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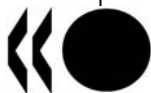
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**PART 2: ANNEXES TO THE DETAILED REVIEW PAPER ON TRANSGENIC RODENT MUTATION
ASSAYS**

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No. 103

DETAILED REVIEW PAPER ON TRANSGENIC RODENT MUTATION ASSAYS

-ANNEXES-

(Part 1 Report is Available under Reference ENV/JM/MONO(2009)7)

IOMC

INTER-ORGANIZATION PROGRAMME FOR THE SOUND MANAGEMENT OF CHEMICALS

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**Environment Directorate
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FOREWORD

This document presents a Detailed Review Paper on Transgenic Rodent Mutation Assays. The project for developing this document, led by Canada, was included in the work plan of the Test Guidelines Programme in 1996. In 2005, the Working Group of National Coordinators for the Test Guidelines Programme (WNT) was invited to comment on a first version that was an extensive review work that started in 1996. Canada made a compilation of all comments, and responded to these comments, and submitted a revised draft in 2008.

On 30 June 2008, comments from the WNT were not requested on the entire draft revised DRP, but on the executive summary and conclusions/recommendations, which include a summary of incremental changes compared to the earlier version. Considering the size of the draft DRP (600 pages), the informative nature of the document, and the resources that would be needed for a second revision of the full document, the Secretariat, in consultation with the lead country and the WNT Bureau, proposed this new approach in order to be able to finalize the document.

Considering that (i) the full document was revised by Canada to take WNT comments into account after a first commenting round, and (ii) incremental changes, as summarized in the executive summary and the conclusions of the last version, were reviewed and approved by the WNT at its 21st, this process was considered by the WNT to constitute a full and final review of this document.

This document is published on the responsibility of the Joint Meeting of the Chemicals Committee and the Working Party on Chemicals, Pesticides and Biotechnology.

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APPENDIX A: EXPERIMENTAL DATA SORTED BY CHEMICAL

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
1,10-Diazachrysen	Muta TM Mouse	+	6.91 (4 / 2.673)	29.69 (4 / 6.671)	4.3	22.78	ip	28	400	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	+	3.02 (4 / 5.898)	4.38 (4 / 9.127)	1.45	1.36	ip	28	400	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	4.56 (4 / 3.535)	9.69 (4 / 5.038)	2.13	5.13	ip	28	400	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	5.89 (4 / 4.863)	10.78 (4 / 5.474)	1.83	4.89	ip	28	400	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	4.65 (4 / 3.887)	9.23 (4 / 3.837)	1.98	4.58	ip	28	400	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	7.38 (4 / 2.11)	11.92 (4 / 2.079)	1.62	4.54	ip	28	400	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	+	2.08 (4 / 4.209)	5.77 (4 / 6.415)	2.77	3.69	ip	28	400	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	+	3.28 (4 / 4.085)	11.2 (4 / 7.735)	3.41	7.92	ip	28	400	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	+	3.73 (4 / 4.137)	5.33 (4 / 2.347)	1.43	1.6	ip	28	400	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	+	2.35 (4 / 3.782)	4.43 (4 / 4.705)	1.89	2.08	ip	28	400	7	Yamada <i>et al.</i> (2005)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
1,2:3,4-Diepoxybutane	Muta TM Mouse	+	8.82 (4 / 2.931)	15.67 (4 / 2.133)	1.78	6.85	ip	28	400	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	-	2.45 (4 / 5.165)	4.27 (4 / 5.188)	1.74	1.82	ip	28	400	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	-	6.4 (7 / 2.6)	7.7 (8 / 3)	1.2	1.3	ip	5	30	2	unpublished
	Muta TM Mouse	-	9.1 (8 / 5.1)	6.9 (8 / 2.9)	0.76	-2.2	ip	5	30	2	unpublished
	Muta TM Mouse	-	6.4 (7 / 2.6)	10.6 (7 / 2.8)	1.66	4.2	ip	5	60	2	unpublished
	Muta TM Mouse	-	4.5 (7 / 3.4)	7.8 (8 / 4.2)	1.73	3.3	ip	5	120	2	unpublished
	Muta TM Mouse	-	4.5 (7 / 3.4)	6.7 (8 / 5.1)	1.49	2.2	ip	5	60	2	unpublished
	Muta TM Mouse	-	4.5 (7 / 3.4)	4.5 (8 / 4.4)	1	0	ip	5	30	2	unpublished
	Muta TM Mouse	-	9.1 (8 / 5.1)	10.5 (7 / 3.3)	1.15	1.4	ip	5	120	2	unpublished
	Muta TM Mouse	-	9.1 (8 / 5.1)	7.6 (8 / 3.9)	0.84	-1.5	ip	5	60	2	unpublished
1,2-Dibromo-3-chloropropane	Muta TM Mouse	-	6.36 (4 / 2.14)	6.21 (3 / 4.96)	0.98	-0.15	ip	1	40	14	Hachiya and Motohashi (2000)
	Muta TM Mouse	+	0.76 (3 / 1.85)	2.89 (3 / 2.73)	3.8	2.13	ip	1	40	14	Hachiya and Motohashi (2000)
1,2-Dibromoethane	Muta TM Mouse	-	0.76 (3 / 1.85)	1.78 (3 / 3.7)	2.34	1.02	ip	1	60	14	Hachiya and Motohashi (2000)
	Muta TM Mouse	-	0.76 (3 / 1.85)	0.4 (3 / 4.45)	0.53	-0.36	ip	5	80	14	Hachiya and Motohashi (2000)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	10.7 (6 / 2.3)	10.4 (6 / 2.2)	0.97	-0.3	inhalation	10	300	14	Schmezer <i>et al.</i> (1998b)
	Muta TM Mouse	-	10.7 (6 / 2.3)	10.9 (6 / 2.5)	1.02	0.2	inhalation	1	30	14	Schmezer <i>et al.</i> (1998b)
	Muta TM Mouse	-	6.36 (4 / 2.14)	6.27 (3 / 4.96)	0.99	-0.09	ip	1	60	14	Hachiya and Motohashi (2000)
	Muta TM Mouse	-	6.36 (4 / 2.14)	4.45 (3 / 2.99)	0.7	-1.91	ip	5	80	14	Hachiya and Motohashi (2000)
	Muta TM Mouse	-	14.4 (5 / 1.5)	15.9 (5 / 1.7)	1.1	1.5	inhalation	1	30	14	Schmezer <i>et al.</i> (1998)
	Muta TM Mouse	+	14.4 (5 / 1.5)	26.1 (5 / 1.7)	1.81	11.7	inhalation	10	300	14	Schmezer <i>et al.</i> (1998b)
1,2-Dichloroethane	Muta TM Mouse	-	6.36 (4 / 2.14)	3.44 (3 / 3.34)	0.54	-2.92	ip	10	280	14	Hachiya and Motohashi (2000)
	Muta TM Mouse	-	6.36 (4 / 2.14)	5 (3 / 0.64)	0.79	-1.36	gavage	1	75	14	Hachiya and Motohashi (2000)
	Muta TM Mouse	-	0.76 (3 / 1.85)	0.89 (3 / 6.7)	1.17	0.13	ip	5	200	14	Hachiya and Motohashi (2000)
	Muta TM Mouse	-	0.76 (3 / 1.85)	0.88 (3 / 6.23)	1.16	0.12	ip	10	280	14	Hachiya and Motohashi (2000)
	Muta TM Mouse	-	6.36 (4 / 2.14)	5.92 (3 / 3.46)	0.93	-0.44	ip	5	200	28	Hachiya and Motohashi (2000)
	Muta TM Mouse	-	6.36 (4 / 2.14)	4.17 (3 / 5.25)	0.66	-2.19	ip	5	200	14	Hachiya and Motohashi (2000)
	Muta TM Mouse	-	6.36 (4 / 2.14)	6.76 (3 / 0.947)	1.06	0.4	gavage	1	150	28	Hachiya and Motohashi (2000)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
1,2-Epoxy-3-butene	Muta TM Mouse	-	6.36 (4 / 2.14)	5.46 (3 / 1.28)	0.86	-0.9	gavage	1	150	14	Hachiya and Motohashi (2000)
	Muta TM Mouse	-	6.36 (4 / 2.14)	8.17 (2 / 0.453)	1.28	1.81	gavage	1	150	7	Hachiya and Motohashi (2000)
	Muta TM Mouse	-	6.36 (4 / 2.14)	5.38 (3 / 0.836)	0.85	-0.98	gavage	1	75	28	Hachiya and Motohashi (2000)
	Muta TM Mouse	-	0.76 (3 / 1.85)	1.18 (3 / 2.29)	1.55	0.42	ip	5	200	28	Hachiya and Motohashi (2000)
	Muta TM Mouse	+	4.5 (7 / 3.4)	9.1 (7 / 3.8)	2.02	4.6	ip	5	300	2	unpublished
	Muta TM Mouse	-	9.1 (8 / 5.1)	9.4 (8 / 4.6)	1.03	0.3	ip	5	150	2	unpublished
	Muta TM Mouse	-	9.1 (8 / 5.1)	10 (7 / 3.5)	1.1	0.9	ip	5	300	2	unpublished
	Muta TM Mouse	-	4.5 (7 / 3.4)	7.7 (8 / 5.1)	1.71	3.2	ip	5	150	2	unpublished
	Big Blue [®] mouse	-	8.1 (6 / 1.3)	7.8 (6 / 1.3)	0.96	-0.3	inhalation	12	301	14	Saranko <i>et al.</i> (2001)
	Muta TM Mouse	-	9.1 (8 / 5.1)	8.3 (7 / 3.2)	0.91	-0.8	ip	5	75	2	unpublished
1,3-Butadiene	Big Blue [®] mouse	+	3.6 (6 / 1.9)	9.9 (6 / 1.3)	2.75	6.3	inhalation	12	301	14	Saranko <i>et al.</i> (2001)
	Muta TM Mouse	-	4.5 (7 / 3.4)	8.6 (8 / 3.4)	1.91	4.1	ip	5	75	2	unpublished
	Big Blue [®] mouse	-	9.9 (6 / 1.3)	10.7 (6 / 1.3)	1.08	0.8	inhalation	12	301	14	Saranko <i>et al.</i> (2001)
	Big Blue [®] mouse	+	3.6 (3 / 1.7)	16.1 (3 / 0.9)	4.47	12.5	inhalation	28	960	14	Recio, Pluta and Meyer (1998)
	Big Blue [®] mouse	+	3.6 (3 / 1.7)	12.3 (4 / 1.2)	3.42	8.7	inhalation	20	9 750	14	Recio, Pluta and Meyer (1998)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	2.1 (4 / 0.8)	12.6 (5 / 0.8)	6	10.5	inhalation	5	2 400	14	Recio <i>et al.</i> (1996)
	Big Blue [®] mouse	+	3.6 (3 / 1.7)	15.3 (3 / 0.9)	4.25	11.7	inhalation	20	19 500	14	Recio, Pluta and Meyer (1998)
	Big Blue [®] mouse	+	3.8 (3 / 2.5)	7.2 (3 / 1.5)	1.89	3.4	inhalation	28	960	14	Recio and Goldsworthy (1995)
	Big Blue [®] mouse	+	3.8 (3 / 2.5)	15.3 (3 / 2.2)	4.03	11.5	inhalation	28	9 600	14	Recio and Goldsworthy (1995)
	Big Blue [®] mouse	+	3.8 (3 / 2.5)	13.4 (3 / 1.6)	3.53	9.6	inhalation	28	19 200	14	Recio and Goldsworthy (1995)
	Big Blue [®] mouse	+	3.8 (3 / 2.5)	7.2 (3 / 1.5)	1.89	3.4	inhalation	20	960	14	Sisk <i>et al.</i> (1994)
	Big Blue [®] mouse	+	3.8 (3 / 2.5)	15.3 (3 / 2.2)	4.03	11.5	inhalation	20	9 600	14	Sisk <i>et al.</i> (1994)
	Muta [™] Mouse	-	2.4 (5 / 0.5)	3.1 (5 / 0.6)	1.29	0.7	inhalation	5	2 400	14	Recio <i>et al.</i> (1992)
	Muta [™] Mouse	+	4.4 (5 / 0.6)	9.1 (5 / 0.5)	2.07	4.7	inhalation	5	2 400	14	Recio <i>et al.</i> (1992)
	Muta [™] Mouse	-	3 (5 / 0.1)	1.9 (5 / 0.1)	0.63	-1.1	inhalation	5	2 400	14	Recio <i>et al.</i> (1992)
	Big Blue [®] mouse	+	3.8 (3 / 1.6)	14.6 (5 / 1.3)	3.84	10.8	inhalation	28	19 500	14	Recio <i>et al.</i> (1993)
	Big Blue [®] mouse	+	3.8 (3 / 1.6)	7.2 (3 / 1.5)	1.89	3.4	inhalation	28	975	14	Recio <i>et al.</i> (1993)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	3.8 (3 / 1.6)	17.5 (3 / 1.6)	4.61	13.7	inhalation	28	9 750	14	Recio <i>et al.</i> (1993)
	Big Blue [®] mouse	+	3.8 (3 / 2.5)	13.4 (3 / 1.6)	3.53	9.6	inhalation	20	19 200	14	Sisk <i>et al.</i> (1994)
1,4-Phenylene-bis(methylene)-selenocyanate (p-XSC)	Big Blue [®] rat <i>cII</i>	-	4.2 (8 / -)	3.1 (8 / -)	0.74	-1.1	diet	168	449	0	Guttenplan <i>et al.</i> (2007)
1,6-Dinitropyrene	<i>gpt</i> delta (<i>gpt</i>)	+	0.5 (3 / 1.913)	1.92 (3 / 1.834)	3.84	1.42	intra-tracheal	1	2	14	Hashimoto <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.5 (3 / 1.913)	0.89 (3 / 2.49)	1.78	0.39	intra-tracheal	1	4	14	Hashimoto <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.5 (3 / 1.913)	0.04 (3 / 2.038)	0.08	-0.46	intra-tracheal	1	1	14	Hashimoto <i>et al.</i> (2006)
1,7-Phenanthroline	Muta TM Mouse	-	7.8 (4 / 1.701)	10 (4 / 1.388)	1.28	2.2	ip	4	200	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	+	7.9 (4 / 1.207)	14.8 (4 / 1.543)	1.87	6.9	ip	4	200	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	-	7.1 (4 / 0.943)	4.7 (4 / 1.854)	0.66	-2.4	ip	4	200	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	-	6.8 (4 / 1.06)	6.8 (4 / 1.541)	1	0	ip	4	200	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	+	2.1 (4 / 2.851)	4.1 (4 / 2.702)	1.95	2	ip	4	200	14	Yamada <i>et al.</i> (2004)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	7.9 (4 / 1.642)	7.7 (4 / 2.157)	0.97	-0.2	ip	4	200	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	-	8.2 (4 / 1.639)	7.3 (4 / 2.258)	0.89	-0.9	ip	4	200	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	-	7.9 (4 / 2.967)	9 (4 / 2.748)	1.14	1.1	ip	4	200	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	2.4 (4 / 3.242)	2.4 (4 / 3.923)	1	0	ip	4	200	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	2.1 (4 / 3.74)	2.9 (4 / 3.917)	1.38	0.8	ip	4	200	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	2.7 (4 / 2.337)	3.3 (4 / 3.66)	1.22	0.6	ip	4	200	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	1.3 (4 / 1.951)	1.6 (4 / 4.184)	1.23	0.3	ip	4	200	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	+	1.7 (4 / 7.453)	4.8 (4 / 7.384)	2.82	3.1	ip	4	200	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	+	7 (4 / 3.926)	15.9 (4 / 0.902)	2.27	8.9	ip	4	200	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	+	6 (4 / 4.802)	10.3 (4 / 1.142)	1.72	4.3	ip	4	200	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	-	7.3 (4 / 2.296)	7 (4 / 1.712)	0.96	-0.3	ip	4	200	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	2.9 (4 / 5.461)	2.2 (4 / 3.924)	0.76	-0.7	ip	4	200	56	Yamada <i>et al.</i> (2004)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse <i>cII</i>	–	3.1 (4 / 3.753)	3 (4 / 4.007)	0.97	–0.1	ip	4	200	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	–	1.9 (4 / 5.166)	1.5 (4 / 5.227)	0.79	–0.4	ip	4	200	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	–	2.5 (4 / 6.765)	2.2 (4 / 5.065)	0.88	–0.3	ip	4	200	56	Yamada <i>et al.</i> (2004)
1,8-Dinitropyrene	Muta TM Mouse	–	10.72 (2 / 0.4)	8.86 (5 / 0.6)	0.83	–1.86	ip	8	5	29	unpublished
	Muta TM Mouse	–	6.5 (5 / 0.4)	9.13 (4 / 0.4)	1.4	2.63	ip	56	0.3	29	unpublished
	Muta TM Mouse	–	6.5 (5 / 0.4)	9.82 (6 / 0.4)	1.51	3.32	ip	56	0.9	29	unpublished
	Muta TM Mouse	+	6.5 (5 / 0.4)	21.29 (6 / 0.4)	3.28	14.79	ip	56	2.8	29	unpublished
	Muta TM Mouse	–	4.06 (4 / 1.1)	6.94 (6 / 2.1)	1.71	2.88	ip	56	0.9	29	unpublished
	Muta TM Mouse	–	5.62 (5 / 0.7)	7.76 (5 / 0.6)	1.38	2.14	ip	56	0.3	29	unpublished
	Muta TM Mouse	–	5.62 (5 / 0.7)	7 (6 / 0.9)	1.25	1.38	ip	56	0.9	29	unpublished
	Muta TM Mouse	–	5.62 (5 / 0.7)	6.19 (6 / 1)	1.1	0.57	ip	56	2.8	29	unpublished
	Muta TM Mouse	–	9.16 (5 / 1.5)	7.96 (5 / 1.7)	0.87	–1.2	ip	56	0.3	29	unpublished
	Muta TM Mouse	–	9.16 (5 / 1.5)	8.26 (6 / 2.1)	0.9	–0.9	ip	56	0.9	29	unpublished
	Muta TM Mouse	–	9.16 (5 / 1.5)	8.6 (6 / 2.1)	0.94	–0.56	ip	56	2.8	29	unpublished
	Muta TM Mouse	–	8.13 (4 / 0.4)	6.2 (5 / 0.8)	0.76	–1.93	ip	56	0.3	29	unpublished
	Muta TM Mouse	–	8.13 (4 / 0.4)	8.66 (4 / 0.7)	1.07	0.53	ip	56	0.9	29	unpublished
	Muta TM Mouse	–	8.49 (8 / 3.3)	8.05 (10 / 3.3)	0.95	–0.44	ip	8	5	29	unpublished
	Muta TM Mouse	–	4.06 (4 / 1.1)	3.42 (5 / 1.9)	0.84	–0.64	ip	56	0.3	29	unpublished
	Muta TM Mouse	–	8.13 (4 / 0.4)	10.9 (5 / 0.6)	1.34	2.77	ip	56	2.8	29	unpublished

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
1.5 GHz electromagnetic near field	Muta TM Mouse	+	4.06 (4 / 1.1)	7.59 (6 / 2.1)	1.87	3.53	ip	56	2.8	29	unpublished
	Big Blue [®] mouse	-	2.08 (5 / 1.1)	2.07 (5 / 1.1)	1	-0.01	irradiation	14	20 W/kg	0	Takahashi <i>et al.</i> (2002)
	Big Blue [®] mouse	-	2.08 (5 / 1.1)	1.63 (5 / 1.1)	0.78	-0.45	irradiation	14	6.7 W/kg	0	Takahashi <i>et al.</i> (2002)
	Big Blue [®] mouse	-	1.26 (5 / 2)	1.61 (5 / 2)	1.28	0.35	irradiation	28	40 W/kg	0	Takahashi <i>et al.</i> (2002)
	Big Blue [®] mouse	-	1.26 (5 / 2)	1.81 (5 / 1.7)	1.44	0.55	irradiation	28	13.4 W/kg	0	Takahashi <i>et al.</i> (2002)
10-Azabenz(a)pyrene	Muta TM Mouse	-	8.5 (5 / 1.8)	5.6 (5 / 0.8)	0.66	-2.9	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	+	3.5 (5 / 4.9)	6.3 (5 / 3.6)	1.8	2.8	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	-	3.9 (4 / 1.5)	5.4 (5 / 1.6)	1.4	1.5	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	-	3.8 (5 / 4.1)	4.8 (5 / 3.6)	1.3	1	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	-	3.1 (5 / 2.8)	4.1 (5 / 3.1)	1.3	1	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	-	3.3 (5 / 2)	3.4 (5 / 1.1)	1	0.1	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	-	5.6 (5 / 6.2)	5.9 (5 / 4.8)	1.1	0.3	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	-	3.1 (5 / 3.5)	2.9 (5 / 3.9)	0.94	-0.2	gavage	5	625	14	Yamada <i>et al.</i> (2002)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	7.9 (5 / 3.1)	13.6 (5 / 1.6)	1.7	5.7	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse	-	7.6 (5 / 2.2)	10.2 (5 / 2.6)	1.3	2.6	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse	+	5.6 (5 / 1.7)	13.7 (5 / 2)	2.4	8.1	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse	-	6.2 (5 / 3.1)	7.5 (5 / 2)	1.2	1.3	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse	-	9 (5 / 1.6)	9 (5 / 1.2)	1	0	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse	-	8.3 (5 / 2.9)	9.4 (5 / 2.4)	1.1	1.1	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	-	4.7 (5 / 2.7)	6.1 (5 / 2.8)	1.3	1.4	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse	-	8.5 (4 / 1.3)	12.6 (5 / 1.1)	1.5	4.1	gavage	5	625	14	Yamada <i>et al.</i> (2002)
^{114m} In internal radiation	Big Blue [®] mouse	+	6.7 (6 / 1)	15.6 (7 / 1.1)	2.33	8.9	ip	1	14.8 MBq/kg	35	Hoyes <i>et al.</i> (1998)
	Big Blue [®] mouse	-	17.1 (7 / 1.3)	15.7 (7 / 1.2)	0.92	-1.4	ip	1	1.85	35	Hoyes <i>et al.</i> (1998)
	Big Blue [®] mouse	-	6.7 (6 / 1)	17.1 (7 / 1.1)	2.55	10.4	ip	1	1.85 MBq/kg	35	Hoyes <i>et al.</i> (1998)
	Big Blue [®] mouse	-	10.6 (7 / 1.4)	8.5 (6 / 1.4)	0.8	-2.1	ip	1	14.8 MBq/kg	35	Hoyes <i>et al.</i> (1998)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
17 β -Oestradiol	Big Blue [®] mouse	–	17.1 (7 / 1.3)	23 (7 / 1.4)	1.35	5.9	ip	1	14.8 MBq/kg	35	Hoyes <i>et al.</i> (1998)
	Big Blue [®] mouse	–	10.6 (7 / 1.4)	12.2 (7 / 1.5)	1.15	1.6	ip	1	1.85 MBq/kg	35	Hoyes <i>et al.</i> (1998)
	Big Blue [®] rat	–	1.74 (5 / 0.986)	2.16 (5 / 1.047)	1.24	0.42	diet	62	31	112	Manjanatha <i>et al.</i> (2005)
	Big Blue [®] rat	–	2.95 (5 / –)	3.95 (5 / –)	1.34	1	diet	112	49	0	Manjanatha <i>et al.</i> (2006a)
1-Chloromethylpyrene	Muta TM Mouse	–	10 (2 / 0.3)	5.2 (2 / 0.3)	0.52	–4.8	gavage	1	25	7	Brooks and Dean (1996)
	Muta TM Mouse	–	7.1 (2 / 0.4)	9.4 (2 / 0.2)	1.32	2.3	gavage	1	25	10	Brooks and Dean (1996)
	Muta TM Mouse	–	10 (2 / 0.3)	5.2 (1 / 0.1)	0.52	–4.8	gavage	1	50	3	Brooks and Dean (1996)
	Muta TM Mouse	+	3.1 (2 / 0.1)	9 (1 / 0)	2.9	5.9	topical	1	10 μ g	21	Brooks and Dean (1996)
	Muta TM Mouse	–	7.1 (2 / 0.4)	6.5 (1 / 0.1)	0.92	–0.6	gavage	1	50	10	Brooks and Dean (1996)
	Muta TM Mouse	+	1.7 (1 / 0.1)	12.2 (2 / 0.1)	7.18	10.5	topical	1	5 μ g	7	Brooks and Dean (1996)
	Muta TM Mouse	+	1.7 (1 / 0.1)	22 (2 / 0.1)	12.94	20.3	topical	1	5 μ g	14	Brooks and Dean (1996)
	Muta TM Mouse	+	3.1 (2 / 0.1)	23.4 (2 / 0.1)	7.55	20.3	topical	1	5 μ g	21	Brooks and Dean (1996)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	1.7 (1 / 0.1)	17 (2 / 0.2)	10	15.3	topical	1	10 µg	7	Brooks and Dean (1996)
	Muta TM Mouse	+	1.7 (1 / 0.1)	24.6 (2 / 0.1)	14.47	22.9	topical	1	10 µg	14	Brooks and Dean (1996)
	Muta TM Mouse	-	10 (2 / 0.3)	4.8 (1 / 0.1)	0.48	-5.2	gavage	1	50	7	Brooks and Dean (1996)
	Muta TM Mouse	-	10 (2 / 0.3)	5.1 (2 / 0.3)	0.51	-4.9	gavage	1	25	3	Brooks and Dean (1996)
1-Methylphenanthrene	Muta TM Mouse	-	6.6 (5 / 3.9)	5 (5 / 2.2)	0.76	-1.6	ip	1	250	14	unpublished
	Muta TM Mouse	-	12.8 (5 / 2.8)	9.2 (5 / 1.8)	0.72	-3.6	ip	1	250	14	unpublished
	Muta TM Mouse	-	10.3 (5 / 1.4)	8.9 (5 / 2.3)	0.86	-1.4	ip	1	250	56	unpublished
	Muta TM Mouse	-	10.3 (5 / 1.4)	6.9 (5 / 1.6)	0.67	-3.4	ip	1	250	56	unpublished
	Muta TM Mouse	-	6.6 (5 / 3.9)	4 (5 / 2.2)	0.61	-2.6	ip	1	250	14	unpublished
	Muta TM Mouse	-	10.3 (5 / 1.4)	7.7 (5 / 2)	0.75	-2.6	ip	1	250	56	unpublished
	Muta TM Mouse	-	12.8 (5 / 2.8)	6.3 (5 / 1.6)	0.49	-6.5	ip	1	250	14	unpublished
	Muta TM Mouse	-	12.8 (5 / 2.8)	6.9 (5 / 1.6)	0.54	-5.9	ip	1	250	14	unpublished
	Muta TM Mouse	-	6.5 (5 / 2.5)	8.5 (5 / 1.9)	1.31	2	ip	1	250	56	unpublished
	Muta TM Mouse	-	6.5 (5 / 2.5)	8 (5 / 2.2)	1.23	1.5	ip	1	250	56	unpublished
	Muta TM Mouse	-	6.5 (5 / 2.5)	9.8 (5 / 1.9)	1.51	3.3	ip	1	250	56	unpublished
	Muta TM Mouse	-	6.7 (5 / 2)	7.7 (5 / 2.1)	1.15	1	ip	1	250	14	unpublished
	Muta TM Mouse	-	6.7 (5 / 2)	6.8 (5 / 2.1)	1.01	0.1	ip	1	250	14	unpublished
	Muta TM Mouse	-	6.7 (5 / 2)	6.5 (5 / 2)	0.97	-0.2	ip	1	250	14	unpublished
Muta TM Mouse	-	4.3 (5 / 2.7)	2.5 (5 / 2.6)	0.58	-1.8	ip	1	250	56	unpublished	

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	5 (5 / 2.2)	3.1 (4 / 1.9)	0.62	–1.9	ip	1	250	56	unpublished
	Muta TM Mouse	–	4.3 (5 / 2.7)	5 (5 / 2.7)	1.16	0.7	ip	1	250	56	unpublished
	Muta TM Mouse	–	4.1 (5 / 2.8)	3.7 (5 / 2.4)	0.9	–0.4	ip	1	250	14	unpublished
	Muta TM Mouse	–	2.7 (4 / 2.5)	3.9 (5 / 2)	1.44	1.2	ip	1	250	14	unpublished
	Muta TM Mouse	–	2.7 (4 / 2.5)	2.9 (4 / 2.2)	1.07	0.2	ip	1	250	14	unpublished
	Muta TM Mouse	–	5 (5 / 2.2)	5.8 (5 / 2.9)	1.16	0.8	ip	1	250	56	unpublished
	Muta TM Mouse	–	5 (5 / 2.2)	5.4 (5 / 2.9)	1.08	0.4	ip	1	250	56	unpublished
	Muta TM Mouse	–	6.6 (5 / 3.9)	7.2 (5 / 3.2)	1.09	0.6	ip	1	250	14	unpublished
	Muta TM Mouse	–	4.3 (5 / 2.7)	5.2 (5 / 2.8)	1.21	0.9	ip	1	250	56	unpublished
1-Nitronaphthalene	Muta TM Mouse	–	4.23 (3 / 1.424)	5.561 (5 / 2.141)	1.31	1.331	topical	28	1 750	7	Kirkland and Beevers (2006)
	Muta TM Mouse	–	3.135 (3 / 2.105)	5.343 (2 / 0.917)	1.7	2.208	topical	28	1 750	7	Kirkland and Beevers (2006)
	Muta TM Mouse	–	4.064 (4 / 4.473)	3.676 (5 / 5.308)	0.9	–0.388	topical	28	1 750	7	Kirkland and Beevers (2006)
2,3,7,8-Tetrachloro-dibenzo- <i>p</i> -dioxin	Big Blue [®] rat	–	4.5 (5 / –)	3.5 (5 / 3.4)	0.78	–1	gavage	42	0.024	14	Thornton <i>et al.</i> (2001)
	Big Blue [®] rat	–	3.4 (5 / –)	3.3 (5 / 3.4)	0.97	–0.1	gavage	42	0.024	14	Thornton <i>et al.</i> (2001)
2,4-Diaminotoluene	Big Blue [®] mouse	–	10 (5 / 0.6)	9.3 (5 / 0.6)	0.93	–0.7	diet	30	3 600	0	Hayward <i>et al.</i> (1995)
	Big Blue [®] mouse	+	5 (5 / 1)	9.7 (5 / 1)	1.94	4.7	gavage	12	800	28	Suter <i>et al.</i> (1996)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
2,6-Diaminotoluene	Big Blue [®] mouse	+	5.7 (5 / 0.7)	12.1 (5 / 0.6)	2.12	6.4	diet	90	10 800	0	Hayward <i>et al.</i> (1995)
	Big Blue [®] mouse	+	4.3 (5 / 1)	8.5 (5 / 1)	1.98	4.2	gavage	12	800	28	Suter <i>et al.</i> (1996)
	Muta TM Mouse	+	4.064 (4 / 4.473)	18.407 (5 / 2.123)	4.53	14.343	topical	28	5 600	7	Kirkland and Beevers (2006)
	Big Blue [®] mouse	-	10 (5 / -)	9.3 (5 / -)	0.93	-0.7	diet	30	3 600	0	Cunningham <i>et al.</i> (1996)
	Muta TM Mouse	-	5.241 (4 / 2.168)	9.777 (5 / 3.32)	1.87	4.536	topical	28	5 600	7	Kirkland and Beevers (2006)
	Muta TM Mouse	-	4.23 (3 / 1.424)	5.625 (5 / 1.253)	1.33	1.395	topical	28	5 600	7	Kirkland and Beevers (2006)
	Big Blue [®] mouse	+	5.7 (5 / -)	12.1 (5 / -)	2.12	6.4	diet	90	10 800	0	Cunningham <i>et al.</i> (1996)
	Big Blue [®] mouse	+	4.2 (5 / 1.4)	7.5 (4 / 1.1)	1.79	3.3	gavage	12	800	10	Suter <i>et al.</i> (1996)
	Big Blue [®] mouse	-	5.1 (5 / 1.3)	5.2 (5 / 1.1)	1.02	0.1	gavage	12	800	10	Suter <i>et al.</i> (1996)
	Muta TM Mouse	-	4.23 (3 / 1.424)	5.407 (7 / 2.108)	1.28	1.177	topical	28	350	7	Kirkland and Beevers (2006)
	Big Blue [®] mouse	-	5.7 (5 / 0.7)	5.6 (5 / 0.5)	0.98	-0.1	diet	90	10 800	0	Hayward <i>et al.</i> (1995)
Big Blue [®] mouse	-	10 (5 / 0.6)	8.7 (5 / 0.5)	0.87	-1.3	diet	30	3 600	0	Hayward <i>et al.</i> (1995)	

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	-	5.7 (5 / -)	5.6 (5 / -)	0.98	-0.1	diet	90	10 800	0	Cunningham <i>et al.</i> (1996)
	Big Blue [®] mouse	-	10 (5 / -)	8.7 (5 / -)	0.87	-1.3	diet	30	3 600	0	Cunningham <i>et al.</i> (1996)
	Muta TM Mouse	-	5.241 (4 / 2.168)	4.812 (5 / 2.494)	0.92	-0.42 9	topical	28	350	7	Kirkland and Beevers (2006)
	Muta TM Mouse	-	4.064 (4 / 4.473)	5.784 (7 / 12.818)	1.42	1.72	topical	28	350	7	Kirkland and Beevers (2006)
2.45 GHz radio-frequency	Muta TM Mouse	-	6.66 (- / -)	5.4 (3 / 2.009)	0.81	-1.26	irradiation	15	0.71 W/kg	70	Ono <i>et al.</i> (2004)
	Muta TM Mouse	-	6.51 (- / -)	5.8 (3 / 2.916)	0.89	-0.71	irradiation	15	0.71 W/kg	70	Ono <i>et al.</i> (2004)
	Muta TM Mouse	-	6.95 (- / -)	6.21 (3 / 3.506)	0.89	-0.74	irradiation	15	0.71 W/kg	70	Ono <i>et al.</i> (2004)
	Muta TM Mouse	-	7.06 (- / -)	5.94 (3 / 2.33)	0.84	-1.12	irradiation	15	0.71 W/kg	70	Ono <i>et al.</i> (2004)
2-Acetylaminofluorene (2-AAF)	Big Blue [®] mouse	+	5.02 (6 / 1.5)	6.53 (4 / 1.3)	1.3	1.51	ip	4	400	420	Ross and Leavitt (1998)
	Muta TM Mouse	-	6.85 (2 / 0.5)	7.4 (2 / 0.5)	1.08	0.55	gavage	1	50	3	Brooks <i>et al.</i> (1995)
	Big Blue [®] mouse	+	4.83 (5 / 1.3)	7.43 (4 / 1.2)	1.54	2.6	ip	4	400	70	Ross and Leavitt (1998)
	Big Blue [®] mouse	+	10 (3 / 0.5)	51 (3 / 0.3)	5.1	41	diet	120	18 000	0	Gunz, Shephard and Lutz (1993)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	10 (3 / 0.5)	27 (3 / 0.3)	2.7	17	diet	120	9 000	0	Gunz, Shephard and Lutz (1993)
	<i>lacZ</i> plasmid mouse	+	6.3 (8 / -)	38.5 (8 / -)	6.11	32.2	diet	84	3 024	0	van Steeg (2001)
	Muta TM Mouse	-	6.85 (2 / 0.5)	4 (2 / 0.6)	0.58	-2.85	gavage	1	100	7	Brooks <i>et al.</i> (1995)
	Muta TM Mouse	-	6.85 (2 / 0.5)	13.4 (2 / 0.5)	1.96	6.55	gavage	1	100	28	Brooks <i>et al.</i> (1995)
	Muta TM Mouse	+	6.85 (2 / 0.5)	13.9 (2 / 0.5)	2.03	7.05	gavage	1	100	56	Brooks <i>et al.</i> (1995)
	Muta TM Mouse	-	7.8 (2 / 0.6)	12.9 (2 / 0.5)	1.65	5.1	gavage	1	100	112	Brooks <i>et al.</i> (1995)
	<i>lacZ</i> plasmid mouse	+	8.7 (8 / -)	214.2 (8 / -)	24.62	205.5	diet	84	3 024	0	van Steeg (2001)
	<i>lacZ</i> plasmid mouse	+	7.5 (8 / -)	94.2 (8 / -)	12.56	86.7	diet	84	3 024	0	van Steeg (2001)
	Muta TM Mouse	-	6.85 (2 / 0.5)	7 (2 / 0.5)	1.02	0.15	gavage	1	100	3	Brooks <i>et al.</i> (1995)
	<i>lacZ</i> plasmid mouse	+	4.9 (8 / -)	8.6 (8 / -)	1.76	3.7	diet	84	3 024	0	van Steeg (2001)
	Muta TM Mouse	-	6.85 (2 / 0.5)	8.4 (2 / 0.5)	1.23	1.55	gavage	1	100	14	Brooks <i>et al.</i> (1995)
	<i>lacZ</i> plasmid mouse	+	6.4 (8 / -)	132.2 (8 / -)	20.66	125.8	diet	84	3 024	0	van Steeg (2001)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	5.5 (8 / -)	12.3 (8 / -)	2.24	6.8	diet	84	3 024	0	van Steeg (2001)
	<i>lacZ</i> plasmid mouse	+	8.7 (8 / -)	133.5 (8 / -)	15.34	124.8	diet	84	3 024	0	van Steeg (2001)
	Big Blue [®] mouse	-	2.7 (2 / 0.3)	3.5 (2 / 0.2)	1.3	0.8	diet	28	1 008	0	Shephard <i>et al.</i> (1993)
	<i>lacZ</i> plasmid mouse	+	7 (8 / -)	12.3 (8 / -)	1.76	5.3	diet	84	3 024	0	van Steeg (2001)
	Big Blue [®] mouse	+	2.7 (2 / 0.3)	7.7 (2 / 0.2)	2.85	5	diet	28	2 016	0	Shephard <i>et al.</i> (1993)
	<i>lacZ</i> plasmid mouse	+	8.5 (8 / -)	84.5 (8 / -)	9.94	76	diet	84	3 024	0	van Steeg (2001)
	Muta TM Mouse	-	6.85 (2 / 0.5)	4.67 (2 / 0.8)	0.68	-2.18	gavage	1	50	7	Brooks <i>et al.</i> (1995)
	Muta TM Mouse	-	6.85 (2 / 0.5)	4.4 (2 / 0.7)	0.64	-2.45	gavage	1	50	56	Brooks <i>et al.</i> (1995)
	Big Blue [®] mouse	+	3.93 (5 / 1.2)	8.13 (3 / 0.9)	2.07	4.2	ip	4	400	35	Ross and Leavitt (1998)
	Muta TM Mouse	-	6.85 (2 / 0.5)	5.14 (2 / 0.8)	0.75	-1.71	gavage	1	50	28	Brooks <i>et al.</i> (1995)
	Muta TM Mouse	-	6.85 (2 / 0.5)	4.4 (2 / 0.5)	0.64	-2.45	gavage	1	50	14	Brooks <i>et al.</i> (1995)
	Muta TM Mouse	-	7.8 (2 / 0.6)	4.4 (2 / 0.6)	0.56	-3.4	gavage	1	50	112	Brooks <i>et al.</i> (1995)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
2-Amino-1-methyl-6-phenylimidazo(4,5-b)pyridine (PhIP)	Big Blue [®] rat <i>cII</i>	+	3.5 (3 / -)	83.8 (3 / -)	23.94	80.3	gavage	60	1 680	0	Nakai, Nelson and De Marzo (2007)
	Muta TM Mouse <i>cII</i>	+	4.96 (6 / 1.603)	19.94 (5 / 0.736)	4.02	14.98	gavage	5	100	14	Itoh <i>et al.</i> (2003)
	Muta TM Mouse	+	12 (7 / -)	78.6 (7 / -)	6.55	66.6	gavage	5	100	14	Itoh <i>et al.</i> (2003)
	Muta TM Mouse	+	11.4 (7 / -)	55.1 (7 / -)	4.83	43.7	gavage	5	100	14	Itoh <i>et al.</i> (2003)
	<i>lacZ</i> plasmid mouse	-	9 (- / -)	11 (4 / -)	1.22	2	diet	14	67.2	0	Klein <i>et al.</i> (2001)
	Muta TM Mouse	+	11.23 (7 / 1.909)	67.2 (7 / 1.007)	5.98	55.97	gavage	5	100	14	Itoh <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	+	4.8 (3 / -)	43.2 (3 / -)	9	38.4	gavage	60	1 680	0	Nakai, Nelson and De Marzo (2007)
	Big Blue [®] rat <i>cII</i>	+	2.9 (3 / -)	33.7 (3 / -)	11.62	30.8	gavage	60	1 680	0	Nakai, Nelson and De Marzo (2007)
	Big Blue [®] rat <i>cII</i>	+	3.3 (3 / -)	18.3 (3 / -)	5.55	15	gavage	30	840	0	Nakai, Nelson and De Marzo (2007)
	Big Blue [®] rat <i>cII</i>	+	3.9 (3 / -)	38.5 (3 / -)	9.87	34.6	gavage	30	840	0	Nakai, Nelson and De Marzo (2007)
	Big Blue [®] rat <i>cII</i>	+	5.1 (3 / -)	37.4 (3 / -)	7.33	32.3	gavage	30	840	0	Nakai, Nelson and De Marzo (2007)
Big Blue [®] rat <i>cII</i>	+	5.3 (3 / -)	65.8 (3 / -)	12.42	60.5	gavage	60	1 680	0	Nakai, Nelson and De Marzo (2007)	
Big Blue [®] rat <i>cII</i>	+	4 (3 / -)	14.4 (3 / -)	3.6	10.4	gavage	30	840	0	Nakai, Nelson and De Marzo (2007)	

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat <i>cII</i>	+	5.9 (3 / -)	82.6 (3 / -)	14	76.7	gavage	60	1 680	0	Nakai, Nelson and De Marzo (2007)
	Big Blue [®] rat <i>cII</i>	+	6.4 (3 / -)	17.9 (3 / -)	2.8	11.5	gavage	30	840	0	Nakai, Nelson and De Marzo (2007)
	Big Blue [®] rat	+	1.69 (- / -)	19.6 (- / -)	11.6	17.91	gavage	12	900	42	Shan <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	+	4.1 (3 / -)	19.1 (3 / -)	4.66	15	gavage	30	840	0	Nakai, Nelson and De Marzo (2007)
	Big Blue [®] rat <i>cII</i>	-	3.6 (3 / -)	7.1 (3 / -)	1.97	3.5	gavage	60	1 680	0	Nakai, Nelson and De Marzo (2007)
	Big Blue [®] rat <i>cII</i>	-	4.2 (3 / -)	4.2 (3 / -)	1	0	gavage	30	840	0	Nakai, Nelson and De Marzo (2007)
	Big Blue [®] rat <i>cII</i>	-	4.8 (3 / -)	6 (3 / -)	1.25	1.2	gavage	60	1 680	0	Nakai, Nelson and De Marzo (2007)
	Big Blue [®] rat <i>cII</i>	-	5.4 (3 / -)	4.8 (3 / -)	0.89	-0.6	gavage	30	840	0	Nakai, Nelson and De Marzo (2007)
	Big Blue [®] rat	+	2.8 (- / -)	22.2 (- / -)	7.93	19.4	gavage	12	900	42	Shan <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	+	6.5 (3 / -)	86.2 (3 / -)	13.26	79.7	gavage	60	1 680	0	Nakai, Nelson and De Marzo (2007)
	<i>lacZ</i> plasmid mouse	-	5 (- / -)	5 (4 / -)	1	0	diet	56	168	0	Klein <i>et al.</i> (2001)
	Big Blue [®] mouse	-	7 (2 / 0.1)	7.5 (6 / 0.1)	1.07	0.5	diet	30	360	7	Zhang <i>et al.</i> (1996a)
	<i>lacZ</i> plasmid mouse	-	4 (- / -)	5 (4 / -)	1.25	1	diet	7	21	0	Klein <i>et al.</i> (2001)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	-	4 (-/-)	6 (5/-)	1.5	2	diet	14	42	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	4 (-/-)	10 (4/-)	2.5	6	diet	56	168	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	4 (-/-)	12 (4/-)	3	8	diet	7	33.6	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	4 (-/-)	19 (4/-)	4.75	15	diet	56	268.8	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	4 (-/-)	28 (4/-)	7	24	diet	91	436.8	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	9 (-/-)	21 (4/-)	2.33	12	diet	7	84	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	5 (-/-)	5 (5/-)	1	0	diet	14	42	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	9 (-/-)	50 (4/-)	5.56	41	diet	91	436.8	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	5 (-/-)	20 (4/-)	4	15	diet	91	273	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	5 (-/-)	5 (4/-)	1	0	diet	7	33.6	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	5 (-/-)	8 (4/-)	1.6	3	diet	14	67.2	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	5 (-/-)	22 (4/-)	4.4	17	diet	56	268.8	0	Klein <i>et al.</i> (2001)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	5 (-/-)	25 (4/-)	5	20	diet	91	436.8	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	9 (-/-)	11 (4/-)	1.22	2	diet	7	21	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	9 (-/-)	15 (4/-)	1.67	6	diet	14	42	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	9 (-/-)	11 (4/-)	1.22	2	diet	56	168	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	5 (-/-)	5 (4/-)	1	0	diet	7	21	0	Klein <i>et al.</i> (2001)
	Big Blue [®] rat	+	6 (5 / 1.5)	49.47 (15 / 2.2)	8.25	43.47	diet	61	1 464	7	Stuart <i>et al.</i> (2001)
	Big Blue [®] mouse	-	7 (2 / 0.1)	13 (6 / 0.1)	1.86	6	diet	30	900	7	Zhang <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	7 (2 / 0.1)	37 (6 / 0.1)	5.29	30	diet	30	1 440	7	Zhang <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	5.6 (3 / 0.1)	28 (5 / 0.1)	5	22.4	diet	60	720	7	Zhang <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	5.6 (3 / 0.1)	69 (6 / 0.3)	12.32	63.4	diet	60	2 880	7	Zhang <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	2.2 (4 / 0.1)	35 (6 / 0.1)	15.91	32.8	diet	90	1 080	7	Zhang <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	2.2 (4 / 0.1)	133 (5 / 0.1)	60.45	130.8	diet	90	4 320	7	Zhang <i>et al.</i> (1996a)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	+	6.4 (4 / 1.1)	50.99 (15 / 2.5)	7.97	44.59	diet	61	1 464	7	Stuart <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	9 (- / -)	34 (4 / -)	3.78	25	diet	14	168	0	Klein <i>et al.</i> (2001)
	Big Blue [®] rat	+	6.1 (5 / 1.6)	119.3 (15 / 3.3)	19.56	113.2	diet	61	1 464	7	Stuart <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	9 (- / -)	20 (4 / -)	2.22	11	diet	56	268.8	0	Klein <i>et al.</i> (2001)
	Big Blue [®] rat	+	6.6 (5 / 1.5)	100.1 (15 / 3)	15.17	93.5	diet	61	1 464	7	Stuart <i>et al.</i> (2001)
	Big Blue [®] rat	+	6.1 (5 / 1.5)	126.4 (15 / 2.9)	20.72	120.3	diet	61	1 464	7	Stuart <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	9 (- / -)	12 (4 / -)	1.33	3	diet	7	21	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	9 (- / -)	19 (4 / -)	2.11	10	diet	14	42	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	9 (- / -)	23 (4 / -)	2.56	14	diet	56	168	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	9 (- / -)	21 (4 / -)	2.33	12	diet	91	273	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	9 (- / -)	36 (4 / -)	4	27	diet	14	67.2	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	9 (- / -)	40 (4 / -)	4.44	31	diet	56	268.8	0	Klein <i>et al.</i> (2001)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	+	4.9 (5 / 1.4)	108.3 (15 / 3.2)	22.1	103.4	diet	61	1 464	7	Stuart <i>et al.</i> (2001)
	BC-1 <i>lacI</i>	+	6.8 (4 / 3.9)	12.6 (3 / 2.4)	1.85	5.8	ip	21	200	84	Zhang <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	6 (- / -)	9 (4 / -)	1.5	3	diet	7	33.6	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	6 (- / -)	10 (4 / -)	1.67	4	diet	14	67.2	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	6 (- / -)	9 (4 / -)	1.5	3	diet	56	268.8	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	6 (- / -)	9 (4 / -)	1.5	3	diet	91	436.8	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	6 (- / -)	4 (4 / -)	0.67	-2	diet	7	84	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	6 (- / -)	8 (4 / -)	1.33	2	diet	14	168	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	6 (- / -)	10 (4 / -)	1.67	4	diet	56	672	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	9 (- / -)	18 (4 / -)	2	9	diet	91	273	0	Klein <i>et al.</i> (2001)
	BC-1 <i>lacI</i>	+	5.3 (3 / 3.7)	14 (5 / 5.5)	2.64	8.7	ip	21	200	84	Zhang <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	6 (- / -)	7 (4 / -)	1.17	1	diet	14	42	0	Klein <i>et al.</i> (2001)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	BC-1 <i>lacI</i>	+	44 (4 / 3.9)	70.6 (5 / 4.1)	1.6	26.6	ip	21	200	84	Zhang <i>et al.</i> (2001)
	Big Blue [®] rat	+	4.9 (5 / 1.4)	97.5 (5 / -)	19.9	92.6	diet	61	1 464	7	Yang <i>et al.</i> (2001)
	Big Blue [®] rat	+	6.1 (5 / 1.6)	104.3 (5 / -)	17.1	98.2	diet	61	1 464	7	Yang <i>et al.</i> (2001)
	Big Blue [®] rat	+	5.3 (6 / 2.1)	39.9 (9 / 3.1)	7.53	34.6	diet	47	564	7	Yang, Glickman and de Boer (2002)
	Big Blue [®] rat	+	4.3 (6 / 1.9)	20.1 (8 / 2.6)	4.67	15.8	diet	47	564	7	Yang, Glickman and de Boer (2002)
	Big Blue [®] rat	+	6.4 (4 / 1.1)	51.5 (5 / -)	8.05	45.1	diet	61	1 464	7	Yang <i>et al.</i> (2001)
	Big Blue [®] rat	+	2.4 (4 / 1.4)	14.6 (5 / 2.4)	6.08	12.2	diet	47	5 640	7	Yang <i>et al.</i> (2003)
	<i>lacZ</i> plasmid mouse	+	9 (- / -)	19 (4 / -)	2.11	10	diet	91	436.8	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	6 (- / -)	13 (4 / -)	2.17	7	diet	91	1 092	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	7 (- / -)	7 (4 / -)	1	0	diet	14	67.2	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	4 (- / -)	9 (4 / -)	2.25	5	diet	91	273	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	9 (- / -)	13 (4 / -)	1.44	4	diet	7	84	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	9 (- / -)	18 (4 / -)	2	9	diet	14	168	0	Klein <i>et al.</i> (2001)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	9 (-/-)	20 (4/-)	2.22	11	diet	56	672	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	9 (-/-)	18 (4/-)	2	9	diet	91	1 092	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	7 (-/-)	7 (4/-)	1	0	diet	7	21	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	7 (-/-)	7 (4/-)	1	0	diet	14	42	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	7 (-/-)	6 (4/-)	0.86	-1	diet	56	168	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	6 (-/-)	5 (4/-)	0.83	-1	diet	91	273	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	7 (-/-)	7 (4/-)	1	0	diet	7	33.6	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	6 (-/-)	6 (4/-)	1	0	diet	56	168	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	7 (-/-)	11 (4/-)	1.57	4	diet	56	268.8	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	7 (-/-)	13 (4/-)	1.86	6	diet	91	436.8	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	7 (-/-)	7 (4/-)	1	0	diet	7	84	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	7 (-/-)	9 (4/-)	1.29	2	diet	14	168	0	Klein <i>et al.</i> (2001)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	-	7 (-/-)	12 (4/-)	1.71	5	diet	56	672	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	7 (-/-)	11 (4/-)	1.57	4	diet	91	1 092	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	6 (-/-)	6 (4/-)	1	0	diet	7	21	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	9 (-/-)	10 (4/-)	1.11	1	diet	7	33.6	0	Klein <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	7 (-/-)	9 (4/-)	1.29	2	diet	91	273	0	Klein <i>et al.</i> (2001)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.3 (3/-)	1 (3/-)	3.33	0.7	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	Big Blue [®] rat	+	3.2 (5 / 0.7)	66.1 (5 / 0.6)	20.66	62.9	diet	60	2 880	7	Okonogi <i>et al.</i> (1997a)
	Big Blue [®] rat	+	2.5 (5 / 1.6)	32.3 (6 / 0.7)	12.92	29.8	gavage	10	650	420	Okochi <i>et al.</i> (1999)
	Big Blue [®] rat	+	3.2 (5 / 0.4)	71 (5 / 0.7)	22.19	67.8	diet	61	1 464	7	Stuart <i>et al.</i> (2000a)
	<i>gpt</i> delta (Spi)	+	0.2 (3/-)	1 (3/-)	5	0.8	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	<i>gpt</i> delta (Spi)	+	0.1 (3/-)	3 (3/-)	30	2.9	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	<i>gpt</i> delta (Spi)	-	0.2 (3/-)	0.5 (3/-)	2.5	0.3	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>gpt</i> delta (Spi)	-	0.3 (3 / -)	0.3 (3 / -)	1	0	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	<i>gpt</i> delta (Spi)	-	0.2 (3 / -)	0.2 (3 / -)	1	0	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	<i>gpt</i> delta (Spi)	+	0.3 (3 / -)	0.9 (3 / -)	3	0.6	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	Big Blue [®] rat	+	2.9 (5 / 0.6)	71.8 (5 / 0.5)	24.76	68.9	diet	60	2 880	7	Okonogi <i>et al.</i> (1997a)
	<i>gpt</i> delta (<i>gpt</i>)	+	1 (3 / -)	12 (3 / -)	12	11	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	<i>gpt</i> delta (Spi)	+	0.6 (3 / -)	2.2 (3 / -)	3.67	1.6	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.5 (3 / -)	1 (3 / -)	2	0.5	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.5 (3 / -)	0.5 (3 / -)	1	0	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.5 (3 / -)	2.5 (3 / -)	5	2	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.5 (3 / -)	3.5 (3 / -)	7	3	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.5 (3 / -)	11 (3 / -)	22	10.5	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	Big Blue [®] rat <i>cII</i>	+	2.3 (3 / 0.8)	60 (3 / 0.1)	26.09	57.7	diet	60	2 880	7	Stuart <i>et al.</i> (2000c)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat <i>cII</i>	+	2.3 (3 / 0.6)	60 (5 / 0.3)	26.09	57.7	diet	60	2 880	7	Stuart <i>et al.</i> (2000c)
	Big Blue [®] rat	+	2.3 (5 / 0.6)	60 (5 / 0.5)	26.09	57.7	diet	60	2 880	7	Stuart <i>et al.</i> (2000c)
	Big Blue [®] rat	+	2.3 (5 / 0.7)	60 (5 / 0.6)	26.09	57.7	diet	60	2 880	7	Stuart <i>et al.</i> (2000c)
	<i>lacZ</i> plasmid mouse	+	4 (- / -)	21 (4 / -)	5.25	17	diet	14	67.2	0	Klein <i>et al.</i> (2001)
	<i>gpt</i> delta (Spi)	+	0.4 (3 / -)	4.5 (3 / -)	11.25	4.1	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	Muta TM Mouse	-	3.5 (2 / 0.5)	2.4 (3 / 0.2)	0.69	-1.1	gavage	4	8	7	Lynch, Gooderham and Boobis (1996)
	Muta TM Mouse	-	1.5 (3 / 1)	1.5 (3 / 0.6)	1	0	gavage	4	0.8	7	Lynch, Gooderham and Boobis (1996)
	Muta TM Mouse	-	3.5 (2 / 0.5)	2.6 (3 / 0.5)	0.74	-0.9	gavage	4	0.8	7	Lynch, Gooderham and Boobis (1996)
	Muta TM Mouse	+	1.5 (3 / 1)	9 (3 / 0.1)	6	7.5	gavage	4	80	7	Lynch, Gooderham and Boobis (1996)
	Muta TM Mouse	-	2.8 (3 / 1.1)	2.7 (3 / 1.3)	0.96	-0.1	gavage	4	80	7	Lynch, Gooderham and Boobis (1996)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	2 (3 / 2.1)	8.4 (3 / 0.9)	4.2	6.4	gavage	4	80	7	Lynch, Gooderham and Boobis (1996)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.5 (3 / -)	4 (3 / -)	8	3.5	diet	91	4 368	14	Masumura <i>et al.</i> (1999a)
	Muta TM Mouse	-	3.5 (2 / 0.5)	5.6 (3 / 0.8)	1.6	2.1	gavage	4	80	7	Lynch, Gooderham and Boobis (1996)
	Muta TM Mouse	-	1.5 (3 / 1)	2.1 (3 / 0.4)	1.4	0.6	gavage	4	8	7	Lynch, Gooderham and Boobis (1996)
PhIP + 3H-1,2-dithiole-3-thione (D3T)	Big Blue [®] rat	+	6.4 (4 / 1.1)	58.8 (5 / -)	9.19	52.4	diet	61	1 464	7	Yang <i>et al.</i> (2001)
	Big Blue [®] rat	+	4.9 (5 / 1.4)	93 (5 / -)	18.98	88.1	diet	61	1 464	7	Yang <i>et al.</i> (2001)
	Big Blue [®] rat	+	6.1 (5 / 1.6)	78.3 (5 / -)	12.84	72.2	diet	61	1 464	7	Yang <i>et al.</i> (2001)
PhIP + conjugated linoleic acid (CLA)	Big Blue [®] rat	+	6.4 (4 / 1.1)	74.4 (5 / -)	11.63	68	diet	61	1 464	7	Yang <i>et al.</i> (2001)
	Big Blue [®] rat	+	4.9 (5 / 1.4)	102.9 (5 / -)	21	98	diet	61	nd	7	Yang <i>et al.</i> (2001)
	Big Blue [®] rat	+	4.3 (6 / 1.9)	19.3 (5 / 2.6)	4.49	15	diet	47	564	7	Yang, Glickman and de Boer (2002)
	Big Blue [®] rat	+	5.3 (6 / 2.1)	30.7 (9 / 2.8)	5.79	25.4	diet	47	564	7	Yang, Glickman and de Boer (2002)
	Big Blue [®] rat	+	6.1 (5 / 1.6)	87 (5 / -)	14.26	80.9	diet	61	1 464	7	Yang <i>et al.</i> (2001)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
PhIP + high-fat diet	Big Blue [®] rat	+	2.4 (4 / 1.4)	9.1 (5 / 1.9)	3.79	6.7	diet	47	nd	7	Yang <i>et al.</i> (2003)
	Big Blue [®] rat	+	2.5 (3 / -)	19.3 (3 / 0.4)	7.72	16.8	gavage	12	750	42	Yu <i>et al.</i> (2002)
	Big Blue [®] rat	-	5 (3 / -)	10 (3 / -)	2	5	gavage	12	750	42	Yu <i>et al.</i> (2002)
PhIP + low-fat diet	Big Blue [®] rat	+	2.5 (3 / -)	23.1 (3 / 0.3)	9.24	20.6	gavage	12	750	42	Yu <i>et al.</i> (2002)
	Big Blue [®] rat	-	5 (3 / -)	9 (3 / -)	1.8	4	gavage	12	750	42	Yu <i>et al.</i> (2002)
2-Amino-3,4-dimethylimidazo(4,5-f)quinoline (MeIQ)	Big Blue [®] mouse	+	1.9 (3 / 1)	10.9 (3 / 0.7)	5.74	9	diet	84	3 024	0	Suzuki <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	2.9 (3 / 0.6)	110.5 (3 / 0.4)	38.1	107.6	diet	84	3 024	0	Suzuki <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	2.1 (6 / 1.3)	28.9 (3 / 0.6)	13.76	26.8	diet	28	1 008	0	Suzuki <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	1.3 (3 / 0.7)	15.5 (3 / 0.5)	11.92	14.2	diet	7	252	0	Suzuki <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	3.8 (16 / 0.6)	9.8 (16 / 0.4)	2.58	6	diet	84	3 024	0	Suzuki <i>et al.</i> (1996a)
	Big Blue [®] mouse	-	3.3 (8 / 0.5)	2.5 (8 / 0.6)	0.76	-0.8	diet	7	252	0	Suzuki <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	1.4 (6 / 2)	7.6 (3 / 0.6)	5.43	6.2	diet	2	72	0	Suzuki <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	1 (3 / 1)	4 (3 / 1.1)	4	3	diet	7	252	0	Suzuki <i>et al.</i> (1996a)
	Big Blue [®] mouse	-	2.9 (5 / 0.5)	2 (5 / 0.8)	0.69	-0.9	diet	84	3 024	0	Suzuki <i>et al.</i> (1996a)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	–	1.6 (2 / 0.4)	2.6 (2 / 0.5)	1.63	1	diet	7	252	0	Suzuki <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	3.1 (3 / 0.6)	14.2 (3 / 0.6)	4.58	11.1	diet	84	3 024	0	Suzuki <i>et al.</i> (1996a)
	Big Blue [®] mouse	–	2.5 (6 / 1.3)	3.1 (3 / 0.8)	1.24	0.6	diet	28	1 008	0	Suzuki <i>et al.</i> (1996a)
	Big Blue [®] mouse	–	2.1 (3 / 0.7)	2.1 (3 / 0.8)	1	0	diet	7	252	0	Suzuki <i>et al.</i> (1996a)
	Muta TM Mouse <i>cII</i>	+	6.69 (4–5 / –)	18.3 (4–5 / –)	2.74	11.61	gavage	5	100	14	Itoh <i>et al.</i> (2003)
	Muta TM Mouse <i>cII</i>	–	8.83 (4–5 / –)	11.6 (4–5 / –)	1.31	2.77	gavage	5	100	14	Itoh <i>et al.</i> (2003)
	Big Blue [®] mouse	–	3.6 (24 / 1.1)	3.2 (8 / 0.5)	0.89	–0.4	diet	28	1 008	0	Suzuki <i>et al.</i> (1996a)
	Muta TM Mouse <i>cII</i>	+	5.94 (4–5 / –)	11.81 (4–5 / –)	1.99	5.87	gavage	5	100	14	Itoh <i>et al.</i> (2003)
2-Amino-3,8-dimethylimidazo(4,5-f)quinoxaline (MeIQx)	Muta TM Mouse	+	2.9 (6 / 2)	11.3 (6 / 2.2)	3.9	8.4	gavage	10	200	28	Davis <i>et al.</i> (1996)
	Big Blue [®] rat	–	0.58 (5 / 0.783)	0.39 (5 / 0.519)	0.67	–0.19	diet	112	474.8	0	Hoshi <i>et al.</i> (2004)
	Big Blue [®] mouse	+	1.6 (3 / 0.3)	6.5 (3 / 0.2)	4.06	4.9	diet	28	1 008	0	Itoh <i>et al.</i> (2000)
	Big Blue [®] mouse	+	2.3 (3 / 0.5)	20.7 (3 / 0.4)	9	18.4	diet	84	3 024	0	Itoh <i>et al.</i> (2000)
	<i>gpt</i> delta (<i>gpt</i>)	+	1.22 (5 / 2.51)	23.8 (5 / 2.49)	19.51	22.58	diet	546	19 650	0	unpublished

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>gpt</i> delta (<i>gpt</i>)	–	0.9 (5 / 4.3)	0.93 (5 / 4.64)	1.03	0.03	diet	84	30	0	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	–	0.9 (5 / 4.3)	1.17 (5 / 3.89)	1.3	0.27	diet	84	302	0	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	+	0.9 (5 / 4.3)	2.54 (5 / 4.08)	2.82	1.64	diet	84	3 025	0	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	–	0.66 (5 / 5.54)	0.55 (5 / 2.2)	0.83	–0.11	diet	84	30	0	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	+	0.66 (5 / 5.54)	2.02 (5 / 2.32)	3.06	1.36	diet	84	302	0	unpublished
	Muta TM Mouse	+	3.3 (6 / 2)	16.1 (6 / 2)	4.88	12.8	gavage	10	200	28	Davis <i>et al.</i> (1996)
	Big Blue [®] mouse	–	1.8 (3 / 0.4)	3.2 (3 / 0.2)	1.78	1.4	diet	28	1 008	0	Itoh <i>et al.</i> (2000)
	Muta TM Mouse	+	17 (3 / –)	836 (3 / –)	49.18	819	diet	280	20 160	0	Ryu <i>et al.</i> (1999a)
	Muta TM Mouse	+	11.5 (3 / –)	519 (3 / –)	45.13	507.5	diet	280	20 160	0	Ryu <i>et al.</i> (1999a)
	Muta TM Mouse	+	13 (3 / –)	714 (3 / –)	54.92	701	diet	210	15 120	0	Ryu <i>et al.</i> (1999a)
	Muta TM Mouse	+	6 (3 / –)	495 (3 / –)	82.5	489	diet	210	15 120	0	Ryu <i>et al.</i> (1999a)
	Muta TM Mouse	+	8 (3 / –)	520 (3 / –)	65	512	diet	280	20 160	0	Ryu <i>et al.</i> (1999a)
	Muta TM Mouse	+	3.5 (3 / –)	191 (3 / –)	54.57	187.5	diet	280	20 160	0	Ryu <i>et al.</i> (1999a)
	Muta TM Mouse	+	9 (3 / –)	520 (3 / –)	57.78	511	diet	210	15 120	0	Ryu <i>et al.</i> (1999a)
	Muta TM Mouse	+	3.5 (3 / –)	243 (3 / –)	69.43	239.5	diet	210	15 120	0	Ryu <i>et al.</i> (1999a)
	Big Blue [®] mouse	+	4.3 (3 / 0.4)	10 (3 / 0.5)	2.33	5.7	diet	84	3 024	0	Itoh <i>et al.</i> (2000)
	Big Blue [®] mouse	+	1.7 (3 / 0.3)	6.8 (3 / 0.5)	4	5.1	diet	84	3 024	0	Itoh <i>et al.</i> (2000)
	Big Blue [®] mouse	+	2.3 (3 / 0.4)	6.5 (3 / 0.6)	2.83	4.2	diet	28	1 008	0	Itoh <i>et al.</i> (2000)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	-	3.3 (3 / 0.8)	2.9 (3 / 0.8)	0.88	-0.4	diet	28	1 008	0	Itoh <i>et al.</i> (2000)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.66 (5 / 5.54)	5.49 (5 / 4.65)	8.32	4.83	diet	84	3 025	0	unpublished
	Big Blue [®] rat	-	1.59 (5 / 0.771)	2.71 (5 / 0.791)	1.7	1.12	diet	112	474.8	0	Hoshi <i>et al.</i> (2004)
	Big Blue [®] mouse	+	2.3 (3 / 0.5)	7.1 (3 / 0.5)	3.09	4.8	diet	84	3 024	0	Itoh <i>et al.</i> (2000)
	Big Blue [®] rat	+	0.36 (5 / 0.598)	18.71 (5 / 0.824)	51.97	18.35	diet	112	474.8	0	Hoshi <i>et al.</i> (2004)
	Big Blue [®] rat	+	1.47 (5 / 0.669)	7.09 (5 / 0.645)	4.82	5.62	diet	112	474.8	0	Hoshi <i>et al.</i> (2004)
	Big Blue [®] rat	+	1.73 (5 / 0.526)	4.5 (5 / 0.554)	2.6	2.77	diet	112	474.8	0	Hoshi <i>et al.</i> (2004)
	Big Blue [®] rat	+	0.45 (5 / 0.727)	2.99 (5 / 0.582)	6.64	2.54	diet	112	474.8	0	Hoshi <i>et al.</i> (2004)
	Big Blue [®] rat	-	1.48 (10 / 1.213)	1.56 (5 / 0.583)	1.05	0.08	diet	112	0.046	0	Hoshi <i>et al.</i> (2004)
	Big Blue [®] rat	-	0.78 (5 / 0.613)	2.6 (5 / 0.586)	3.33	1.82	diet	112	474.8	0	Hoshi <i>et al.</i> (2004)
	Big Blue [®] rat	-	1.48 (10 / 1.213)	1.99 (5 / 0.588)	1.34	0.51	diet	112	0.46	0	Hoshi <i>et al.</i> (2004)
	Big Blue [®] rat	-	0.65 (5 / 0.618)	0.42 (5 / 0.669)	0.65	-0.23	diet	112	474.8	0	Hoshi <i>et al.</i> (2004)
	Big Blue [®] rat	-	1.81 (5 / 0.618)	3.01 (5 / 0.689)	1.66	1.2	diet	112	474.8	0	Hoshi <i>et al.</i> (2004)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	-	1.3 (5 / 0.544)	0.8 (5 / 0.87)	0.62	-0.5	diet	112	474.8	0	Hoshi <i>et al.</i> (2004)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.617 (5 / 8.022)	1.401 (5 / 4.921)	2.27	0.78	diet	84	420	0	Masumura <i>et al.</i> (2003a)
	Big Blue [®] rat	-	0.18 (5 / 0.53)	0.48 (5 / 0.615)	2.67	0.3	diet	112	474.8	0	Hoshi <i>et al.</i> (2004)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.617 (5 / 8.022)	0.758 (4 / 7.478)	1.23	0.14	diet	84	42	0	Masumura <i>et al.</i> (2003a)
	Big Blue [®] mouse	-	1.7 (3 / 1.1)	2.6 (3 / 1.1)	1.53	0.9	gavage	1	100	14	Itoh <i>et al.</i> (2000)
	Big Blue [®] rat	-	1.48 (10 / 1.213)	2.94 (5 / 0.567)	1.99	1.46	diet	112	4.78	0	Hoshi <i>et al.</i> (2004)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.9 (5 / 4.298)	0.933 (5 / 3.546)	1.04	0.03	diet	84	42	0	Masumura <i>et al.</i> (2003a)
	Big Blue [®] rat	+	1.48 (10 / 1.213)	5.14 (5 / 0.565)	3.47	3.66	diet	112	47.26	0	Hoshi <i>et al.</i> (2004)
	Big Blue [®] rat	+	1.48 (10 / 1.213)	64.15 (5 / 0.616)	43.34	62.67	diet	112	474.8	0	Hoshi <i>et al.</i> (2004)
	<i>gpt</i> delta (<i>gpt</i>)	+	1.22 (5 / -)	23.84 (5 / -)	19.54	22.62	diet	546	22 386	0	Masumura <i>et al.</i> (2003a)
	Big Blue [®] mouse	-	2.9 (3 / 0.8)	1.8 (3 / 0.7)	0.62	-1.1	gavage	1	100	14	Itoh <i>et al.</i> (2000)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.9 (5 / 4.298)	2.538 (5 / 2.831)	2.82	1.64	diet	84	4 200	0	Masumura <i>et al.</i> (2003a)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
2-Amino-3-methylimidazo(4,5-f)quinoline (IQ)	Big Blue [®] rat	-	1.48 (10 / 1.213)	1.49 (5 / 0.598)	1.01	0.01	diet	112	0.005	0	Hoshi <i>et al.</i> (2004)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.617 (5 / 8.022)	5.285 (5 / 7.264)	8.57	4.67	diet	84	4 200	0	Masumura <i>et al.</i> (2003a)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.9 (5 / 4.298)	1.174 (5 / 3.885)	1.3	0.27	diet	84	420	0	Masumura <i>et al.</i> (2003a)
	Big Blue [®] rat <i>cII</i>	-	2.6 (6 / -)	4 (6 / -)	1.5	1.4	diet	21	420 mg/kg feed	0	Moller <i>et al.</i> (2002)
	Muta TM Mouse	+	3.3 (6 / 2)	17.5 (6 / 2.1)	5.3	14.2	gavage	10	200	28	Davis <i>et al.</i> (1996)
	Big Blue [®] rat	-	3.3 (4 / 1.5)	4.7 (4 / 1.5)	1.42	1.4	gavage	1	20	14	Bol <i>et al.</i> (2000)
	Big Blue [®] rat	-	2.8 (4 / 1.7)	5.1 (4 / 1.4)	1.82	2.3	gavage	1	20	14	Bol <i>et al.</i> (2000)
	Big Blue [®] rat	+	3.3 (4 / 1.5)	5.9 (4 / 1.6)	1.79	2.6	gavage	5	100	14	Bol <i>et al.</i> (2000)
	Big Blue [®] rat	+	2.7 (4 / 1.3)	7.4 (4 / 1.3)	2.74	4.7	gavage	5	100	14	Bol <i>et al.</i> (2000)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.55 (5 / 2.976)	18.8 (5 / 0.525)	34.18	18.25	diet	91	1 374.1	0	Kanki <i>et al.</i> (2005)
	Big Blue [®] rat <i>cII</i>	-	3.3 (9 / 1.4)	5.3 (8 / -)	1.61	2	diet	21	123	0	Hansen <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	+	2.3 (6 / -)	10 (6 / -)	4.3	7.7	diet	21	1 470 mg/kg feed	0	Moller <i>et al.</i> (2002)
Big Blue [®] rat <i>cII</i>	+	2.23 (6 / 1.787)	9.85 (6 / 2.892)	4.42	7.62	diet	21	177	0	Dybdahl <i>et al.</i> (2003)	
Muta TM Mouse	+	2.9 (6 / 2)	13.4 (6 / 2)	4.62	10.5	gavage	10	200	28	Davis <i>et al.</i> (1996)	

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat <i>cII</i>	+	2.91 (6 / 2.635)	5.4 (6 / 1.776)	1.86	2.49	diet	21	177	0	Dybdahl <i>et al.</i> (2003)
	Big Blue [®] rat	+	2.8 (4 / 1.7)	12.9 (4 / 2.7)	4.61	10.1	gavage	5	100	14	Bol <i>et al.</i> (2000)
	Big Blue [®] rat <i>cII</i>	+	3.8 (9 / -)	12 (8 / -)	3.16	8.2	diet	21	123	0	Hansen <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	+	2.3 (6 / -)	13.8 (6 / -)	6	11.5	diet	21	4 200 mg/kg feed	0	Moller <i>et al.</i> (2002)
	Big Blue [®] rat <i>cII</i>	-	2.3 (6 / -)	5.3 (6 / -)	2.3	3	diet	21	420 mg/kg feed	0	Moller <i>et al.</i> (2002)
	Big Blue [®] rat <i>cII</i>	+	2.6 (6 / -)	5.5 (6 / -)	2.1	2.9	diet	21	1 470 mg/kg feed	0	Moller <i>et al.</i> (2002)
	Muta [™] Mouse <i>cII</i>	-	5.94 (4-5 / -)	9.59 (4-5 / -)	1.61	3.65	gavage	5	100	14	Itoh <i>et al.</i> (2003)
	Big Blue [®] rat	-	2.7 (4 / 1.3)	5.6 (4 / 1.2)	2.07	2.9	gavage	1	20	14	Bol <i>et al.</i> (2000)
	Big Blue [®] rat <i>cII</i>	+	2.6 (6 / -)	7 (6 / -)	2.7	4.4	diet	21	4 200 mg/kg feed	0	Moller <i>et al.</i> (2002)
	Muta [™] Mouse <i>cII</i>	-	8.83 (4-5 / -)	11.6 (4-5 / -)	1.31	2.77	gavage	5	100	14	Itoh <i>et al.</i> (2003)
	Muta [™] Mouse <i>cII</i>	+	6.69 (4-5 / -)	12.6 (4-5 / -)	1.88	5.91	gavage	5	100	14	Itoh <i>et al.</i> (2003)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
IQ + sucrose	Big Blue [®] rat <i>cII</i>	+	3.3 (9 / 1.4)	7.3 (8 / -)	2.21	4	diet	21	123	0	Hansen <i>et al.</i> (2004)
	Big Blue [®] rat	-	3.63 (8 / -)	3.24 (8 / -)	0.89	-0.39	diet	21	36	0	Moller <i>et al.</i> (2003)
	Big Blue [®] rat	-	3.63 (8 / -)	5.45 (6 / -)	1.5	1.82	diet	21	36	0	Moller <i>et al.</i> (2003)
	Big Blue [®] rat	-	2.59 (8 / -)	4.13 (8 / -)	1.59	1.54	diet	21	36	0	Moller <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	+	3.8 (9 / -)	10.6 (8 / -)	2.79	6.8	diet	21	123	0	Hansen <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	+	3.8 (9 / -)	8 (8 / -)	2.11	4.2	diet	21	123	0	Hansen <i>et al.</i> (2004)
	Big Blue [®] rat	-	2.59 (8 / -)	3.23 (6 / -)	1.25	0.64	diet	21	36	0	Moller <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	+	3.3 (9 / 1.4)	6.5 (8 / -)	1.97	3.2	diet	21	123	0	Hansen <i>et al.</i> (2004)
	Big Blue [®] rat	-	3.63 (8 / -)	2.7 (8 / -)	0.74	-0.93	diet	21	1.4	0	Risom <i>et al.</i> (2003)
	Big Blue [®] rat	-	2.59 (8 / -)	3.24 (8 / -)	1.25	0.65	diet	21	1.4	0	Risom <i>et al.</i> (2003)
	Big Blue [®] rat	-	2.59 (8 / -)	2.3 (8 / -)	0.89	-0.29	diet	21	1.4	0	Risom <i>et al.</i> (2003)
	Big Blue [®] rat	-	3.63 (8 / -)	3.16 (8 / -)	0.87	-0.47	diet	21	1.4	0	Risom <i>et al.</i> (2003)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
2-Nitronaphthalene	Muta TM Mouse	+	3.135 (3 / 2.105)	6.315 (2 / 0.831)	2.01	3.18	topical	28	56 000	7	Kirkland and Beevers (2006)
	Muta TM Mouse	+	4.064 (4 / 4.473)	9.799 (4 / 7.516)	2.41	5.735	topical	28	56 000	7	Kirkland and Beevers (2006)
	Muta TM Mouse	-	4.23 (3 / 1.424)	6.601 (5 / 1.089)	1.56	2.371	topical	28	56 000	7	Kirkland and Beevers (2006)
2-Nitro- <i>p</i> -phenylenediamine	Big Blue [®] mouse	-	2.2 (4 / 1.3)	2.4 (4 / 1.5)	1.09	0.2	gavage	12	1 500	10	Suter <i>et al.</i> (1996)
	Big Blue [®] mouse	+	2.7 (5 / 1.4)	5.4 (5 / 1.5)	2	2.7	gavage	12	1 500	10	Suter <i>et al.</i> (1996)
3-Amino-1-methyl-5H-pyrido(4,3-b)indole (Trp-P-2)	Muta TM Mouse <i>cII</i>	-	6.69 (4-5 / -)	9.49 (4-5 / -)	1.42	2.8	gavage	5	100	14	Itoh <i>et al.</i> (2003)
	Muta TM Mouse <i>cII</i>	-	5.94 (4-5 / -)	7.19 (4-5 / -)	1.21	1.25	gavage	5	100	14	Itoh <i>et al.</i> (2003)
	Muta TM Mouse <i>cII</i>	-	8.83 (4-5 / -)	8.7 (4-5 / -)	0.99	-0.13	gavage	5	100	14	Itoh <i>et al.</i> (2003)
3-Chloro-4-(dichloromethyl)-5-hydroxy-2(5H)-furanone (MX)	<i>gpt</i> delta (<i>gpt</i>)	-	0.188 (5 / 3.027)	0.182 (5 / 4.511)	0.97	-0.01	drinking water	84	361	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.203 (5 / 3.159)	0.419 (5 / 2.48)	2.06	0.22	drinking water	84	445	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	-	0.155 (5 / 6.645)	0.174 (5 / 9.267)	1.12	0.02	drinking water	84	118	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	-	0.155 (5 / 6.645)	0.168 (5 / 10.245)	1.08	0.01	drinking water	84	1 210	0	Nishikawa <i>et al.</i> (2006)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>gpt</i> delta (Spi)	–	0.11 (5 / 4.617)	0.084 (5 / 2.202)	0.76	–0.03	drinking water	84	118	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	–	0.217 (5 / 3.675)	0.176 (5 / 3.473)	0.81	–0.04	drinking water	84	361	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	–	0.11 (5 / 4.617)	0.081 (5 / 5.154)	0.74	–0.03	drinking water	84	361	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	–	0.11 (5 / 4.617)	0.125 (5 / 4.926)	1.14	0.02	drinking water	84	1 210	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	–	0.335 (5 / 2.069)	0.363 (5 / 4.302)	1.08	0.03	drinking water	546	6 006	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	–	0.247 (5 / 3.206)	0.265 (5 / 3.902)	1.07	0.02	drinking water	546	5 842	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	–	0.188 (5 / 3.027)	0.25 (5 / 3.908)	1.33	0.06	drinking water	84	118	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	–	0.188 (5 / 3.027)	0.205 (5 / 4.052)	1.09	0.02	drinking water	84	1 210	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	–	0.203 (5 / 3.159)	0.24 (5 / 2.24)	1.18	0.04	drinking water	84	1 470	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	–	0.155 (5 / 6.645)	0.199 (5 / 9.774)	1.28	0.04	drinking water	84	361	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	–	0.217 (5 / 3.675)	0.15 (5 / 5.811)	0.69	–0.07	drinking water	84	1 210	0	Nishikawa <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	–	0.217 (5 / 3.675)	0.232 (5 / 4.397)	1.07	0.02	drinking water	84	118	0	Nishikawa <i>et al.</i> (2006)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
3-Fluoroquinoline	<i>gpt</i> delta (<i>gpt</i>)	–	0.203 (5 / 3.159)	0.217 (5 / 2.192)	1.07	0.01	drinking water	84	151	0	Nishikawa <i>et al.</i> (2006)
	Muta TM Mouse	–	3.6 (3 / –)	4 (3 / –)	1.11	0.4	ip	4	200	14	Miyata <i>et al.</i> (1998)
	Muta TM Mouse	–	5.1 (5 / 0.5)	5.2 (5 / 0.6)	1.02	0.1	ip	4	200	14	Miyata <i>et al.</i> (1998)
3-Methylcholanthrene ^e	Muta TM Mouse	–	2.8 (3 / –)	4.6 (3 / –)	1.64	1.8	ip	4	200	14	Miyata <i>et al.</i> (1998)
	Big Blue [®] mouse	+	1.8 (4 / 1.5)	4.3 (4 / 1.3)	2.39	2.5	ip	1	80	3	Rihn <i>et al.</i> (2000b)
	Big Blue [®] rat	+	1.7 (4 / 0.948)	8.8 (4 / 0.728)	5.18	7.1	gavage	21	320	17	Lehmann <i>et al.</i> (2007)
	Big Blue [®] mouse	+	6.9 (4 / 1.4)	29.1 (4 / 1.6)	4.22	22.2	ip	1	80	30	Rihn <i>et al.</i> (2000b)
	Big Blue [®] mouse	+	3.7 (4 / 1.4)	9.8 (4 / 1.7)	2.65	6.1	ip	1	80	6	Rihn <i>et al.</i> (2000b)
3-Nitrobenzanthrone	Big Blue [®] mouse	+	7.6 (4 / 1.4)	20.3 (4 / 1.3)	2.67	12.7	ip	1	80	14	Rihn <i>et al.</i> (2000b)
	Muta TM Mouse <i>cII</i>	–	1.52 (5 / 0.84)	2.28 (5 / 0.73)	1.5	0.76	ip	1	25	3	Arlt <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	–	2.88 (5 / 0.81)	3.44 (5 / 0.96)	1.19	0.56	ip	1	25	3	Arlt <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	–	3.62 (5 / 1.92)	3.76 (5 / 1.19)	1.04	0.14	ip	1	25	3	Arlt <i>et al.</i> (2004)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK)	Muta TM Mouse <i>cII</i>	+	3.67 (5 / 1.96)	25.87 (4 / 1.55)	7.05	22.2	ip	1	25	3	Arlt <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	inc.	1.31 (2 / 1.23)	5.44 (2 / 1.43)	4.15	4.13	ip	1	25	3	Arlt <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	3.81 (5 / 0.43)	3.85 (5 / 0.54)	1.01	0.04	ip	1	25	3	Arlt <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	+	3.05 (5 / 0.79)	14.74 (4 / 0.07)	4.83	11.69	ip	1	25	3	Arlt <i>et al.</i> (2004)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.81 (6 / -)	13.4 (6 / -)	16.54	12.59	ip	4	400	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.423 (6 / 8.274)	1.426 (6 / 4.698)	3.37	1.003	ip	4	400	0	Ikeda <i>et al.</i> (2007)
	Muta TM Mouse	+	3.1 (5 / -)	15 (5 / -)	4.84	11.9	drinking water	28	588	14	von Pressentin, Kosinska and Guttenplan (1999)
	Muta TM Mouse	+	3.9 (6 / -)	39.4 (5 / -)	10.1	35.5	drinking water	5	615	14	von Pressentin, Chen and Guttenplan (2001)
	Muta TM Mouse	+	3.8 (5 / -)	5.6 (5 / -)	1.47	1.8	drinking water	28	588	14	von Pressentin, Kosinska and Guttenplan (1999)
	Muta TM Mouse	+	3.2 (6 / -)	9.1 (5 / -)	2.84	5.9	drinking water	28	588	14	von Pressentin, Kosinska and Guttenplan (1999)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	5.89 (4 / 1.51)	45.76 (4 / 0.911)	7.77	39.87	ip	28	1 000	0	Hashimoto, Ohsawa and Kimura (2004)
	Muta TM Mouse	+	3.3 (6 / -)	7.5 (5 / -)	2.27	4.2	drinking water	5	615	14	von Pressentin, Chen and Guttenplan (2001)
	Muta TM Mouse <i>cII</i>	+	3.83 (4 / 1.673)	8.2 (4 / 1.378)	2.14	4.37	ip	28	500	0	Hashimoto, Ohsawa and Kimura (2004)
	<i>gpt</i> delta (Spi)	-	0.411 (6 / 18.25)	0.515 (6 / 8.155)	1.25	0.104	ip	4	400	0	Ikeda <i>et al.</i> (2007)
	Muta TM Mouse <i>cII</i>	+	3.83 (4 / 1.673)	14.05 (4 / 1.196)	3.67	10.22	ip	28	1 000	0	Hashimoto, Ohsawa and Kimura (2004)
	Muta TM Mouse <i>cII</i>	+	2.34 (4 / 1.154)	15.4 (4 / 0.877)	6.58	13.06	ip	28	500	0	Hashimoto, Ohsawa and Kimura (2004)
	Muta TM Mouse <i>cII</i>	+	2.34 (4 / 1.154)	25.25 (4 / 0.887)	10.79	22.91	ip	28	1 000	0	Hashimoto, Ohsawa and Kimura (2004)
	Muta TM Mouse	+	3.3 (6 / -)	15.8 (5 / -)	4.79	12.5	drinking water	5	615	14	von Pressentin, Chen and Guttenplan (2001)
	Muta TM Mouse	-	3.6 (6 / -)	5.6 (5 / -)	1.56	2	drinking water	5	615	14	von Pressentin, Chen and Guttenplan (2001)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.6 (6 / -)	9.2 (5 / -)	2.56	5.6	drinking water	5	615	14	von Pressentin, Chen and Guttenplan (2001)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.64 (- / -)	6.22 (- / -)	9.72	5.58	ip	1	100	18	Miyazaki <i>et al.</i> (2005)
	Muta TM Mouse	+	5.89 (4 / 1.51)	36.63 (4 / 1.278)	6.22	30.74	ip	28	500	0	Hashimoto, Ohsawa and Kimura (2004)
	Muta TM Mouse	+	8.34 (4 / 1.463)	26.1 (4 / 1.345)	3.13	17.76	ip	28	1 000	0	Hashimoto, Ohsawa and Kimura (2004)
	Muta TM Mouse	+	8.34 (4 / 1.463)	15.65 (4 / 1.144)	1.88	7.31	ip	28	500	0	Hashimoto, Ohsawa and Kimura (2004)
	Muta TM Mouse	+	3.3 (6 / -)	10.3 (5 / -)	3.12	7	drinking water	5	615	14	von Pressentin, Chen and Guttenplan (2001)
NNK + 8-methoxy-psoralen	<i>gpt</i> delta (<i>gpt</i>)	-	0.64 (- / -)	0.4 (- / -)	0.63	-0.24	ip	1	100	18	Miyazaki <i>et al.</i> (2005)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.64 (- / -)	0.7 (- / -)	1.09	0.06	ip	1	100	18	Miyazaki <i>et al.</i> (2005)
NNK + green tea	Muta TM Mouse	-	3.6 (6 / -)	5.6 (5 / -)	1.56	2	drinking water	35	615	14	von Pressentin, Chen and Guttenplan (2001)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.3 (6 / -)	11.1 (5 / -)	3.36	7.8	drinking water	35	615	14	von Pressentin, Chen and Guttenplan (2001)
	Muta TM Mouse	+	3.9 (6 / -)	28 (5 / -)	7.18	24.1	drinking water	35	615	14	von Pressentin, Chen and Guttenplan (2001)
	Muta TM Mouse	-	3.6 (6 / -)	3.7 (5 / -)	1.03	0.1	drinking water	35	615	14	von Pressentin, Chen and Guttenplan (2001)
	Muta TM Mouse	+	3.3 (6 / -)	6.8 (5 / -)	2.06	3.5	drinking water	35	615	14	von Pressentin, Chen and Guttenplan (2001)
4,10-Diazachrysene	Muta TM Mouse <i>cII</i>	+	3.73 (4 / 4.137)	15.15 (4 / 4.202)	4.06	11.42	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	+	2.35 (4 / 3.782)	13.03 (4 / 3.873)	5.54	10.68	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	+	3.02 (4 / 5.898)	8.97 (4 / 8.453)	2.97	5.95	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	+	2.08 (4 / 4.209)	13.29 (4 / 5.813)	6.39	11.21	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	+	2.45 (4 / 5.165)	13.09 (4 / 6.008)	5.34	10.64	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	7.38 (4 / 2.11)	34.51 (4 / 2.238)	4.68	27.13	ip	28	800	7	Yamada <i>et al.</i> (2005)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
4-Acetylaminofluorene (4-AAF)	Muta TM Mouse	+	4.65 (4 / 3.887)	27.78 (4 / 2.964)	5.97	23.13	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	5.89 (4 / 4.863)	19.55 (4 / 6.281)	3.32	13.66	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	6.91 (4 / 2.673)	128.2 (4 / 5.639)	18.55	121.29	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	4.56 (4 / 3.535)	27.23 (4 / 4.501)	5.97	22.67	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	8.82 (4 / 2.931)	49.36 (4 / 1.557)	5.6	40.54	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	+	3.28 (4 / 4.085)	50.93 (4 / 6.606)	15.53	47.65	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	1.8 (6 / 2.6)	5.71 (4 / 1)	3.17	3.91	gavage	1	1 000	14	Tinwell, Lefevre and Ashby (1998)
	Big Blue [®] mouse <i>cII</i>	+	7.7 (6 / 1.458)	22.1 (5 / 1.54)	2.87	14.4	ip	7	31	56	Chen <i>et al.</i> (2005b)
	Big Blue [®] rat	-	1.76 (- / 0.05)	7.2 (- / 0.05)	4.09	5.44	gavage	10	200	14	Turner <i>et al.</i> (2001)
	Big Blue [®] rat	+	1.44 (6 / 1.2)	4.49 (6 / 1.2)	3.12	3.05	gavage	10	200	14	Turner <i>et al.</i> (2001)
Big Blue [®] rat	+	1.78 (9 / 2)	12.3 (9 / 1)	6.91	10.52	gavage	10	200	14	Turner <i>et al.</i> (2001)	
Muta TM Mouse	+	3 (6 / 0.3)	14.4 (6 / 0.3)	4.8	11.4	gavage	10	200	14	Fletcher, Tinwell and Ashby (1998)	

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	2.7 (6 / 5.3)	6.5 (6 / 3.6)	2.41	3.8	gavage	10	200	14	Fletcher, Tinwell and Ashby (1998)
	Big Blue [®] mouse <i>cII</i>	+	7.7 (6 / 1.458)	15.6 (6 / 1.913)	2.03	7.9	ip	7	9	56	Chen <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cII</i>	+	8.6 (5 / 1.609)	27.8 (5 / 1.083)	3.23	19.2	ip	7	31	56	Chen <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cII</i>	-	7.2 (5 / 2.049)	6.7 (6 / 2.868)	0.93	-0.5	ip	7	31	56	Chen <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cII</i>	-	8.1 (5 / 1.433)	7.1 (5 / 1.71)	0.88	-1	ip	7	31	56	Chen <i>et al.</i> (2005b)
	Big Blue [®] mouse	+	1.5 (6 / 0.673)	6.3 (6 / 0.785)	4.2	4.8	ip	7	9	56	Chen <i>et al.</i> (2005b)
	Big Blue [®] mouse	+	1.5 (6 / 0.673)	17.4 (6 / 0.727)	11.6	15.9	ip	7	31	56	Chen <i>et al.</i> (2005b)
	Muta TM Mouse	+	4.1 (4 / 0.9)	54.9 (4 / 0.5)	13.39	50.8	gavage	10	200	14	Fletcher, Tinwell and Ashby (1998)
	Muta TM Mouse	+	3 (6 / 0.3)	7 (6 / 0.3)	2.33	4	gavage	1	75	14	Fletcher, Tinwell and Ashby (1998)
	Muta TM Mouse	-	3.7 (6 / 0.5)	6 (6 / 0.6)	1.62	2.3	gavage	1	75	14	Fletcher, Tinwell and Ashby (1998)
	Muta TM Mouse	-	5.6 (6 / 3.6)	7.8 (6 / 2.3)	1.39	2.2	gavage	1	75	14	Fletcher, Tinwell and Ashby (1998)
	Muta TM Mouse	+	5.6 (6 / 3.6)	20.4 (6 / 4)	3.64	14.8	gavage	10	200	14	Fletcher, Tinwell and Ashby (1998)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
4-Chloro- <i>o</i> -phenylenediamine	Muta TM Mouse	+	2.7 (6 / 5.3)	5.9 (6 / 2.6)	2.19	3.2	gavage	1	75	14	Fletcher, Tinwell and Ashby (1998)
	Muta TM Mouse	+	4.1 (4 / 0.9)	27.5 (2 / 0.2)	6.71	23.4	gavage	1	75	14	Fletcher, Tinwell and Ashby (1998)
	Big Blue [®] mouse	-	2.4 (5 / 1.1)	2.7 (4 / 1.4)	1.13	0.3	gavage	12	2 000	10	Suter <i>et al.</i> (1996)
	Big Blue [®] mouse	+	2.7 (3 / 0.7)	20.5 (3 / 0.7)	7.59	17.8	diet	182	218 400	0	Suter <i>et al.</i> (1998)
	Big Blue [®] mouse	+	7.2 (3 / 0.7)	24.9 (3 / 0.7)	3.46	17.7	diet	182	109 200	0	Suter <i>et al.</i> (1998)
	Big Blue [®] mouse	+	2.7 (5 / 1.5)	4.6 (5 / 1.5)	1.7	1.9	gavage	12	2 000	10	Suter <i>et al.</i> (1996)
	Big Blue [®] mouse	+	7.2 (3 / 0.7)	36.2 (3 / 0.8)	5.03	29	diet	182	218 400	0	Suter <i>et al.</i> (1998)
4-Hydroxybiphenyl	Big Blue [®] rat	-	1.7 (4 / 0.948)	4 (4 / 0.92)	2.35	2.3	gavage	21	328	17	Lehmann <i>et al.</i> (2007)
	Big Blue [®] rat	+	1.7 (4 / 0.948)	4.8 (4 / 0.636)	2.82	3.1	gavage	21	452	17	Lehmann <i>et al.</i> (2007)
4-Nitroquinoline-1-oxide (4-NQO)	Muta TM Mouse	+	7.5 (4 / 1)	261.4 (5 / 1.2)	34.85	253.9	gavage	1	200	7	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	-	9.3 (4 / 2.7)	11.8 (3 / 4.1)	1.27	2.5	ip	1	7.5	28	Nakajima <i>et al.</i> (1999)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat <i>cII</i>	+	4.2 (8 / -)	329 (8 / -)	78.33	324.8	drinking water	70	63	91	Guttenplan <i>et al.</i> (2007)
	Muta TM Mouse	-	5.5 (4 / 0.1)	3.9 (6 / 0.2)	0.71	-1.6	ip	1	7.5	28	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	-	3.1 (4 / 1.4)	3.8 (4 / 0.4)	1.23	0.7	ip	1	7.5	28	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	3.7 (4 / 1.4)	10.2 (5 / 2)	2.76	6.5	gavage	1	200	14	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	2 (4 / 1.3)	5.6 (6 / 2.2)	2.8	3.6	gavage	1	200	28	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	-	9.3 (4 / 2.7)	13 (2 / 0.9)	1.4	3.7	ip	1	15	14	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	2.9 (- / -)	72.7 (6 / 3.4)	25.07	69.8	drinking water	14	62	14	von Pressentin, El Bayoumy and Guttenplan (2000)
	Muta TM Mouse	-	4.3 (- / -)	3 (6 / 1.7)	0.7	-1.3	drinking water	14	62	14	von Pressentin, El Bayoumy and Guttenplan (2000)
	Muta TM Mouse	+	3.5 (- / -)	117 (6 / 5)	33.43	113.5	drinking water	14	62	14	von Pressentin, El Bayoumy and Guttenplan (2000)
	Big Blue [®] rat <i>cII</i>	+	4.2 (8 / -)	184 (8 / -)	43.81	179.8	drinking water	49	44	0	Guttenplan <i>et al.</i> (2007)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.8 (6 / -)	144 (4 / -)	37.89	140.2	drinking water	28	250	14	von Pressentin, Kosinska and Guttenplan (1999)
	Big Blue [®] rat <i>cII</i>	+	4.2 (8 / -)	237 (8 / -)	56.43	232.8	drinking water	70	63	14	Guttenplan <i>et al.</i> (2007)
	Muta TM Mouse	+	3.7 (8 / -)	144 (8 / -)	38.92	140.3	drinking water	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	-	3.9 (- / -)	3.1 (4 / 2.6)	0.79	-0.8	drinking water	14	62	14	von Pressentin, El Bayoumy and Guttenplan (2000)
	Muta TM Mouse	+	4.9 (4 / 2.5)	7.2 (5 / 3.1)	1.47	2.3	ip	1	7.5	7	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	-	3.9 (- / -)	3.3 (6 / 2.5)	0.85	-0.6	drinking water	14	62	14	von Pressentin, El Bayoumy and Guttenplan (2000)
	Muta TM Mouse	+	6.3 (4 / 3)	54.7 (6 / 4.3)	8.68	48.4	gavage	1	200	28	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	3.2 (- / -)	47.2 (6 / 3.5)	14.75	44	drinking water	14	62	14	von Pressentin, El Bayoumy and Guttenplan (2000)
	Muta TM Mouse	+	4.9 (4 / 2.5)	8.8 (6 / 3.3)	1.8	3.9	ip	1	7.5	14	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	-	6.1 (4 / 6.3)	7.5 (6 / 12.2)	1.23	1.4	ip	1	7.5	28	Nakajima <i>et al.</i> (1999)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	2.4 (8 / -)	61 (8 / -)	25.42	58.6	drinking water	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	-	6.1 (4 / 6.3)	13.7 (2 / 0)	2.25	7.6	ip	1	15	7	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	-	7.4 (4 / 2.2)	7.6 (6 / 3.7)	1.03	0.2	ip	1	7.5	28	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	-	3.8 (4 / 1)	3.4 (4 / 0.6)	0.89	-0.4	ip	1	7.5	14	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	-	2.9 (4 / 1)	1.1 (4 / 0.6)	0.38	-1.8	ip	1	7.5	28	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	-	7.4 (4 / 2.2)	19.7 (2 / 0.1)	2.66	12.3	ip	1	15	14	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	9.5 (4 / 1.6)	46.9 (5 / 1.9)	4.94	37.4	gavage	1	200	14	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	3.7 (4 / 1.4)	7.2 (5 / 1.6)	1.95	3.5	gavage	1	200	7	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	7.2 (4 / 1)	27.5 (5 / 1.2)	3.82	20.3	gavage	1	200	7	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	7.2 (4 / 1)	37.1 (5 / 1.2)	5.15	29.9	gavage	1	200	14	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	4.7 (4 / 1.3)	11.9 (6 / 2.4)	2.53	7.2	ip	1	7.5	28	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	4.4 (4 / 1)	244.8 (6 / 1.4)	55.64	240.4	gavage	1	200	28	Nakajima <i>et al.</i> (1999)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	7.5 (4 / 1)	248.1 (5 / 1.2)	33.08	240.6	gavage	1	200	14	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	2.9 (8 / -)	130 (8 / -)	44.83	127.1	drinking water	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	4.8 (4 / 1.5)	12.8 (6 / 1.6)	2.67	8	ip	1	7.5	14	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	9.5 (4 / 1.6)	33.3 (5 / 1.2)	3.51	23.8	gavage	1	200	7	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	15.1 (4 / 1.5)	29.4 (6 / 1.6)	1.95	14.3	gavage	1	200	28	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	-	4.8 (4 / 1.5)	12.3 (2 / 0.1)	2.56	7.5	ip	1	15	7	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	4.8 (4 / 1.5)	7.6 (5 / 2)	1.58	2.8	ip	1	7.5	7	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	3.2 (6 / -)	77.8 (5 / -)	24.31	74.6	drinking water	28	250	14	von Pressentin, Kosinska and Guttenplan (1999)
	Muta TM Mouse	-	3.8 (4 / 1)	4 (3 / 1)	1.05	0.2	ip	1	7.5	7	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	10.9 (4 / 1.7)	80.8 (6 / 2)	7.41	69.9	gavage	1	200	28	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	3.1 (4 / 0.7)	110 (5 / 2)	35.48	106.9	gavage	1	200	14	Nakajima <i>et al.</i> (1999)
	Muta TM Mouse	+	3.1 (4 / 0.7)	160.8 (2 / 0.9)	51.87	157.7	gavage	1	200	7	Nakajima <i>et al.</i> (1999)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
4-NQO + alpha-tocopherol	Muta TM Mouse	+	2.9 (8 / -)	111 (7 / -)	38.28	108.1	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	3.7 (8 / -)	142 (8 / -)	38.38	138.3	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	2.4 (8 / -)	64 (7 / -)	26.67	61.6	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	2.4 (8 / -)	52 (8 / -)	21.67	49.6	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	2.9 (8 / -)	125 (8 / -)	43.1	122.1	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	3.7 (8 / -)	126 (7 / -)	34.05	122.3	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
4-NQO + p-XSC	Muta TM Mouse	+	3.7 (8 / -)	128 (8 / -)	34.59	124.3	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	3.7 (8 / -)	155 (8 / -)	41.89	151.3	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat <i>cII</i>	+	4.2 (8 / -)	202 (8 / -)	48.1	197.8	drinking water + diet	70	63	14	Guttenplan <i>et al.</i> (2007)
	Muta TM Mouse	+	3.2 (- / -)	32.7 (6 / 5.6)	10.22	29.5	drinking water + diet	42	62	14	von Pressentin, El Bayoumy and Guttenplan (2000)
	Muta TM Mouse	+	2.4 (8 / -)	54 (8 / -)	22.5	51.6	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	2.4 (8 / -)	66 (8 / -)	27.5	63.6	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Big Blue [®] rat <i>cII</i>	+	4.2 (8 / -)	141 (8 / -)	33.57	136.8	drinking water + diet	49	44	0	Guttenplan <i>et al.</i> (2007)
	Big Blue [®] rat <i>cII</i>	+	4.2 (8 / -)	260 (8 / -)	61.9	255.8	drinking water + diet	70	63	91	Guttenplan <i>et al.</i> (2007)
	Big Blue [®] rat <i>cII</i>	+	4.2 (8 / -)	237 (8 / -)	56.43	232.8	drinking water + diet	70	63	91	Guttenplan <i>et al.</i> (2007)
	Muta TM Mouse	+	3.5 (- / -)	131 (6 / 7.2)	37.43	127.5	drinking water + diet	42	62	14	von Pressentin, El Bayoumy and Guttenplan (2000)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
4-NQO + p-XSC + alpha-tocopherol	Muta TM Mouse	+	2.9 (8 / -)	100 (8 / -)	34.48	97.1	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	2.9 (8 / -)	138 (8 / -)	47.59	135.1	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	2.9 (- / -)	60.8 (6 / 3.3)	20.97	57.9	drinking water + diet	42	62	14	von Pressentin, El Bayoumy and Guttenplan (2000)
	Muta TM Mouse	+	3.7 (8 / -)	149 (8 / -)	40.27	145.3	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	2.9 (8 / -)	80 (8 / -)	27.59	77.1	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	2.9 (8 / -)	102 (8 / -)	35.17	99.1	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	3.7 (8 / -)	83 (8 / -)	22.43	79.3	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
	Muta TM Mouse	+	2.4 (8 / -)	59 (8 / -)	24.58	56.6	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	2.4 (8 / -)	62 (7 / -)	25.83	59.6	drinking water + diet	28	90	14	Guttenplan <i>et al.</i> (2002)
5-(2-Chloroethyl)-2'-deoxyuridine (CEDU)	Muta TM Mouse	+	4.28 (6 / 3.682)	35.61 (4 / 3.887)	8.32	31.33	gavage	5	10 000	14	Suter <i>et al.</i> (2004)
	Muta TM Mouse	+	4.73 (6 / 4.446)	17.59 (4 / 3.542)	3.72	12.86	gavage	5	10 000	14	Suter <i>et al.</i> (2004)
	Muta TM Mouse	+	5.61 (4 / 2.588)	30.17 (4 / 1.147)	5.38	24.56	gavage	5	10 000	14	Suter <i>et al.</i> (2004)
5-(<i>p</i> -Dimethylamino-phenylazo)benzothiazole	Big Blue [®] rat	+	4.2 (5 / 1.1)	69.1 (5 / 1)	16.45	64.9	gavage	10	100	10	Fletcher <i>et al.</i> (1999)
	Big Blue [®] rat	+	3.9 (5 / 1)	23.2 (5 / 1.1)	5.95	19.3	diet	10	360	10	Fletcher <i>et al.</i> (1999)
5,9-Dimethyl-dibenzo-(c,g)carbazole (DMDBC)	Muta TM Mouse	-	3.6 (8 / 2.6)	4.7 (5 / 1.3)	1.31	1.1	topical	1	3	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.6 (8 / 2.6)	8.2 (5 / 1.4)	2.28	4.6	topical	1	10	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.6 (8 / 2.6)	133 (5 / 1.2)	36.94	129.4	topical	1	30	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.6 (8 / 2.6)	184 (5 / 1)	51.11	180.4	topical	1	90	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	-	3.1 (8 / 2.2)	5.1 (5 / 1.7)	1.65	2	topical	1	10	28	Renault <i>et al.</i> (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	3.1 (8 / 2.2)	4.9 (5 / 1.6)	1.58	1.8	topical	1	30	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.1 (8 / 2.2)	7.2 (5 / 1.3)	2.32	4.1	topical	1	90	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.1 (8 / 2.6)	14 (5 / 1.3)	4.52	10.9	topical	1	10	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.1 (8 / 2.6)	96 (5 / 1.5)	30.97	92.9	topical	1	30	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.1 (8 / 2.6)	150 (5 / 1.5)	48.39	146.9	topical	1	90	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	4.2 (8 / 2.7)	6.6 (5 / 1.6)	1.57	2.4	topical	1	90	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	-	4.5 (4 / 1.4)	5.1 (5 / 1.9)	1.13	0.6	topical	1	10	7	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	-	4.5 (4 / 1.4)	4.5 (5 / 1.4)	1	0	topical	1	10	2	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	+	5.4 (5 / -)	13 (5 / -)	2.41	7.6	topical	1	10	28	Tombolan <i>et al.</i> (1999a)
	Muta TM Mouse	+	4 (5 / -)	11.5 (5 / -)	2.88	7.5	topical	1	10	28	Tombolan <i>et al.</i> (1999a)
	Muta TM Mouse	-	3.8 (5 / 1.2)	4.7 (5 / 1.2)	1.24	0.9	topical	1	3	28	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	+	3.8 (5 / 1.2)	7.6 (5 / 1.2)	2	3.8	topical	1	10	28	Tombolan <i>et al.</i> (1999b)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.8 (5 / 1.2)	91.2 (5 / 1)	24	87.4	topical	1	30	28	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.5 (4 / 1.4)	10.7 (5 / 1.5)	2.38	6.2	topical	1	10	21	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	+	3.8 (5 / 1.2)	221.2 (5 / 1.1)	58.21	217.4	topical	1	180	28	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.5 (4 / 1.4)	199.8 (5 / 1)	44.4	195.3	topical	1	90	28	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	-	4.5 (4 / 1.4)	5.2 (5 / 1.4)	1.16	0.7	topical	1	10	4	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	-	4.5 (4 / 1.4)	7.9 (5 / 1.4)	1.76	3.4	topical	1	10	14	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.5 (4 / 1.4)	10.6 (5 / 1.1)	2.36	6.1	topical	1	10	28	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	-	4.5 (4 / 1.4)	8.1 (5 / 1.5)	1.8	3.6	topical	1	90	2	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	-	4.5 (4 / 1.4)	43.4 (5 / 1.1)	9.64	38.9	topical	1	90	4	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.5 (4 / 1.4)	77.3 (5 / 1.2)	17.18	72.8	topical	1	90	7	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.5 (4 / 1.4)	124.3 (5 / 1.6)	27.62	119.8	topical	1	90	14	Tombolan <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.5 (4 / 1.4)	190 (5 / 1.4)	42.22	185.5	topical	1	90	21	Tombolan <i>et al.</i> (1999b)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.8 (5 / 1.2)	184.4 (5 / 1)	48.53	180.6	topical	1	90	28	Tombolan <i>et al.</i> (1999b)
DMDBC + carbon tetrachloride	Muta TM Mouse	+	5.4 (5 / -)	81.3 (5 / -)	15.06	75.9	sc + gavage	1	10	28	Tombolan <i>et al.</i> (1999a)
DMDBC + phenobarbital	Muta TM Mouse	+	4 (5 / -)	101.6 (5 / -)	25.4	97.6	sc + diet	1	10	28	Tombolan <i>et al.</i> (1999a)
5-Bromo-2'-deoxyuridine (BrdU)	Muta TM Mouse	-	3.1 (8 / 2.4)	6 (4 / 0.9)	1.94	2.9	gavage	1	5 000	14	Cosentino and Heddle (1999a)
	Muta TM Mouse	-	3.1 (8 / 2.4)	4.4 (5 / 0.8)	1.42	1.3	gavage	1	2 500	14	Cosentino and Heddle (1999a)
5-Fluoroquinoline	Muta TM Mouse	-	2.8 (3 / -)	4.6 (3 / -)	1.64	1.8	ip	4	200	14	Miyata <i>et al.</i> (1998)
	Muta TM Mouse	-	3.6 (3 / -)	5.2 (3 / -)	1.44	1.6	ip	4	200	14	Miyata <i>et al.</i> (1998)
	Muta TM Mouse	+	5.1 (5 / 0.5)	24 (5 / 0.5)	4.71	18.9	ip	4	200	14	Miyata <i>et al.</i> (1998)
6-(<i>p</i> -Dimethylamino-phenylazo)benzothiazole	Big Blue [®] rat	+	4.2 (5 / 1.1)	19.3 (3 / 0.6)	4.6	15.1	gavage	10	100	7	Fletcher <i>et al.</i> (1999)
	Big Blue [®] rat	+	3.9 (5 / 1)	42.4 (5 / 1.1)	10.87	38.5	diet	10	360	10	Fletcher <i>et al.</i> (1999)
	Big Blue [®] rat	+	2.9 (6 / 0.2)	28.3 (7 / 0.2)	9.76	25.4	gavage	10	100	11	Lefevre, Tinwell and Ashby (1997)
	Big Blue [®] rat	+	4.4 (1 / 0.1)	20.5 (1 / 0.1)	4.66	16.1	gavage	10	100	11	Lefevre, Tinwell and Ashby (1997)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	+	4.4 (1 / 0.1)	34.1 (1 / 0.1)	7.75	29.7	gavage	10	100	11	Lefevre, Tinwell and Ashby (1997)
6,11-Dimethylbenzo(b)-naphtho(2,3-d)thiophene	Muta TM Mouse	-	2.8 (2 / 2.3)	1.5 (2 / 2)	0.54	-1.3	topical	1	10 µg	7	Ashby <i>et al.</i> (1993)
	Muta TM Mouse	-	2.8 (2 / 2.3)	3.5 (2 / 1.5)	1.25	0.7	topical	1	100 µg	7	Ashby <i>et al.</i> (1993)
	Muta TM Mouse	+	2.8 (2 / 2.3)	15.7 (2 / 1)	5.61	12.9	topical	1	500 µg	7	Ashby <i>et al.</i> (1993)
6-Nitrochrysene	Big Blue [®] rat	+	0.95 (8 / -)	2.2 (14 / -)	2.32	1.25	gavage	56	800 µmol/rat	224	Boyiri <i>et al.</i> (2004)
	Big Blue [®] rat	+	0.95 (8 / -)	2.6 (9 / -)	2.74	1.65	gavage	56	1 600 µmol/rat	224	Boyiri <i>et al.</i> (2004)
7,12-Dimethylbenzanthracene (7,12-DMBA)	Big Blue [®] rat	+	2.5 (5 / 0.9)	10.1 (5 / 0.8)	4.04	7.6	gavage	1	20	42	Manjanatha <i>et al.</i> (1998)
	Big Blue [®] mouse <i>cII</i>	+	4.4 (4 / 0.857)	13.5 (4 / 1.308)	3.07	9.1	gavage	1	80	112	Chen <i>et al.</i> (2005a)
	Muta TM Mouse <i>cII</i>	+	4.1 (3 / 1.1)	13.5 (3 / 0.6)	3.29	9.4	ip	1	20	28	Kohara <i>et al.</i> (2001)
	Big Blue [®] mouse	+	6.4 (3 / 1.8)	36 (3 / 1.8)	5.63	29.6	topical	1	100	7	Gorelick <i>et al.</i> (1995)
	Big Blue [®] rat	+	1 (3 / 0.7)	21.3 (3 / 0.7)	21.3	20.3	gavage	1	130	98	Shelton, Cherry and Manjanatha, 2000)
	Big Blue [®] rat	+	2.5 (5 / 0.9)	22.1 (5 / 0.8)	8.84	19.6	gavage	1	75	42	Manjanatha <i>et al.</i> (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	+	1.8 (3 / 0.8)	21 (3 / 0.8)	11.67	19.2	gavage	1	130	42	Shelton, Cherry and Manjanatha (2000)
	Muta TM Mouse	-	2.5 (7 / 2.8)	4.3 (6 / 3.5)	1.72	1.8	ip	1	20	7	Hachiya <i>et al.</i> (1999)
	Big Blue [®] rat	+	2.5 (5 / 0.9)	34.1 (4 / 0.6)	13.64	31.6	gavage	1	130	42	Manjanatha <i>et al.</i> (1998)
	Big Blue [®] rat	+	0.3 (3 / 0.6)	32.8 (3 / 0.6)	109.33	32.5	gavage	1	130	14	Shelton, Cherry and Manjanatha (2000)
	Big Blue [®] rat	+	0.7 (3 / 0.7)	15.9 (3 / 0.7)	22.71	15.2	gavage	1	130	70	Shelton, Cherry and Manjanatha (2000)
	Big Blue [®] rat	+	2.8 (5 / 0.8)	13.7 (4 / 0.7)	4.89	10.9	gavage	1	130	14	Manjanatha <i>et al.</i> (1998)
	Big Blue [®] rat	-	2.8 (5 / 0.8)	7.7 (5 / 0.6)	2.75	4.9	gavage	1	75	14	Manjanatha <i>et al.</i> (1998)
	Big Blue [®] rat	-	2.8 (5 / 0.8)	7.7 (5 / 0.7)	2.75	4.9	gavage	1	20	14	Manjanatha <i>et al.</i> (1998)
	Big Blue [®] rat	+	1 (3 / 0.7)	4.3 (3 / 0.6)	4.3	3.3	gavage	1	20	98	Shelton, Cherry and Manjanatha (2000)
	Muta TM Mouse	-	2.5 (7 / 2.8)	3.4 (4 / 1.8)	1.36	0.9	ip	1	20	14	Hachiya <i>et al.</i> (1999)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	+	0.3 (3 / 0.6)	10.6 (3 / 0.5)	35.33	10.3	gavage	1	20	14	Shelton, Cherry and Manjanatha (2000)
	Muta TM Mouse	+	4.7 (7 / 9.3)	17.6 (2 / 2.8)	3.74	12.9	ip	1	20	28	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	4.7 (7 / 9.3)	20.7 (4 / 5)	4.4	16	ip	1	20	14	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	4.7 (7 / 9.3)	16.7 (6 / 8.9)	3.55	12	ip	1	20	7	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	5.6 (6 / 2.3)	29.7 (4 / 3.7)	5.3	24.1	ip	1	20	14	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	-	5.6 (6 / 2.3)	5.2 (6 / 5.4)	0.93	-0.4	ip	1	20	7	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	5.6 (6 / 3.6)	18.8 (2 / 1.1)	3.36	13.2	ip	1	20	28	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	5.6 (6 / 3.6)	40 (4 / 1.2)	7.14	34.4	ip	1	20	14	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	2.5 (7 / 2.8)	5.4 (2 / 1.2)	2.16	2.9	ip	1	20	28	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	5.89 (4 / 1.51)	35.45 (3 / 0.604)	6.02	29.56	ip	28	20	0	Hashimoto, Ohsawa and Kimura (2004)
	Big Blue [®] rat	+	4.9 (5 / -)	26.7 (5 / -)	5.45	21.8	gavage	1	130	128	Mittelstaedt <i>et al.</i> (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	2.8 (2 / 2.3)	5.5 (2 / 2)	1.96	2.7	topical	1	10 µg	7	Ashby <i>et al.</i> (1993)
	Muta TM Mouse	+	2.8 (2 / 2.3)	10.1 (2 / 1)	3.61	7.3	topical	1	40 µg	7	Ashby <i>et al.</i> (1993)
	Big Blue [®] rat	+	3.8 (5 / -)	19.9 (5 / -)	5.24	16.1	gavage	1	130	120	Mittelstaedt <i>et al.</i> (1998)
	Muta TM Mouse	+	2.8 (2 / 2.3)	100 (2 / 2.3)	35.71	97.2	topical	1	100 µg	7	Ashby <i>et al.</i> (1993)
	Muta TM Mouse	+	3.6 (1 / 0.1)	10.9 (1 / 0.1)	3.03	7.3	topical	1	100 µg	7	Hoorn <i>et al.</i> (1993)
	Big Blue [®] rat	+	2.4 (5 / -)	26.4 (5 / -)	11	24	gavage	1	130	42	Mittelstaedt <i>et al.</i> (1998)
	Big Blue [®] rat	-	6 (5 / 1.1)	16.8 (5 / 0.7)	2.8	10.8	gavage	1	75	140	Manjanatha <i>et al.</i> (1998)
	Big Blue [®] rat	+	1.74 (5 / 0.986)	11.98 (5 / 1.026)	6.89	10.24	gavage	1	80	112	Manjanatha <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	+	2.34 (4 / 1.154)	11.03 (3 / 0.499)	4.71	8.69	ip	28	20	0	Hashimoto, Ohsawa and Kimura (2004)
	Big Blue [®] rat	+	4.8 (5 / 0.9)	26.6 (4 / 0.6)	5.54	21.8	gavage	1	130	98	Manjanatha <i>et al.</i> (1998)
	Muta TM Mouse <i>cII</i>	+	3.83 (4 / 1.673)	17.44 (3 / 0.631)	4.55	13.61	ip	28	20	0	Hashimoto, Ohsawa and Kimura (2004)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	+	1.8 (3 / 0.8)	10 (3 / 0.6)	5.56	8.2	gavage	1	20	42	Shelton, Cherry and Manjanatha (2000)
	Big Blue [®] rat	+	4.8 (5 / 0.9)	13.7 (4 / 0.7)	2.85	8.9	gavage	1	75	98	Manjanatha <i>et al.</i> (1998)
	Big Blue [®] rat	-	3.8 (5 / 1)	6.7 (5 / 0.7)	1.76	2.9	gavage	1	20	70	Manjanatha <i>et al.</i> (1998)
	Muta TM Mouse	-	2.8 (2 / 2.3)	2.7 (2 / 0.9)	0.96	-0.1	topical	1	4 µg	7	Myhr (1991)
	Muta TM Mouse	-	2.8 (2 / 2.3)	5.5 (2 / 2)	1.96	2.7	topical	1	10 µg	7	Myhr (1991)
	Muta TM Mouse	+	8.34 (4 / 1.463)	28.97 (3 / 1.115)	3.47	20.63	ip	28	20	0	Hashimoto, Ohsawa and Kimura (2004)
	Big Blue [®] rat	-	4.8 (5 / 0.9)	7.8 (4 / 0.7)	1.63	3	gavage	1	20	98	Manjanatha <i>et al.</i> (1998)
	Muta TM Mouse	+	2.8 (2 / 2.3)	10.1 (2 / 1)	3.61	7.3	topical	1	40 µg	7	Myhr (1991)
	Muta TM Mouse	+	2.8 (2 / 2.3)	8.3 (2 / 2.3)	2.96	5.5	topical	1	100 µg	7	Myhr (1991)
	Big Blue [®] rat	+	3.8 (5 / 1)	19.9 (4 / 0.6)	5.24	16.1	gavage	1	130	70	Manjanatha <i>et al.</i> (1998)
	Muta TM Mouse	+	1.7 (1 / 0.1)	78.6 (2 / 0.1)	46.24	76.9	topical	1	40 µg	14	Brooks and Dean (1996)
	Muta TM Mouse	-	5.6 (6 / 2.3)	7 (2 / 3.4)	1.25	1.4	ip	1	20	28	Hachiya <i>et al.</i> (1999)
	Big Blue [®] rat	+	3.8 (5 / 1)	15.5 (5 / 0.8)	4.08	11.7	gavage	1	75	70	Manjanatha <i>et al.</i> (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	5.6 (6 / 3.6)	12.8 (6 / 2.5)	2.29	7.2	ip	1	20	7	Hachiya <i>et al.</i> (1999)
	Big Blue [®] rat	+	0.7 (3 / 0.7)	4.6 (3 / 0.7)	6.57	3.9	gavage	1	20	70	Shelton, Cherry and Manjanatha (2000)
	Muta TM Mouse	+	3.6 (1 / 0.1)	24.2 (1 / 0.1)	6.72	20.6	topical	1	100 µg	7	Hoorn <i>et al.</i> (1993)
	Big Blue [®] rat	-	0.8 (5 / 0.7)	1.1 (5 / 0.7)	1.38	0.3	gavage	1	20	14	Manjanatha <i>et al.</i> (2000)
	Muta TM Mouse	+	3.3 (7 / 4)	75.2 (6 / 2.9)	22.79	71.9	ip	1	20	7	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	3.2 (6 / -)	7.1 (5 / -)	2.22	3.9	oral swab	15	0.75 mg	14	von Pressentin, Kosinska and Guttenplan (1999)
	Big Blue [®] rat	+	1.6 (5 / 1)	18.6 (5 / 0.7)	11.63	17	gavage	1	130	98	Manjanatha <i>et al.</i> (2000)
	Big Blue [®] rat	+	1.8 (5 / 1)	25.6 (3 / 0.9)	14.22	23.8	gavage	1	130	70	Manjanatha <i>et al.</i> (2000)
	Big Blue [®] rat	+	1.5 (5 / 0.8)	14.2 (4 / 0.8)	9.47	12.7	gavage	1	130	42	Manjanatha <i>et al.</i> (2000)
	Big Blue [®] rat	+	0.8 (5 / 0.7)	5.1 (4 / 0.6)	6.38	4.3	gavage	1	130	14	Manjanatha <i>et al.</i> (2000)
	Big Blue [®] rat	-	1.4 (5 / 0.9)	3.1 (5 / 0.7)	2.21	1.7	gavage	1	20	126	Manjanatha <i>et al.</i> (2000)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	–	1.6 (5 / 1)	4 (4 / 0.8)	2.5	2.4	gavage	1	20	98	Manjanatha <i>et al.</i> (2000)
	Big Blue [®] rat	–	1.8 (5 / 1)	5.5 (5 / 1.1)	3.06	3.7	gavage	1	20	70	Manjanatha <i>et al.</i> (2000)
	Muta TM Mouse	+	3.3 (7 / 4)	81.7 (4 / 2.1)	24.76	78.4	ip	1	20	14	Hachiya <i>et al.</i> (1999)
	Big Blue [®] rat	–	6 (5 / 1.1)	11.5 (5 / 0.7)	1.92	5.5	gavage	1	20	140	Manjanatha <i>et al.</i> (1998)
	Muta TM Mouse	–	3.8 (5 / –)	7.9 (3 / –)	2.08	4.1	oral swab	15	0.75 mg	14	von Pressentin, Kosinska and Guttenplan (1999)
	Big Blue [®] rat	+	2.95 (5 / –)	26.35 (5 / –)	8.93	23.4	gavage	1	80	112	Manjanatha <i>et al.</i> (2006a)
	Muta TM Mouse	inc.	0.3 (5 / 4.7)	1.5 (5 / 1.1)	5	1.2	ip	1	20	14	Ohsawa <i>et al.</i> (2000)
	Big Blue [®] rat	+	1.53 (5 / 1)	10 (5 / 1)	6.54	8.47	gavage	1	80	112	Aidoo <i>et al.</i> (2005)
	Muta TM Mouse	+	6.7 (5 / 1.5)	11.3 (3 / 1.1)	1.69	4.6	ip	1	20	14	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	–	2.2 (5 / 1.8)	2.1 (5 / 2.1)	0.95	–0.1	ip	1	20	14	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	–	8.2 (5 / 1)	4 (5 / 0.8)	0.49	–4.2	ip	1	20	14	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	+	4.5 (5 / 3.2)	37.9 (5 / 1.7)	8.42	33.4	ip	1	20	14	Ohsawa <i>et al.</i> (2000)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	11.7 (3 / 1.5)	18 (5 / 2.6)	1.54	6.3	ip	1	20	14	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	+	9.9 (5 / 0.7)	18.4 (5 / 0.7)	1.86	8.5	ip	1	20	14	Ohsawa <i>et al.</i> (2000)
	Big Blue [®] rat	-	1.5 (5 / 0.8)	5.8 (5 / 0.7)	3.87	4.3	gavage	1	20	42	Manjanatha <i>et al.</i> (2000)
	Muta TM Mouse	+	3.3 (7 / 4)	70 (3 / 0.9)	21.21	66.7	ip	1	20	28	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	3.6 (7 / 2.5)	34.8 (2 / 1.3)	9.67	31.2	ip	1	20	28	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	3.6 (7 / 2.5)	37.5 (4 / 1.2)	10.42	33.9	ip	1	20	14	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	-	7 (7 / 1.6)	10.3 (6 / 1.7)	1.47	3.3	ip	1	20	7	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	7 (7 / 1.6)	17.5 (4 / 1.1)	2.5	10.5	ip	1	20	14	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	3.6 (7 / 2.5)	13.8 (6 / 3.1)	3.83	10.2	ip	1	20	7	Hachiya <i>et al.</i> (1999)
	Muta TM Mouse	+	7 (7 / 1.6)	16.5 (2 / 0.7)	2.36	9.5	ip	1	20	28	Hachiya <i>et al.</i> (1999)
7,12-DMBA + 17 β -oestradiol	Big Blue [®] rat	+	1.74 (5 / 0.986)	6.14 (5 / 1.019)	3.53	4.4	gavage + diet	1	80	112	Manjanatha <i>et al.</i> (2005)
	Big Blue [®] rat	+	3.95 (5 / -)	28.84 (4 / -)	7.3	24.89	gavage	1	80	112	Manjanatha <i>et al.</i> (2006a)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
7,12-DMBA + daidzein	Big Blue [®] rat	+	3.2 (5 / 1)	14 (4 / 1)	4.38	10.8	gavage	1	80	112	Aidoo <i>et al.</i> (2005)
	Big Blue [®] rat	+	3.3 (5 / -)	21.5 (5 / -)	6.52	18.2	gavage	1	80	112	Manjanatha <i>et al.</i> (2006a)
	Big Blue [®] rat	+	1.62 (5 / 1)	7 (5 / 1)	4.32	5.38	gavage	1	80	112	Aidoo <i>et al.</i> (2005)
	Big Blue [®] rat	+	4.15 (5 / -)	30.75 (5 / -)	7.41	26.6	gavage	1	80	112	Manjanatha <i>et al.</i> (2006a)
	Big Blue [®] rat	+	1.18 (5 / 1)	8.97 (5 / 1)	7.6	7.79	gavage	1	80	112	Aidoo <i>et al.</i> (2005)
7,12-DMBA + daidzein + genistein	Big Blue [®] rat	+	1.69 (5 / 1)	8.1 (5 / 1)	4.79	6.41	gavage	1	80	112	Aidoo <i>et al.</i> (2005)
	Big Blue [®] rat	+	2.75 (5 / -)	24.75 (5 / -)	9	22	gavage	1	80	112	Manjanatha <i>et al.</i> (2006a)
7,12-DMBA + genistein	Big Blue [®] rat	+	2.7 (5 / -)	26.45 (5 / -)	9.8	23.75	gavage	1	80	112	Manjanatha <i>et al.</i> (2006a)
	Big Blue [®] rat	+	1.74 (5 / 0.986)	13.78 (5 / 0.832)	7.92	12.04	gavage + diet	1	80	112	Manjanatha <i>et al.</i> (2005)
	Big Blue [®] rat	+	2.01 (5 / 1)	12.37 (5 / 1)	6.15	10.36	gavage	1	80	112	Aidoo <i>et al.</i> (2005)
	Big Blue [®] rat	+	1.74 (5 / 0.986)	13.94 (5 / 1.005)	8.01	12.2	gavage + diet	1	80	112	Manjanatha <i>et al.</i> (2005)
	Big Blue [®] rat	+	2.55 (5 / 1)	13.55 (5 / 1)	5.31	11	gavage	1	80	112	Aidoo <i>et al.</i> (2005)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	+	3.42 (5 / -)	29.57 (5 / -)	8.65	26.15	gavage	1	80	112	Manjanatha <i>et al.</i> (2006a)
	Big Blue [®] mouse <i>cII</i>	+	4.1 (3 / 0.66)	13.7 (5 / 1.696)	3.34	9.6	gavage	1	80	112	Chen <i>et al.</i> (2005a)
7,12-DMBA + high-fat diet	Big Blue [®] rat	+	4 (3 / -)	65 (3 / -)	16.25	61	gavage	1	125	42	Yu <i>et al.</i> (2002)
	Big Blue [®] rat	+	3 (3 / -)	30.3 (3 / 0.4)	10.1	27.3	gavage	1	125	42	Yu <i>et al.</i> (2002)
7,12-DMBA + low-fat diet	Big Blue [®] rat	+	4 (3 / -)	90 (3 / -)	22.5	86	gavage	1	125	42	Yu <i>et al.</i> (2002)
	Big Blue [®] rat	+	3 (3 / -)	28.2 (3 / 0.4)	9.4	25.2	gavage	1	125	42	Yu <i>et al.</i> (2002)
7H-Dibenzo(c,g)-carbazole (DBC)	Muta TM Mouse	+	4.2 (8 / 2.7)	17 (5 / 1.4)	4.05	12.8	topical	1	10	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.1 (8 / 2.2)	5.4 (5 / 1.1)	1.74	2.3	topical	1	10	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.1 (8 / 2.2)	5.8 (5 / 1.1)	1.87	2.7	topical	1	3	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.6 (8 / 2.6)	186 (5 / 1.2)	51.67	182.4	topical	1	10	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.6 (8 / 2.6)	7.2 (5 / 1.6)	2	3.6	topical	1	3	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.1 (8 / 2.2)	155 (5 / 1.7)	50	151.9	topical	1	10	28	Renault <i>et al.</i> (1998)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
7-Methoxy-2-nitro-naphtho(2,1-b)furan (R7000)	Big Blue [®] mouse	+	10 (4 / 2)	21.5 (2 / 0.51)	2.15	11.5	ip	5	2.5 mg	15	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	+	5.5 (3 / 0.9)	12.3 (4 / 1.1)	2.24	6.8	ip	4	100	28	Quillardet <i>et al.</i> (2000)
	Big Blue [®] mouse	+	10 (4 / 2)	10.5 (2 / 0.4)	1.05	0.5	ip	5	2.5 mg	0	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	+	3.86 (4 / 0.5)	6.16 (4 / 0.44)	1.59	2.3	ip	4	0.8 mg	28	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	+	10 (4 / 2)	26.5 (2 / 0.37)	2.65	16.5	ip	5	2.5 mg	5	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	+	10 (4 / 2)	24 (2 / 0.45)	2.4	14	ip	5	2.5 mg	25	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	-	3.86 (4 / 0.5)	3.49 (4 / 0.45)	0.9	-0.37	ip	4	0.4 mg	28	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	-	5.8 (3 / 0.2)	12.5 (2 / 0.2)	2.16	6.7	ip	4	100	28	Quillardet <i>et al.</i> (2000)
	Big Blue [®] mouse	-	12.4 (4 / 0.4)	11.1 (4 / 0.6)	0.9	-1.3	ip	4	100	28	Quillardet <i>et al.</i> (2000)
	Big Blue [®] mouse	+	7.2 (- / -)	33 (4 / -)	4.58	25.8	gavage	5	300	21	Touati <i>et al.</i> (2000)
	Big Blue [®] mouse	+	4.8 (4 / 1.2)	14.35 (4 / 0.51)	2.99	9.55	ip	4	0.8 mg	28	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	-	3.8 (4 / 0.6)	10 (3 / 1)	2.63	6.2	ip	4	100	28	Quillardet <i>et al.</i> (2000)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	4.8 (4 / 1.2)	26.12 (4 / 0.5)	5.44	21.32	ip	4	2 mg	28	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	-	3.86 (4 / 0.5)	2.54 (3 / 0.35)	0.66	-1.32	ip	4	0.2 mg	28	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	-	5 (2 / 0.1)	5.1 (2 / 0.2)	1.02	0.1	ip	4	100	28	Quillardet <i>et al.</i> (2000)
	Big Blue [®] mouse	+	8 (4 / 0.72)	36 (2 / 0.3)	4.5	28	ip	5	2.5 mg	25	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	+	4.8 (4 / 1.2)	8.5 (4 / 1.04)	1.77	3.7	ip	4	0.4 mg	28	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	+	8.2 (4 / 0.4)	26.1 (4 / 0.5)	3.18	17.9	ip	4	100	28	Quillardet <i>et al.</i> (2000)
	Big Blue [®] mouse	+	8 (4 / 0.72)	22 (2 / 0.27)	2.75	14	ip	5	2.5 mg	5	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	-	3.5 (2 / 0.2)	5.4 (3 / 0.4)	1.54	1.9	ip	4	100	28	Quillardet <i>et al.</i> (2000)
	Big Blue [®] mouse	+	4.8 (4 / 1.2)	7.25 (3 / 0.65)	1.51	2.45	ip	4	0.2 mg	28	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	-	8.5 (3 / 0.2)	6.6 (2 / 0.3)	0.78	-1.9	ip	4	100	28	Quillardet <i>et al.</i> (2000)
	Big Blue [®] mouse	+	8 (4 / 0.72)	30.5 (2 / 0.31)	3.81	22.5	ip	5	2.5 mg	15	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	+	8 (4 / 0.72)	15.5 (2 / 0.34)	1.94	7.5	ip	5	2.5 mg	0	Arrault <i>et al.</i> (2002)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
87-966	Big Blue [®] mouse	+	3.86 (4 / 0.5)	17.46 (4 / 0.8)	4.52	13.6	ip	4	2 mg	28	Arrault <i>et al.</i> (2002)
	Big Blue [®] mouse	+	4.4 (3 / 0.5)	17.5 (4 / 0.9)	3.98	13.1	ip	4	100	28	Quillardet <i>et al.</i> (2000)
	Muta TM Mouse	+	4.3 (4 / 2.59)	35.6 (4 / 3.9)	8.28	31.3	gavage	5	10 000	14	unpublished
	Muta TM Mouse	-	6.4 (6 / 4.9)	9.3 (4 / 3.2)	1.45	2.9	gavage	5	10 000	14	unpublished
	Muta TM Mouse	+	5.6 (4 / 2.6)	30.2 (4 / 1.14)	5.39	24.6	gavage	5	10 000	14	unpublished
⁸⁹ Sr internal radiation	Muta TM Mouse	-	3.8 (2 / 0.3)	4 (3 / 0.2)	1.05	0.2	iv	1	74 MBq/kg	14	Takahashi, Kubota and Sato (1998)
	Muta TM Mouse	-	3.8 (2 / 0.2)	3.8 (2 / 0.1)	1	0	iv	1	7.4 MBq/kg	14	Takahashi, Kubota and Sato (1998)
	Muta TM Mouse	-	3.6 (2 / 0.3)	4 (2 / 0.1)	1.11	0.4	iv	1	7.4 MBq/kg	14	Takahashi, Kubota and Sato (1998)
	Muta TM Mouse	-	3.8 (2 / 0.3)	4 (2 / 0.2)	1.05	0.2	iv	1	7.4 MBq/kg	14	Takahashi, Kubota and Sato (1998)
	Muta TM Mouse	+	3.8 (2 / 0.2)	8.5 (3 / 0.2)	2.24	4.7	iv	1	74 MBq/kg	14	Takahashi, Kubota and Sato (1998)
	Muta TM Mouse	-	3.6 (2 / 0.3)	3.8 (3 / 0.3)	1.06	0.2	iv	1	74 MBq/kg	14	Takahashi, Kubota and Sato (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
A-alpha-C	Muta TM Mouse	+	3.3 (6 / 2)	10.8 (6 / 2)	3.27	7.5	gavage	10	200	28	Davis <i>et al.</i> (1996)
	Muta TM Mouse	+	2.9 (6 / 2)	7.8 (6 / 2.1)	2.69	4.9	gavage	10	200	28	Davis <i>et al.</i> (1996)
	Big Blue [®] mouse	-	- (- / -)	12 (5 / 0.1)			diet	45	4 320	7	Zhang <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	3.5 (- / -)	94 (6 / 0.3)	26.86	90.5	diet	45	4 320	7	Zhang <i>et al.</i> (1996a)
	Big Blue [®] mouse	-	- (- / -)	7 (5 / 0.1)			diet	30	2 880	7	Zhang <i>et al.</i> (1996a)
	Big Blue [®] mouse	+	3.5 (- / -)	116 (6 / 0.1)	33.14	112.5	diet	30	2 880	7	Zhang <i>et al.</i> (1996a)
Acetaminophen	<i>gpt</i> delta (<i>gpt</i>)	-	0.55 (5 / 2.976)	0.55 (5 / 3.638)	1	0	diet	91	47 802.3	0	Kanki <i>et al.</i> (2005)
Acetic acid	Muta TM Mouse	-	2.8 (2 / 2.3)	0.7 (2 / 2)	0.25	-2.1	topical	1	12 mg	7	Myhr (1991)
	Muta TM Mouse	+	2.8 (2 / 2.3)	5.9 (2 / 2)	2.11	3.1	topical	1	30 mg	7	Myhr (1991)
	Muta TM Mouse	-	2.8 (2 / 2.3)	1.4 (2 / 2)	0.5	-1.4	topical	1	48 mg	7	Myhr (1991)
Acetone	Muta TM Mouse	-	2.8 (7 / 7.6)	2.8 (2 / 2.3)	1	0	topical	1	200 µL	7	Ashby <i>et al.</i> (1993)
	Big Blue [®] mouse	-	7.1 (3 / 1.8)	6.4 (3 / 1.9)	0.9	-0.7	topical	1	100 µL	7	Gorelick <i>et al.</i> (1995)
Acrylamide	Muta TM Mouse	+	4.8 (6 / 5.5)	15.4 (3 / 3)	3.21	10.6	ip	2	250	25	unpublished
	Muta TM Mouse	+	2.6 (2 / 0.7)	8.9 (2 / 0.1)	3.42	6.3	ip	5	250	7	Myhr (1991)
	Muta TM Mouse	-	8.6 (5 / 3)	6.1 (5 / 2.8)	0.71	-2.5	ip	2	250	61	unpublished
	Muta TM Mouse	-	8.5 (5 / 3)	10.6 (3 / 1.3)	1.25	2.1	ip	17	680	25	unpublished

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	3.9 (4 / 9)	4.7 (3 / 6.1)	1.21	0.8	ip	2	250	25	unpublished
	Muta TM Mouse	-	2.9 (4 / 8.1)	3 (5 / 9.6)	1.03	0.1	ip	17	680	25	unpublished
	Muta TM Mouse	-	2.3 (5 / 9.8)	3.3 (3 / 6.3)	1.43	1	ip	2	250	61	unpublished
	Muta TM Mouse	-	6.3 (4 / 2)	7.9 (5 / 3.4)	1.25	1.6	ip	2	250	25	unpublished
	Muta TM Mouse	-	3.6 (5 / 12)	3.1 (5 / 8.2)	0.86	-0.5	ip	17	680	61	unpublished
	Muta TM Mouse	-	1.7 (3 / 0.8)	2.6 (4 / 1.1)	1.53	0.9	ip	1	50	3	Krebs and Favor (1997)
	Muta TM Mouse	-	10 (5 / 5.7)	12 (3 / 2.2)	1.2	2	ip	2	250	61	unpublished
	Muta TM Mouse	-	6.8 (5 / 4.1)	11.9 (3 / 2.1)	1.75	5.1	ip	17	680	61	unpublished
	Muta TM Mouse	+	1.5 (2 / 0.2)	7.4 (2 / 0.1)	4.93	5.9	ip	5	250	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	1.5 (2 / 0.2)	8.9 (2 / 0.1)	5.93	7.4	ip	5	250	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	1.5 (2 / 0.2)	6.2 (2 / 0.1)	4.13	4.7	ip	5	250	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	-	0.45 (3 / 0.9)	0.8 (6 / 2)	1.78	0.35	ip	1	100	100	Krebs and Favor (1997)
	Muta TM Mouse	-	1.1 (2 / 0.7)	1.2 (5 / 1.7)	1.09	0.1	ip	1	100	10	Krebs and Favor (1997)
	Muta TM Mouse	-	1.7 (3 / 0.8)	1.8 (4 / 1.4)	1.06	0.1	ip	1	100	3	Krebs and Favor (1997)
	Muta TM Mouse	-	0.45 (3 / 0.9)	0.9 (4 / 1.2)	2	0.45	ip	1	50	100	Krebs and Favor (1997)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	1.1 (2 / 0.7)	1.5 (4 / 1.4)	1.36	0.4	ip	1	50	10	Krebs and Favor (1997)
	Muta TM Mouse	–	6.3 (5 / 5.7)	9.5 (5 / 5.1)	1.51	3.2	ip	17	680	61	unpublished
	Muta TM Mouse	–	7.1 (5 / 5.3)	8.5 (5 / 4.5)	1.2	1.4	ip	17	680	25	unpublished
	Big Blue [®] mouse <i>cII</i>	+	2.65 (7 / 2.013)	5.9 (6 / 1.668)	2.23	3.25	drinking water	21	2 247	21	Manjanatha <i>et al.</i> (2006b)
	Big Blue [®] mouse <i>cII</i>	–	2.65 (7 / 2.013)	2.6 (6 / 1.842)	0.98	–0.05	drinking water	28	700	21	Manjanatha <i>et al.</i> (2006b)
	Big Blue [®] mouse <i>cII</i>	+	2.84 (7 / 2.204)	5.72 (6 / 1.226)	2.01	2.88	drinking water	21	2 058	21	Manjanatha <i>et al.</i> (2006b)
	Big Blue [®] mouse <i>cII</i>	–	2.84 (7 / 2.204)	2.1 (6 / 1.585)	0.74	–0.74	drinking water	28	532	21	Manjanatha <i>et al.</i> (2006b)
Acrylonitrile	Muta TM Mouse	–	3.5 (8 / 4.1)	3.3 (6 / 2.4)	0.94	–0.2	drinking water	28	505	49	unpublished
	Muta TM Mouse	–	6.5 (8 / 4.5)	6.4 (10 / 3.8)	0.98	–0.1	drinking water	28	1 620	49	unpublished
	Muta TM Mouse	–	6.5 (8 / 4.5)	6 (6 / 3.6)	0.92	–0.5	drinking water	28	505	49	unpublished
	Muta TM Mouse	–	3.5 (8 / 4.1)	2.5 (9 / 4.7)	0.71	–1	drinking water	28	2 350	49	unpublished
	Muta TM Mouse	–	7.4 (7 / 3.3)	7.6 (9 / 5.1)	1.03	0.2	drinking water	28	1 620	49	unpublished
	Muta TM Mouse	–	3.5 (8 / 4.1)	3.2 (10 / 4.5)	0.91	–0.3	drinking water	28	1 620	49	unpublished

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	7.4 (7 / 3.3)	10 (6 / 3.1)	1.35	2.6	drinking water	28	505	49	unpublished
	Muta TM Mouse	-	4 (8 / 3.3)	4.7 (9 / 2.1)	1.18	0.7	drinking water	28	2 350	49	unpublished
	Muta TM Mouse	-	4 (8 / 3.3)	4.5 (9 / 4.9)	1.13	0.5	drinking water	28	1 620	49	unpublished
	Muta TM Mouse	-	4 (8 / 3.3)	4.8 (6 / 2.8)	1.2	0.8	drinking water	28	505	49	unpublished
	Muta TM Mouse	-	5.4 (8 / 4)	4.9 (9 / 4.1)	0.91	-0.5	drinking water	28	2 350	49	unpublished
	Muta TM Mouse	-	5.4 (8 / 4)	4.5 (9 / 4.4)	0.83	-0.9	drinking water	28	1 620	49	unpublished
	Muta TM Mouse	-	5.4 (8 / 4)	4.7 (6 / 2.8)	0.87	-0.7	drinking water	28	505	49	unpublished
	Muta TM Mouse	-	7.4 (7 / 3.3)	6.8 (9 / 4)	0.92	-0.6	drinking water	28	2 350	49	unpublished
	Muta TM Mouse	-	6.5 (8 / 4.5)	6.8 (9 / 4.3)	1.05	0.3	drinking water	28	2 350	49	unpublished
Adozelesin	Big Blue [®] mouse	-	2.6 (4 / 0.5)	3.2 (4 / 0.5)	1.23	0.6	iv	1	36	2	Monroe and Mitchell (1993)
	Big Blue [®] mouse	+	2.8 (4 / 0.5)	7.8 (4 / 0.5)	2.79	5	iv	1	0.036	3	Monroe and Mitchell (1993)
	Big Blue [®] mouse	+	3 (4 / 0.5)	9.7 (4 / 0.5)	3.23	6.7	iv	1	0.036	15	Monroe and Mitchell (1993)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Aflatoxin B1	Big Blue [®] mouse	–	11 (4 / 1.3)	11.7 (4 / 1.3)	1.06	0.7	gavage	4	32	21	Autrup, Jorgensen and Jensen (1996)
	Big Blue [®] rat	+	4.5 (5 / –)	21 (5 / –)	4.67	16.5	gavage	1	0.5	14	Thornton <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	+	5 (5 / –)	23 (5 / –)	4.6	18	gavage	1	0.5	14	Davies <i>et al.</i> (1999)
	Big Blue [®] rat	+	4.5 (5 / 0.3)	13 (4 / 0.1)	2.89	8.5	gavage	1	0.5	14	Davies <i>et al.</i> (1997)
	Big Blue [®] mouse	–	3.1 (6 / 2.3)	4.1 (6 / 2)	1.32	1	ip	1	2.5	14	Dycaico <i>et al.</i> (1996)
	Big Blue [®] rat	+	2.7 (6 / 2)	49 (6 / 2)	18.15	46.3	ip	1	0.25	14	Dycaico <i>et al.</i> (1996)
	Big Blue [®] mouse	+	10.2 (4 / 1.4)	16.6 (4 / 1.4)	1.63	6.4	gavage	4	32	21	Autrup, Jorgensen and Jensen (1996)
	Big Blue [®] mouse	+	6.5 (4 / 1.6)	11.9 (4 / 1.5)	1.83	5.4	gavage	4	32	21	Autrup, Jorgensen and Jensen (1996)
	Big Blue [®] rat	+	3.4 (5 / –)	25 (5 / –)	7.35	21.6	gavage	1	0.5	14	Thornton <i>et al.</i> (2004)
Aflatoxin B1 + phorone	Big Blue [®] mouse	–	11 (4 / 1.3)	13.6 (4 / 1.1)	1.24	2.6	gavage	4	32	21	Autrup, Jorgensen and Jensen (1996)
	Big Blue [®] mouse	+	6.5 (4 / 1.6)	17.5 (4 / 1.4)	2.69	11	gavage	4	32	21	Autrup, Jorgensen and Jensen (1996)
	Big Blue [®] mouse	+	10.2 (4 / 1.4)	73.9 (4 / 1.2)	7.25	63.7	gavage	4	32	21	Autrup, Jorgensen and Jensen (1996)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Aflatoxin B1 + TCDD	Big Blue [®] rat	+	3.4 (5 / -)	16 (5 / -)	4.71	12.6	gavage	1	0.5	14	Thornton <i>et al.</i> (2004)
	Big Blue [®] rat	-	4.5 (5 / -)	4.8 (5 / -)	1.07	0.3	gavage	1	0.5	14	Thornton <i>et al.</i> (2004)
Agaritine	Big Blue [®] mouse	-	10 (2 / 0.5)	13 (2 / 0.5)	1.3	3	diet	105	8 400	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	+	5 (2 / 0.5)	10 (2 / 0.4)	2	5	diet	105	12 600	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	-	7 (2 / 1.1)	7 (2 / 0.8)	1	0	diet	105	12 600	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	+	8 (2 / 0.7)	12 (2 / 0.6)	1.5	4	diet	105	12 600	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	-	8 (2 / 0.8)	9 (2 / 0.7)	1.13	1	diet	105	3 150	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	-	7 (2 / 0.8)	7 (2 / 0.8)	1	0	diet	105	8 400	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	-	8 (2 / 0)	8 (2 / 0.3)	1	0	diet	105	8 400	0	Shephard, Gunz and Schlatter (1995)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	–	8 (2 / 0.8)	10 (2 / 0.5)	1.25	2	diet	105	12 600	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	–	10 (2 / 0.5)	12 (2 / 0.5)	1.2	2	diet	105	3 150	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	–	7 (2 / 1.1)	8 (2 / 0.9)	1.14	1	diet	105	3 150	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	–	8 (2 / 0.7)	12 (2 / 0.6)	1.5	4	diet	105	3 150	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	–	8 (2 / 0.7)	7 (2 / 0.7)	0.88	–1	diet	105	8 400	0	Shephard, Gunz and Schlatter (1995)
all- <i>trans</i> -Retinol	Muta TM Mouse	–	3 (– / –)	5 (1 / 0.2)	1.67	2	gavage	1	75	8	Crawford and Myhr (1995)
	Muta TM Mouse	–	3 (– / –)	5.5 (1 / 0.6)	1.83	2.5	gavage	1	75	8	Crawford and Myhr (1995)
alpha-Chaconine	Muta TM Mouse	+	3 (– / –)	16.2 (1 / 0.1)	5.4	13.2	ip	3	90	8	Crawford and Myhr (1995)
	Muta TM Mouse	+	3 (– / –)	11.3 (1 / 0.3)	3.77	8.3	ip	3	90	8	Crawford and Myhr (1995)
alpha-Hydroxytamoxifen	Big Blue [®] rat	+	1 (6 / 1.5)	77 (6 / 0.8)	77	76	ip	21	441	28	da Costa <i>et al.</i> (2002)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	-	1.9 (6 / 0.4)	0.2 (6 / 0.6)	0.11	-1.7	ip	21	441	28	da Costa <i>et al.</i> (2002)
	Big Blue [®] rat <i>cII</i>	+	8 (6 / 2.2)	9.4 (6 / 1.1)	1.8	1.4	ip	21	441	30	Chen <i>et al.</i> (2002)
	Big Blue [®] rat	+	1 (6 / -)	77 (6 / -)	77	76	ip	21	441	30	Chen <i>et al.</i> (2002)
	Big Blue [®] rat	+	5 (5 / 1.7)	9.48 (5 / 1.6)	1.9	4.48	gavage	10	nd	46	White <i>et al.</i> (2001)
alpha-Solanine	Muta TM Mouse	+	3 (- / -)	10.9 (1 / 0.4)	3.63	7.9	ip	3	330	8	Crawford and Myhr (1995)
	Muta TM Mouse	+	3 (- / -)	8 (1 / 0.1)	2.67	5	ip	3	330	8	Crawford and Myhr (1995)
Aminophenylnorharman	<i>gpt</i> delta (Spi)	+	0.12 (5 / 11.8)	1.2 (5 / 11.8)	10	1.08	diet	84	143	14	Masumura <i>et al.</i> (2003b)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.66 (5 / 3.6)	3.8 (5 / 3.6)	5.76	3.14	diet	84	143	14	Masumura <i>et al.</i> (2003b)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.66 (5 / 3.6)	6.8 (5 / 3.6)	10.3	6.14	diet	84	286	14	Masumura <i>et al.</i> (2003b)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.62 (5 / 3.6)	1.7 (5 / 3.6)	2.74	1.08	diet	84	143	14	Masumura <i>et al.</i> (2003b)
	<i>gpt</i> delta (Spi)	+	0.12 (5 / 11.8)	1.6 (5 / 11.8)	13.33	1.48	diet	84	286	14	Masumura <i>et al.</i> (2003b)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.62 (5 / 3.6)	2.9 (5 / 3.6)	4.68	2.28	diet	84	286	14	Masumura <i>et al.</i> (2003b)
Amosite asbestos	Big Blue [®] rat	-	3.36 (5 / 1.654)	3.93 (5 / 1.622)	1.17	0.57	intra-tracheal	1	4	112	Topinka <i>et al.</i> (2004a)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	–	3.77 (5 / 1.925)	4.9 (5 / 1.651)	1.3	1.13	intra-tracheal	28	32	28	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	–	3.11 (5 / 1.644)	3.93 (5 / 1.484)	1.26	0.82	intra-tracheal	1	4	28	Topinka <i>et al.</i> (2004a)
	Big Blue [®] rat	–	3.11 (5 / 1.644)	3.69 (5 / 1.556)	1.19	0.58	intra-tracheal	1	8	28	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	–	3.11 (5 / 1.644)	3.93 (5 / 1.484)	1.26	0.82	intra-tracheal	1	4	28	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	–	3.11 (5 / 1.644)	3.69 (5 / 1.556)	1.19	0.58	intra-tracheal	1	8	28	Topinka <i>et al.</i> (2004a)
	Big Blue [®] rat	–	3.77 (5 / 1.619)	4.9 (5 / 1.651)	1.3	1.13	intra-tracheal	28	32	28	Topinka <i>et al.</i> (2004a)
	Big Blue [®] rat	+	3.36 (5 / 1.654)	6.11 (5 / 1.641)	1.82	2.75	intra-tracheal	1	8	112	Topinka <i>et al.</i> (2004a)
	Big Blue [®] rat	+	3.51 (5 / 1.292)	5.76 (5 / 1.516)	1.64	2.25	intra-tracheal	28	32	112	Topinka <i>et al.</i> (2004a)
	Big Blue [®] rat	–	3.77 (5 / 1.925)	4.9 (5 / 1.651)	1.3	1.13	intra-tracheal	28	32	28	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	+	3.51 (5 / 1.292)	5.76 (5 / 1.516)	1.64	2.25	intra-tracheal	28	32	112	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	+	3.36 (5 / 1.654)	6.11 (5 / 1.641)	1.82	2.75	intra-tracheal	1	8	112	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	–	3.36 (5 / 1.654)	3.93 (5 / 1.622)	1.17	0.57	intra-tracheal	1	4	112	Loli <i>et al.</i> (2004)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	–	3.11 (5 / 1.644)	3.93 (5 / 1.484)	1.26	0.82	intra-tracheal	1	4	28	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	–	3.11 (5 / 1.644)	3.69 (5 / 1.556)	1.19	0.58	intra-tracheal	1	8	28	Loli <i>et al.</i> (2004)
Amosite asbestos + benzo(a)pyrene	Big Blue [®] rat	–	3.36 (5 / 1.654)	4.06 (5 / 1.595)	1.21	0.7	intra-tracheal	1	4	112	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	+	3.11 (5 / 1.644)	9.26 (3 / 0.931)	2.98	6.15	intra-tracheal	1	4	28	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	+	3.11 (5 / 1.644)	15.19 (3 / 0.597)	4.88	12.08	intra-tracheal	1	8	28	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	+	3.77 (5 / 1.925)	17.75 (3 / 0.484)	4.71	13.98	intra-tracheal	28	32	28	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	–	3.77 (5 / 1.925)	5.5 (5 / 1.606)	1.46	1.73	intra-tracheal	28	32	28	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	+	3.51 (5 / 1.292)	7.4 (5 / 1.64)	2.11	3.89	intra-tracheal	28	32	112	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	+	3.11 (5 / 1.644)	6.6 (5 / 1.542)	2.12	3.49	intra-tracheal	1	8	28	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	–	3.11 (5 / 1.644)	5.16 (5 / 1.846)	1.66	2.05	intra-tracheal	1	4	28	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	–	3.36 (5 / 1.654)	4.9 (5 / 1.486)	1.46	1.54	intra-tracheal	1	8	112	Loli <i>et al.</i> (2004)
AMP397	Muta [™] Mouse	–	7.25 (7 / –)	6.98 (7 / –)	0.96	–0.27	gavage	5	1 600	10	Suter <i>et al.</i> (2002)
	Muta [™] Mouse	–	9.58 (7 / –)	7.03 (7 / –)	0.73	–2.55	gavage	5	1 600	3	Suter <i>et al.</i> (2002)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Aristolochic acid	Muta TM Mouse	-	9.58 (7 / -)	9.22 (9 / -)	0.96	-0.36	gavage	5	1 600	31	Suter <i>et al.</i> (2002)
	Muta TM Mouse	-	7.25 (7 / -)	6.64 (7 / -)	0.92	-0.61	gavage	5	1 600	31	Suter <i>et al.</i> (2002)
	Muta TM Mouse	-	9.58 (7 / -)	9.26 (7 / -)	0.97	-0.32	gavage	5	1 600	10	Suter <i>et al.</i> (2002)
	Muta TM Mouse	-	7.25 (7 / -)	6.26 (7 / -)	0.86	-0.99	gavage	5	1 600	3	Suter <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	+	3.9 (4 / 7.7)	17.8 (4 / 5.8)	4.56	13.9	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Big Blue [®] rat <i>cII</i>	+	2.9 (6 / -)	7.8 (6 / -)	2.69	4.9	gavage	84	6	1	Chen <i>et al.</i> (2006)
	Big Blue [®] rat <i>cII</i>	+	2.9 (6 / -)	24.2 (6 / -)	8.34	21.3	gavage	84	60	1	Chen <i>et al.</i> (2006)
	Big Blue [®] rat <i>cII</i>	+	2.9 (6 / -)	131.9 (6 / -)	45.48	129	gavage	84	600	1	Chen <i>et al.</i> (2006)
	Big Blue [®] rat <i>cII</i>	-	2.8 (6 / -)	3.7 (6 / -)	1.32	0.9	gavage	84	6	1	Mei <i>et al.</i> (2006a)
	Big Blue [®] rat <i>cII</i>	+	2.8 (6 / -)	11.3 (6 / -)	4.04	8.5	gavage	84	60	1	Mei <i>et al.</i> (2006a)
	Big Blue [®] rat <i>cII</i>	+	2.8 (6 / -)	66.6 (6 / -)	23.79	63.8	gavage	84	600	1	Mei <i>et al.</i> (2006a)
	Muta TM Mouse <i>cII</i>	-	1.2 (4 / 4.7)	1.5 (4 / 3.8)	1.25	0.3	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse	+	5.2 (4 / 5.6)	13.7 (4 / 6)	2.63	8.5	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
Muta TM Mouse	+	6.7 (4 / 3.9)	13.7 (4 / 3)	2.04	7	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)	

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse <i>cII</i>	+	2.7 (4 / 3.1)	87 (4 / 2)	32.22	84.3	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse <i>cII</i>	+	4.1 (4 / 6.6)	66.3 (4 / 7.8)	16.17	62.2	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse <i>cII</i>	-	3.2 (4 / 5)	5.5 (4 / 4.9)	1.72	2.3	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse	-	6 (4 / 2.7)	6.2 (4 / 2.7)	1.03	0.2	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse	+	8.1 (4 / 2.8)	85.1 (4 / 3)	10.51	77	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse <i>cII</i>	-	2.9 (4 / 8.9)	4.9 (4 / 9.4)	1.69	2	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse	+	3.3 (4 / 3.8)	112.9 (4 / 1.9)	34.21	109.6	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse <i>cII</i>	+	4.5 (4 / 4.3)	46.7 (4 / 3.6)	10.38	42.2	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse <i>cII</i>	-	2.9 (4 / 5.7)	4.9 (4 / 4.2)	1.69	2	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse <i>cII</i>	-	4.4 (4 / 1.4)	7.2 (4 / 9.6)	1.64	2.8	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse	+	6.9 (4 / 6.24)	11.9 (4 / 7)	1.72	5	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse	+	4.5 (4 / 2.6)	14.1 (4 / 3.2)	3.13	9.6	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Arsenite trioxide	Muta TM Mouse	+	6 (4 / 1.7)	102.6 (4 / 2.3)	17.1	96.6	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse <i>cII</i>	-	2.5 (4 / 10.6)	3.9 (4 / 9.3)	1.56	1.4	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse	-	2.4 (4 / 2.9)	3.7 (4 / 2.2)	1.54	1.3	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse	+	7 (4 / 3)	31.6 (4 / 2.1)	4.51	24.6	i.g. injection	22	60	7	Kohara <i>et al.</i> (2002a)
	Muta TM Mouse <i>cII</i>	-	6.8 (5 / 1.7)	5.3 (5 / 12)	0.78	-1.5	ip	5	38	14	Noda <i>et al.</i> (2002)
	Muta TM Mouse	-	2.4 (3 / 0.8)	5 (2 / 0.4)	2.08	2.6	ip	5	38	14	Noda <i>et al.</i> (2002)
	Muta TM Mouse	-	7.5 (3 / 0.48)	5.1 (2 / 0.1)	0.68	-2.4	ip	5	38	14	Noda <i>et al.</i> (2002)
	Muta TM Mouse	-	5.4 (5 / 1.5)	6 (5 / 1.6)	1.11	0.6	ip	5	38	14	Noda <i>et al.</i> (2002)
	Muta TM Mouse	-	5.7 (5 / 3)	5.7 (5 / 2.1)	1	0	ip	5	38	14	Noda <i>et al.</i> (2002)
	Azathioprine	Muta TM Mouse	+	4.7 (10 / 17.4)	9.5 (5 / 9.4)	2.02	4.8	gavage	5	500	1
Muta TM Mouse		-	7.5 (10 / 15.8)	10.5 (5 / 4.2)	1.4	3	gavage	5	500	25	Smith <i>et al.</i> (1999)
Muta TM Mouse		-	7.5 (10 / 15.8)	10 (5 / 9.8)	1.33	2.5	gavage	5	50	25	Smith <i>et al.</i> (1999)
Muta TM Mouse		-	4.7 (10 / 17.4)	3.8 (5 / 11.1)	0.81	-0.9	gavage	5	250	1	Smith <i>et al.</i> (1999)
Muta TM Mouse		-	4.7 (10 / 17.4)	5.9 (5 / 11.8)	1.26	1.2	gavage	5	50	1	Smith <i>et al.</i> (1999)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Benzene	Muta TM Mouse	+	7.3 (10 / 6.4)	14.8 (5 / 4.6)	2.03	7.5	gavage	5	500	25	Smith <i>et al.</i> (1999)
	Muta TM Mouse	+	7.3 (10 / 6.4)	15.2 (3 / 4.6)	2.08	7.9	gavage	5	250	25	Smith <i>et al.</i> (1999)
	Muta TM Mouse	-	7.3 (10 / 6.4)	8 (2 / 3)	1.1	0.7	gavage	5	50	25	Smith <i>et al.</i> (1999)
	Muta TM Mouse	-	7.5 (10 / 15.8)	11.4 (5 / 2.8)	1.52	3.9	gavage	5	250	25	Smith <i>et al.</i> (1999)
	Big Blue [®] mouse	+	8.2 (8 / 3.6)	12.6 (7 / 3.3)	1.54	4.4	inhalation	84	113 400	0	Mullin <i>et al.</i> (1995)
	Big Blue [®] mouse	+	2.2 (4 / 1.6)	3.7 (4 / 1.2)	1.68	1.5	gavage	5	1 000	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	-	4 (4 / 1.5)	3.5 (4 / 1.4)	0.88	-0.5	gavage	5	1 000	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	-	4 (4 / 1.5)	3.6 (3 / 1.1)	0.9	-0.4	gavage	5	3 750	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	-	9 (8 / 3.4)	10.4 (8 / 3.3)	1.16	1.4	inhalation	84	113 400	0	Mullin <i>et al.</i> (1995)
	Big Blue [®] mouse	-	2.2 (4 / 1.6)	3.7 (4 / 1.4)	1.68	1.5	gavage	5	2 000	14	Provost <i>et al.</i> (1996)
Big Blue [®] mouse	-	2.2 (4 / 1.6)	2.6 (3 / 1.1)	1.18	0.4	gavage	5	3 750	14	Provost <i>et al.</i> (1996)	
Big Blue [®] mouse	-	3.4 (4 / 1.4)	3.6 (4 / 1.4)	1.06	0.2	gavage	5	1 000	14	Provost <i>et al.</i> (1996)	

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Benzo(a)pyrene (B(a)P)	Big Blue [®] mouse	+	3.4 (4 / 1.4)	5.6 (4 / 1.2)	1.65	2.2	gavage	5	2 000	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	-	3.4 (4 / 1.4)	5.8 (3 / 1.3)	1.71	2.4	gavage	5	3 750	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	-	4 (4 / 1.5)	5.4 (4 / 1.5)	1.35	1.4	gavage	5	2 000	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	+	6.4 (8 / 3.7)	10.6 (8 / 3.8)	1.66	4.2	inhalation	84	113 400	0	Mullin <i>et al.</i> (1995)
	<i>lacZ</i> plasmid mouse	+	5.8 (6 / -)	20.1 (3 / -)	3.47	14.3	ip	1	100	14	Boerrigter <i>et al.</i> (1995)
	Muta TM Mouse	+	6.1 (3 / 1.6)	56 (2 / 1.1)	9.18	49.9	gavage	5	625	14	Hakura <i>et al.</i> (1998)
	Muta TM Mouse	+	4.1 (4 / 1)	22 (4 / 0.8)	5.37	17.9	gavage	5	625	14	Hakura <i>et al.</i> (1998)
	Big Blue [®] rat	+	3.77 (5 / 1.925)	7.17 (3 / 0.747)	1.9	3.4	intra-tracheal	28	40	28	Topinka <i>et al.</i> (2006b)
	Muta TM Mouse	+	5.4 (4 / 1.8)	22 (4 / 1.6)	4.07	16.6	gavage	5	625	14	Hakura <i>et al.</i> (1998)
	Muta TM Mouse	+	4.3 (4 / 4.4)	16 (4 / 3.3)	3.72	11.7	gavage	5	625	14	Hakura <i>et al.</i> (1998)
Muta TM Mouse	+	8.1 (4 / 2)	17 (4 / 1.9)	2.1	8.9	gavage	5	625	14	Hakura <i>et al.</i> (1998)	
Muta TM Mouse	-	4.1 (4 / 3.3)	5.8 (4 / 3.2)	1.41	1.7	gavage	5	625	14	Hakura <i>et al.</i> (1998)	

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	1.8 (9 / 2.2)	6.2 (10 / 1.2)	3.44	4.4	ip	1	50	21	Skopek <i>et al.</i> (1996)
	Big Blue [®] mouse	+	1.8 (9 / 2.2)	15.6 (10 / 1.2)	8.67	13.8	ip	3	150	21	Skopek <i>et al.</i> (1996)
	Big Blue [®] rat	+	3.11 (5 / 1.644)	6.13 (3 / 0.742)	1.97	3.02	intra-tracheal	1	40	28	Topinka <i>et al.</i> (2006b)
	Muta TM Mouse	+	8.6 (1 / 0.4)	32.2 (1 / 0)	3.74	23.6	ip	1	100	35	Mientjes <i>et al.</i> (1996)
	Muta TM Mouse	+	3.3 (4 / 5.7)	84 (4 / 1.4)	25.45	80.7	gavage	5	625	14	Hakura <i>et al.</i> (1998)
	Muta TM Mouse	+	8.6 (1 / 0.4)	21.1 (1 / 0.1)	2.45	12.5	ip	1	100	28	Mientjes <i>et al.</i> (1996)
	Muta TM Mouse	+	8.6 (1 / 0.4)	25.7 (1 / 0.1)	2.99	17.1	ip	1	100	21	Mientjes <i>et al.</i> (1996)
	Muta TM Mouse	-	8.6 (1 / 0.4)	5.1 (1 / 0.3)	0.59	-3.5	ip	1	100	1	Mientjes <i>et al.</i> (1996)
	Big Blue [®] mouse	+	3 (3 / 0.9)	12 (3 / 0.7)	4	9	ip	3	120	3	Shane <i>et al.</i> (1997)
	Muta TM Mouse	+	7 (1 / 0)	61 (1 / 0)	8.71	54	ip	1	100	35	Mientjes <i>et al.</i> (1996)
	Muta TM Mouse	+	7 (1 / 0)	31 (1 / 0.1)	4.43	24	ip	1	100	28	Mientjes <i>et al.</i> (1996)
	Big Blue [®] mouse	+	4.2 (- / -)	12.4 (4 / 0.2)	2.95	8.2	topical	1	4 µg	3	Miller <i>et al.</i> (2000)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	7 (1 / 0)	10 (1 / 0.1)	1.43	3	ip	1	100	1	Mientjes <i>et al.</i> (1996)
	Muta TM Mouse	+	3.3 (6 / -)	28.1 (9 / 1.601)	8.52	24.8	gavage	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	8 (4 / 1.5)	30.8 (4 / 1.2)	3.85	22.8	topical	5	25 µg	7	Dean <i>et al.</i> (1998)
	Muta TM Mouse	+	4 (6 / -)	20.5 (11 / 2.395)	5.13	16.5	gavage	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Big Blue [®] mouse	-	4.2 (- / -)	5 (4 / 0.2)	1.19	0.8	topical	1	4 µg	3	Miller <i>et al.</i> (2000)
	Muta TM Mouse	-	5.8 (4 / 1.9)	6.7 (3 / 1.5)	1.16	0.9	topical	1	50 µg	21	Dean <i>et al.</i> (1998)
	Muta TM Mouse	-	8.2 (4 / 2.2)	7.3 (4 / 2.7)	0.89	-0.9	topical	1	50 µg	21	Dean <i>et al.</i> (1998)
	Muta TM Mouse	+	8.6 (4 / 1.5)	71.4 (4 / 1.4)	8.3	62.8	topical	5	50 µg	21	Dean <i>et al.</i> (1998)
	Big Blue [®] mouse	+	4.2 (- / -)	30 (4 / 0.2)	7.14	25.8	topical	1	32 µg	3	Miller <i>et al.</i> (2000)
	Muta TM Mouse	+	8 (4 / 1.5)	53.9 (3 / 1.4)	6.74	45.9	topical	5	50 µg	7	Dean <i>et al.</i> (1998)
	Big Blue [®] mouse	+	4.2 (- / -)	17.9 (4 / 0.2)	4.26	13.7	topical	1	64 µg	3	Miller <i>et al.</i> (2000)
	Muta TM Mouse	+	6.5 (4 / 1.6)	77.6 (4 / 0.6)	11.94	71.1	topical	1	50 µg	21	Dean <i>et al.</i> (1998)
	Muta TM Mouse	+	6.5 (4 / 1.6)	52 (3 / 0.9)	8	45.5	topical	1	25 µg	21	Dean <i>et al.</i> (1998)
	Muta TM Mouse	+	13 (3 / 1)	54 (4 / 1.6)	4.15	41	topical	1	25 µg	7	Dean <i>et al.</i> (1998)
	Muta TM Mouse	+	7.1 (4 / 1.4)	18.5 (4 / 1.1)	2.61	11.4	ip	1	100	48	Rompelberg <i>et al.</i> (1996)
	Muta TM Mouse	+	7 (1 / 0)	32 (1 / 0)	4.57	25	ip	1	100	21	Mientjes <i>et al.</i> (1996)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	1.7 (6 / 2.6)	13 (3 / 0.6)	7.65	11.3	ip	1	500	3	Kohler <i>et al.</i> (1991b)
	Muta TM Mouse	+	8.6 (4 / 1.5)	55.7 (4 / 1.1)	6.48	47.1	topical	5	25 µg	21	Dean <i>et al.</i> (1998)
	Muta TM Mouse	+	24.7 (4 / 0.6)	391 (4 / 1.7)	15.83	366.3	gavage	5	625	182	Hakura <i>et al.</i> (1999)
	Muta TM Mouse	+	10 (1 / 0)	147 (3 / 0.9)	14.7	137	gavage	5	625	14	Hakura <i>et al.</i> (1998)
	Muta TM Mouse	+	7.6 (4 / 3.3)	184 (4 / 2.3)	24.21	176.4	gavage	5	625	14	Hakura <i>et al.</i> (1998)
	Muta TM Mouse	+	7.4 (4 / 2.5)	275 (4 / 3.2)	37.16	267.6	gavage	5	625	14	Hakura <i>et al.</i> (1998)
	Muta TM Mouse	+	7.8 (4 / 1.9)	58.7 (4 / 1.1)	7.53	50.9	gavage	5	625	182	Hakura <i>et al.</i> (1999)
	Muta TM Mouse	+	22.8 (4 / 0.4)	62.5 (4 / 0.2)	2.74	39.7	gavage	5	625	182	Hakura <i>et al.</i> (1999)
	Muta TM Mouse	+	7.9 (3 / 0.8)	44.9 (4 / 0.5)	5.68	37	gavage	5	625	182	Hakura <i>et al.</i> (1999)
	Muta TM Mouse	+	3.7 (6 / -)	32.1 (11 / 1.797)	8.68	28.4	gavage	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	8.6 (2 / 0.2)	328 (4 / 0.2)	38.14	319.4	gavage	5	625	182	Hakura <i>et al.</i> (1999)
	Big Blue [®] mouse	+	4.2 (- / -)	17.7 (4 / 0.2)	4.21	13.5	topical	1	32 µg	3	Miller <i>et al.</i> (2000)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.2 (6 / -)	33.2 (5 / -)	10.38	30	gavage	11	27.5	14	von Pressentin, Kosinska and Guttenplan (1999)
	Muta TM Mouse	+	3.8 (5 / -)	25.7 (5 / -)	6.76	21.9	gavage	11	27.5	14	von Pressentin, Kosinska and Guttenplan (1999)
	Big Blue [®] mouse	+	4.2 (- / -)	59.8 (4 / 0.1)	14.24	55.6	topical	1	64 µg	7	Miller <i>et al.</i> (2000)
	Big Blue [®] mouse	+	4.2 (- / -)	41.5 (4 / 0.1)	9.88	37.3	topical	1	64 µg	7	Miller <i>et al.</i> (2000)
	Big Blue [®] mouse	+	4.2 (- / -)	53.7 (4 / 0.2)	12.79	49.5	topical	1	64 µg	3	Miller <i>et al.</i> (2000)
	Muta TM Mouse	+	5 (4 / 1.9)	92 (2 / 0.9)	18.4	87	gavage	5	625	14	Hakura <i>et al.</i> (1998)
	Muta TM Mouse	+	5.8 (4 / 0.9)	89 (4 / 2.7)	15.34	83.2	gavage	5	625	182	Hakura <i>et al.</i> (1999)
	<i>lacZ</i> plasmid mouse	+	7.8 (4 / -)	41.7 (4 / -)	5.35	33.9	gavage	91	507	0	van Steeg (2001)
	<i>lacZ</i> plasmid mouse	-	5.3 (2 / -)	6.6 (4 / -)	1.25	1.3	gavage	7	39	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	4.4 (2 / -)	21.5 (3 / -)	4.89	17.1	gavage	63	351	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	4.4 (2 / -)	24.3 (4 / -)	5.52	19.9	gavage	91	507	3	de Vries <i>et al.</i> (1997)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	7.8 (4 / -)	48.6 (4 / -)	6.23	40.8	gavage	91	507	0	van Steeg (2001)
	<i>lacZ</i> plasmid mouse	+	8.4 (4 / -)	34.2 (4 / -)	4.07	25.8	gavage	91	507	0	van Steeg (2001)
	<i>lacZ</i> plasmid mouse	-	4.4 (2 / -)	7.9 (4 / -)	1.8	3.5	gavage	7	39	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	5.6 (4 / -)	94.1 (4 / -)	16.8	88.5	gavage	91	507	0	van Steeg (2001)
	<i>lacZ</i> plasmid mouse	+	4.3 (3 / -)	22.7 (3 / -)	5.28	18.4	gavage	91	507	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	4.3 (4 / -)	29.8 (4 / -)	6.93	25.5	gavage	91	507	0	van Steeg (2001)
	<i>lacZ</i> plasmid mouse	+	6.4 (4 / -)	39.8 (4 / -)	6.22	33.4	gavage	91	507	0	van Steeg (2001)
	<i>lacZ</i> plasmid mouse	+	7.6 (4 / -)	32.6 (4 / -)	4.29	25	gavage	91	507	0	van Steeg (2001)
	<i>lacZ</i> plasmid mouse	+	6.4 (4 / -)	22.4 (4 / -)	3.5	16	gavage	91	507	0	van Steeg (2001)
	<i>lacZ</i> plasmid mouse	+	6.8 (4 / -)	91.9 (4 / -)	13.51	85.1	gavage	91	507	0	van Steeg (2001)
	<i>lacZ</i> plasmid mouse	+	7.7 (4 / -)	38.9 (4 / -)	5.05	31.2	gavage	91	507	0	van Steeg (2001)
	<i>lacZ</i> plasmid mouse	+	6.6 (4 / -)	31.4 (4 / -)	4.76	24.8	gavage	91	507	0	van Steeg (2001)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	-	3.8 (3 / -)	5.1 (4 / -)	1.34	1.3	gavage	7	39	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	-	5.3 (2 / -)	5.8 (3 / -)	1.09	0.5	gavage	35	195	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	-	5.3 (2 / -)	8.6 (2 / -)	1.62	3.3	gavage	63	351	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	5.3 (2 / -)	18.2 (4 / -)	3.43	12.9	gavage	91	507	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	-	3.8 (4 / -)	6.6 (3 / -)	1.74	2.8	gavage	7	39	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	3.8 (4 / -)	19.5 (3 / -)	5.13	15.7	gavage	35	195	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	4.4 (2 / -)	11.9 (4 / -)	2.7	7.5	gavage	35	195	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	3.8 (4 / -)	26.5 (4 / -)	6.97	22.7	gavage	91	507	3	de Vries <i>et al.</i> (1997)
	Big Blue [®] rat	+	3.4 (5 / 0.4)	36 (3 / 0.3)	10.59	32.6	ip	1	200	28	Unfried, Schurkes and Abel (2002)
	<i>lacZ</i> plasmid mouse	+	3.8 (3 / -)	12.7 (3 / -)	3.34	8.9	gavage	35	195	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	3.8 (3 / -)	27.3 (3 / -)	7.18	23.5	gavage	63	351	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	3.8 (3 / -)	56.1 (4 / -)	14.76	52.3	gavage	91	507	3	de Vries <i>et al.</i> (1997)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	-	4.3 (3 / -)	6.9 (4 / -)	1.6	2.6	gavage	7	39	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	4.3 (3 / -)	9.5 (4 / -)	2.21	5.2	gavage	35	195	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	4.3 (3 / -)	14 (2 / -)	3.26	9.7	gavage	63	351	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	3.8 (4 / -)	22.5 (2 / -)	5.92	18.7	gavage	63	351	3	de Vries <i>et al.</i> (1997)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.55 (3 / 2.617)	1.39 (3 / 0.983)	2.53	0.84	intra-tracheal	1	20	14	Hashimoto <i>et al.</i> (2005)
	Big Blue [®] rat	+	3.11 (5 / 1.644)	6.13 (3 / 0.742)	1.97	3.02	intra-tracheal	2	80	28	Loli <i>et al.</i> (2004)
	Muta TM Mouse	+	8.5 (4 / 1.3)	280.6 (5 / 1)	33	272.1	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse	+	5.6 (5 / 1.7)	41.3 (5 / 4.7)	7.4	35.7	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse	+	6.2 (5 / 3.1)	64.1 (5 / 2.5)	10.3	57.9	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse	+	9 (5 / 1.6)	39.8 (5 / 0.6)	4.4	30.8	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	<i>lacZ</i> plasmid mouse	+	5.8 (4 / -)	41.1 (4 / -)	7.09	35.3	gavage	91	507	0	van Steeg (2001)
	Muta TM Mouse	+	8.5 (5 / 1.8)	83.8 (5 / 0.64)	9.9	75.3	gavage	5	625	14	Yamada <i>et al.</i> (2002)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	-	4.7 (3 / 0.7)	10.6 (3 / 0.8)	2.26	5.9	ip	3	120	1	Shane <i>et al.</i> (1997)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.55 (3 / 2.617)	2.05 (3 / 2.282)	3.73	1.5	intra-tracheal	1	40	14	Hashimoto <i>et al.</i> (2005)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.55 (3 / 2.617)	3.13 (2 / 2.509)	5.69	2.58	intra-tracheal	1	81.6	14	Hashimoto <i>et al.</i> (2005)
	Big Blue [®] rat	-	3.51 (5 / 1.292)	3.8 (5 / 1.607)	1.08	0.29	ip	2	80	112	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	-	3.36 (5 / 1.654)	4.77 (5 / 1.6)	1.42	1.41	ip	2	80	112	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	-	3.77 (5 / 1.925)	6.12 (5 / 2.192)	1.62	2.35	ip	2	80	28	Loli <i>et al.</i> (2004)
	Big Blue [®] rat	-	3.11 (5 / 1.644)	4.32 (5 / 1.501)	1.39	1.21	ip	2	80	28	Loli <i>et al.</i> (2004)
	Muta TM Mouse	+	8.3 (5 / 2.9)	25 (5 / 2.2)	3	16.7	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	+	3.3 (5 / 2)	18.8 (5 / 1.3)	5.7	15.5	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	+	3.5 (5 / 4.9)	9.4 (5 / 1.3)	2.7	5.9	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Big Blue [®] rat	+	1.6 (5 / 0.4)	24 (4 / 0.3)	15	22.4	ip	1	200	84	Unfried, Schurkes and Abel (2002)
	Big Blue [®] rat	+	0.8 (4 / 0.5)	37 (3 / 0.3)	46.25	36.2	ip	1	200	168	Unfried, Schurkes and Abel (2002)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	4.6 (6 / 0.3)	28 (6 / 0.3)	6.09	23.4	gavage	5	625	56	Guttenplan <i>et al.</i> (2001)
	Muta TM Mouse	+	14.3 (6 / 0.3)	94.7 (6 / 0.3)	6.62	80.4	gavage	5	625	56	Guttenplan <i>et al.</i> (2001)
	Muta TM Mouse	+	6.1 (6 / 0.3)	17.4 (6 / 0.3)	2.85	11.3	gavage	5	625	56	Guttenplan <i>et al.</i> (2001)
	Big Blue [®] rat	+	3.77 (5 / 1.925)	7.17 (3 / 0.747)	1.9	3.4	intra-tracheal	2	80	28	Loli <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	+	3.1 (5 / 2.8)	36.8 (5 / 2.7)	11.9	33.7	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse	+	7.6 (5 / 2.2)	50 (5 / 1.6)	6.6	42.4	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	+	3.9 (4 / 1.5)	69.9 (5 / 1.6)	17.9	66.1	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	-	5.6 (5 / 6.2)	9.2 (5 / 6.1)	1.6	3.6	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse <i>cII</i>	-	4.7 (5 / 2.7)	16.2 (5 / 1.5)	3.4	11.5	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Big Blue [®] mouse	+	1.7 (6 / 2.6)	21.5 (3 / 0.6)	12.65	19.8	ip	5	500	3	Kohler <i>et al.</i> (1991b)
	Muta TM Mouse <i>cII</i>	+	3.1 (5 / 3.4)	16.1 (5 / 2.4)	5.2	13	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Big Blue [®] mouse	+	4 (2 / -)	8.6 (5 / -)	2.15	4.6	ip	3	150	21	Jiang, Glickman and de Boer (2001)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse <i>cII</i>	+	3.8 (5 / 4.1)	13.4 (5 / 3.1)	3.5	9.6	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Muta TM Mouse	+	3.2 (5 / -)	14 (5 / -)	4.38	10.8	gavage	12	125	14	Kosinska, von Pressentin and Guttenplan (1999)
	Muta TM Mouse	+	3.5 (4 / -)	9 (4 / -)	2.57	5.5	gavage + drinking water	12	273	14	Kosinska, von Pressentin and Guttenplan (1999)
	Muta TM Mouse	+	3.1 (8 / 2.4)	14.9 (5 / 0.5)	4.81	11.8	gavage	1	100	14	Cosentino and Heddle (1999a)
	Big Blue [®] mouse <i>cI</i>	-	1 (8 / 0.2)	2.7 (9 / 0.3)	2.7	1.7	ip	1	50	21	Monroe <i>et al.</i> (1998)
	Muta TM Mouse	+	7.9 (5 / 3.1)	174.8 (5 / 1.9)	22.1	166.9	gavage	5	625	14	Yamada <i>et al.</i> (2002)
	Big Blue [®] mouse <i>cI</i>	-	1 (8 / 0.2)	1.5 (9 / 0.3)	1.5	0.5	ip	3	150	21	Monroe <i>et al.</i> (1998)
	<i>lacZ</i> plasmid mouse	+	4.7 (1 / -)	13.3 (3 / -)	2.83	8.6	gavage	91	507	3	de Vries <i>et al.</i> (1997)
	Muta TM Mouse	+	3.1 (8 / 2.4)	9.7 (3 / 0.3)	3.13	6.6	gavage	1	50	14	Cosentino and Heddle (1999a)
	Big Blue [®] mouse <i>cII</i>	-	5.5 (8 / 0.2)	7.4 (9 / 0.3)	1.35	1.9	ip	3	150	21	Monroe <i>et al.</i> (1998)
	Muta TM Mouse	-	3.1 (8 / 2.4)	3.9 (5 / 0.8)	1.26	0.8	gavage	1	10	14	Cosentino and Heddle (1999a)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.8 (5 / -)	7.8 (5 / -)	2.05	4	gavage	5	125	14	Kosinska, von Pressentin and Guttenplan (1999)
	Muta TM Mouse	+	3 (5 / -)	11 (5 / -)	3.67	8	gavage	5	125	14	Kosinska, von Pressentin and Guttenplan (1999)
	Muta TM Mouse	+	3.5 (4 / -)	12.3 (4 / -)	3.51	8.8	gavage + drinking water	12	273	14	Kosinska, von Pressentin and Guttenplan (1999)
	Muta TM Mouse	+	3.8 (4 / -)	5 (4 / -)	1.32	1.2	gavage + drinking water	12	273	14	Kosinska, von Pressentin and Guttenplan (1999)
	Muta TM Mouse	+	3 (4 / -)	7 (4 / -)	2.33	4	gavage + drinking water	12	273	14	Kosinska, von Pressentin and Guttenplan (1999)
	Muta TM Mouse	+	3.5 (4 / -)	8 (4 / -)	2.29	4.5	gavage + drinking water	12	273	14	Kosinska, von Pressentin and Guttenplan (1999)
	Big Blue [®] mouse <i>cII</i>	-	5.5 (8 / 0.2)	4.8 (9 / 0.3)	0.87	-0.7	ip	1	50	21	Monroe <i>et al.</i> (1998)
	Muta TM Mouse	-	2.5 (4 / -)	3 (4 / -)	1.2	0.5	gavage + drinking water	12	273	14	Kosinska, von Pressentin and Guttenplan (1999)
	<i>lacZ</i> plasmid mouse	+	4.7 (1 / -)	12.9 (2 / -)	2.74	8.2	gavage	63	351	3	de Vries <i>et al.</i> (1997)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	4.7 (1 / -)	11.2 (3 / -)	2.38	6.5	gavage	35	195	3	de Vries <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	-	4.7 (1 / -)	6.9 (4 / -)	1.47	2.2	gavage	7	39	3	de Vries <i>et al.</i> (1997)
	Muta TM Mouse	-	8 (4 / -)	9 (6 / -)	1.13	1	diet	7	33.6	14	Cosentino and Heddle (2000)
	Muta TM Mouse	+	2.5 (5 / -)	12 (5 / -)	4.8	9.5	gavage	5	625	14	Kosinska, von Pressentin and Guttenplan (1999)
	Muta TM Mouse	+	3.5 (5 / -)	220 (5 / -)	62.86	216.5	gavage	5	625	14	Kosinska, von Pressentin and Guttenplan (1999)
	Muta TM Mouse	+	3 (5 / -)	95 (5 / -)	31.67	92	gavage	5	625	14	Kosinska, von Pressentin and Guttenplan (1999)
	Muta TM Mouse	+	3.8 (5 / -)	41 (5 / -)	10.79	37.2	gavage	5	625	14	Kosinska, von Pressentin and Guttenplan (1999)
	Muta TM Mouse	+	3.5 (5 / -)	58 (5 / -)	16.57	54.5	gavage	5	625	14	Kosinska, von Pressentin and Guttenplan (1999)
	Muta TM Mouse	+	8 (5 / -)	26 (5 / -)	3.25	18	diet	28	134.4	14	Cosentino and Heddle (2000)
	Muta TM Mouse	-	8 (4 / -)	10 (6 / -)	1.25	2	diet	14	67.2	14	Cosentino and Heddle (2000)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	8 (4 / -)	14 (6 / -)	1.75	6	diet	21	100.8	14	Cosentino and Heddle (2000)
	Muta TM Mouse	-	8 (4 / -)	13 (6 / -)	1.63	5	diet	28	134.4	14	Cosentino and Heddle (2000)
	Muta TM Mouse	+	8 (4 / -)	27 (6 / -)	3.38	19	diet	56	268.8	14	Cosentino and Heddle (2000)
	Muta TM Mouse	-	8 (5 / -)	15 (5 / -)	1.88	7	diet	7	33.6	14	Cosentino and Heddle (2000)
	Muta TM Mouse	+	8 (5 / -)	20 (5 / -)	2.5	12	diet	21	100.8	14	Cosentino and Heddle (2000)
B(a)P + D3T	Muta TM Mouse	+	3.3 (6 / -)	24.7 (5 / 1.187)	7.48	21.4	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	3.7 (6 / -)	19.9 (6 / 0.997)	5.38	16.2	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	4 (6 / -)	19.1 (6 / 0.755)	4.78	15.1	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	4 (6 / -)	16 (5 / 0.904)	4	12	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	3.3 (6 / -)	25.6 (5 / 0.671)	7.76	22.3	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	3.7 (6 / -)	24.6 (4 / 0.664)	6.65	20.9	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
B(a)P + D3T + p-XSC	Muta TM Mouse	+	4 (6 / -)	18.2 (6 / 0.892)	4.55	14.2	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.3 (6 / -)	27.7 (5 / 0.973)	8.39	24.4	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	3.7 (6 / -)	24.2 (6 / 1.019)	6.54	20.5	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
B(a)P + eugenol	Muta TM Mouse	+	7.1 (4 / 1.4)	20.6 (4 / 1.2)	2.9	13.5	ip + diet	1	100	0	Rompelberg <i>et al.</i> (1996)
B(a)P + green tea	Big Blue [®] mouse	+	4 (2 / -)	5.7 (5 / -)	1.43	1.7	ip	3	150	21	Jiang, Glickman and de Boer (2001)
B(a)P + lycopene	Muta TM Mouse	+	9.3 (6 / 0.3)	180.2 (6 / 0.3)	19.38	170.9	gavage	5	625	56	Guttenplan <i>et al.</i> (2001)
	Muta TM Mouse	-	7.3 (6 / 0.3)	13.7 (6 / 0.3)	1.88	6.4	gavage	5	625	56	Guttenplan <i>et al.</i> (2001)
	Muta TM Mouse	+	5.3 (6 / 0.3)	13.3 (6 / 0.3)	2.51	8	gavage	5	625	56	Guttenplan <i>et al.</i> (2001)
	Muta TM Mouse	+	4.1 (6 / 0.3)	41.2 (6 / 0.3)	10.05	37.1	gavage	5	625	56	Guttenplan <i>et al.</i> (2001)
	Muta TM Mouse	+	4.9 (6 / 0.3)	28.7 (6 / 0.3)	5.86	23.8	gavage	5	625	56	Guttenplan <i>et al.</i> (2001)
	Muta TM Mouse	+	14.4 (6 / 0.3)	145.7 (6 / 0.3)	10.12	131.3	gavage	5	625	56	Guttenplan <i>et al.</i> (2001)
B(a)P + p-XSC	Muta TM Mouse	+	3.3 (6 / -)	23.1 (5 / 0.775)	7	19.8	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	3.7 (6 / -)	23 (5 / 0.746)	6.22	19.3	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
B(a)P + selenium-enriched yeast	Muta TM Mouse	+	3.7 (6 / -)	36.1 (5 / 0.515)	9.76	32.4	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	4 (6 / -)	18.6 (5 / 0.914)	4.65	14.6	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	4 (6 / -)	19.2 (5 / 1.406)	4.8	15.2	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	3.3 (6 / -)	21.2 (6 / 1.491)	6.42	17.9	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	3.3 (6 / -)	19.8 (5 / 1.494)	6	16.5	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	4 (6 / -)	21.7 (6 / 1.341)	5.43	17.7	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	4 (6 / -)	22.5 (5 / 1.095)	5.63	18.5	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	3.7 (6 / -)	30.8 (6 / 0.898)	8.32	27.1	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	3.7 (6 / -)	32.7 (6 / 1.307)	8.84	29	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
B(a)P + selenium-enriched yeast + D3T	Muta TM Mouse	+	4 (6 / -)	14.7 (6 / 1.59)	3.68	10.7	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	3.7 (6 / -)	20.4 (6 / 10.77)	5.51	16.7	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
	Muta TM Mouse	+	3.3 (6 / -)	17.8 (5 / 1.662)	5.39	14.5	gavage + diet	11	125	14	Guttenplan <i>et al.</i> (2004b)
Benzo(a)pyrene	Big Blue [®]	+	4.2 (- / -)	9.5 (4 / 0.1)	2.26	5.3	topical	1	60.5 ng	2	Miller <i>et al.</i>

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
diolepoxide (BPDE)	mouse										(2000)
BPDE + phorbol-12-myristate-13-acetate (TPA)	Big Blue [®] mouse	+	4.2 (-/-)	14.9 (4 / 0.1)	3.55	10.7	topical	1	60.5 ng	2	Miller <i>et al.</i> (2000)
	Big Blue [®] mouse	-	4.2 (-/-)	1 (4 / 0)	0.24	-3.2	topical	1	60.5 ng	2	Miller <i>et al.</i> (2000)
	Big Blue [®] mouse	-	4.2 (-/-)	7.6 (4 / 0.1)	1.81	3.4	topical	1	60.5 ng	2	Miller <i>et al.</i> (2000)
Benzo(f)quinoline	Muta TM Mouse <i>cII</i>	-	1.3 (4 / 1.951)	2.6 (4 / 3.32)	2	1.3	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	1.9 (4 / 5.166)	3.9 (4 / 5.497)	2.05	2	ip	4	400	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	2.1 (4 / 2.851)	3.8 (4 / 2.777)	1.81	1.7	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	2.1 (4 / 3.74)	2.6 (4 / 3.581)	1.24	0.5	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	2.5 (4 / 6.765)	2.9 (4 / 5.714)	1.16	0.4	ip	4	400	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	3.1 (4 / 3.753)	3.7 (4 / 3.268)	1.19	0.6	ip	4	400	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	+	1.7 (4 / 7.453)	2.4 (4 / 9.474)	1.41	0.7	ip	4	400	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	2.9 (4 / 5.461)	3.3 (4 / 5.143)	1.14	0.4	ip	4	400	56	Yamada <i>et al.</i> (2004)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse <i>cII</i>	–	2.4 (4 / 3.242)	3.5 (4 / 4.111)	1.46	1.1	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	–	2.7 (4 / 2.337)	3.9 (4 / 4.109)	1.44	1.2	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	–	6.8 (4 / 1.06)	7.4 (4 / 2.191)	1.09	0.6	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	–	8.2 (4 / 1.639)	7.1 (4 / 2.505)	0.87	–1.1	ip	4	400	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	–	7 (4 / 3.926)	9.6 (4 / 1.605)	1.37	2.6	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	–	7.9 (4 / 1.642)	7.2 (4 / 1.749)	0.91	–0.7	ip	4	400	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	–	7.8 (4 / 1.701)	8.4 (4 / 1.497)	1.08	0.6	ip	4	400	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	–	7.9 (4 / 1.207)	11.5 (4 / 1.521)	1.46	3.6	ip	4	400	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	–	7.3 (4 / 2.296)	6.1 (4 / 1.115)	0.84	–1.2	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	–	7.1 (4 / 0.943)	6.4 (4 / 1.617)	0.9	–0.7	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	–	7.9 (4 / 2.967)	6.9 (4 / 2.775)	0.87	–1	ip	4	400	56	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	–	6 (4 / 4.802)	6 (4 / 1.504)	1	0	ip	4	400	14	Yamada <i>et al.</i> (2004)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Benzo(h)quinoline	Muta TM Mouse <i>cII</i>	-	1.3 (4 / 1.951)	1.7 (3 / 4.147)	1.31	0.4	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	-	7 (4 / 3.926)	5.9 (4 / 2.022)	0.84	-1.1	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	-	7.3 (4 / 2.296)	6.5 (4 / 1.592)	0.89	-0.8	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	2.1 (4 / 2.851)	2.6 (4 / 4.005)	1.24	0.5	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	2.7 (4 / 2.337)	2.2 (4 / 4.696)	0.81	-0.5	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	-	6.8 (4 / 1.06)	7.4 (4 / 1.9)	1.09	0.6	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	2.1 (4 / 3.74)	3.5 (4 / 7.263)	1.67	1.4	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	-	7.1 (4 / 0.943)	5.7 (3 / 1.557)	0.8	-1.4	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	-	2.4 (4 / 3.242)	2.9 (4 / 3.661)	1.21	0.5	ip	4	400	14	Yamada <i>et al.</i> (2004)
beta-Propiolactone	Muta TM Mouse	+	6 (4 / 4.802)	10.8 (4 / 1.828)	1.8	4.8	ip	4	400	14	Yamada <i>et al.</i> (2004)
	Muta TM Mouse	-	1.7 (6 / 2.3)	1.5 (4 / 1.4)	0.88	-0.2	gavage	1	150	7	Brault <i>et al.</i> (1996)
	Muta TM Mouse	+	3.6 (6 / 2.1)	22.7 (4 / 1.3)	6.31	19.1	gavage	1	150	7	Brault <i>et al.</i> (1996)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	6.7 (5 / 1.3)	27.7 (5 / 1.2)	4.13	21	gavage	1	150	50	Brault <i>et al.</i> (1999)
	Muta TM Mouse	+	3.2 (6 / 2.1)	5.7 (4 / 1.6)	1.78	2.5	gavage	1	150	7	Brault <i>et al.</i> (1996)
	Muta TM Mouse	+	3.7 (5 / 1.4)	41.4 (5 / 1.6)	11.19	37.7	gavage	1	150	14	Brault <i>et al.</i> (1999)
	Muta TM Mouse	+	3.9 (5 / -)	32.9 (5 / 1.1)	8.44	29	gavage	1	150	7	Brault <i>et al.</i> (1999)
	Muta TM Mouse	+	3.9 (5 / 1.3)	19.2 (5 / 1.6)	4.92	15.3	gavage	1	150	3	Brault <i>et al.</i> (1999)
	Muta TM Mouse	+	3.7 (5 / 1.4)	9.6 (5 / 1.4)	2.59	5.9	gavage	1	25	14	Brault <i>et al.</i> (1999)
	Muta TM Mouse	+	3.7 (5 / 1.4)	38.2 (5 / 1.5)	10.32	34.5	gavage	1	150	28	Brault <i>et al.</i> (1999)
	Muta TM Mouse	+	3.9 (5 / 1.3)	9.3 (5 / 1.2)	2.38	5.4	gavage	1	25	3	Brault <i>et al.</i> (1999)
Bitumen fumes	Big Blue [®] rat <i>cII</i>	-	5.34 (6 / 1.82)	5.49 (6 / 2.15)	1.03	0.15	inhalation	5	500 mg/m ³	30	Bottin <i>et al.</i> (2006)
	Big Blue [®] mouse	-	6.4 (6 / 1.1)	5.8 (5 / 1.1)	0.91	-0.6	inhalation	5	180	28	Micillino <i>et al.</i> (2002)
	Big Blue [®] mouse <i>cII</i>	-	11 (6 / 2.3)	10.6 (5 / 2.2)	0.96	-0.4	inhalation	5	180	28	Micillino <i>et al.</i> (2002)
Bleomycin	Muta TM Mouse	+	4.3 (6 / -)	15.8 (6 / -)	3.67	11.5	ip	12	80	21	Guttenplan <i>et al.</i> (2004a)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Carbon tetrachloride	Muta TM Mouse	–	6.36 (4 / 2.14)	14.6 (3 / 0.63)	2.3	8.24	gavage	1	1 400	14	Hachiya and Motohashi (2000)
	Muta TM Mouse	–	6.36 (4 / 2.14)	8.28 (3 / 1.69)	1.3	1.92	gavage	1	700	14	Hachiya and Motohashi (2000)
	Muta TM Mouse	–	6.36 (4 / 2.14)	9.42 (3 / 0.775)	1.5	3.06	gavage	1	1 400	28	Hachiya and Motohashi (2000)
	Muta TM Mouse	–	6.36 (4 / 2.14)	12.1 (3 / 0.124)	1.9	5.74	gavage	1	1 400	7	Hachiya and Motohashi (2000)
	Muta TM Mouse	–	5.4 (5 / –)	8.6 (5 / –)	1.59	3.2	gavage	1	80	14	Tombolan <i>et al.</i> (1999a)
CC-1065	Big Blue [®] mouse	+	2.8 (4 / 0.5)	7.1 (4 / 0.5)	2.54	4.3	iv	1	50	3	Monroe and Mitchell (1993)
Chlorambucil	<i>gpt</i> delta (<i>gpt</i>)	+	0.087 (2 / 1.6)	0.69 (3 / 2.2)	7.93	0.603	ip	1	10	28	unpublished
	<i>gpt</i> delta (Spi)	–	0.26 (4 / 7.2)	0.48 (4 / 8.3)	1.85	0.22	ip	1	20	3	unpublished
	Muta TM Mouse	+	1.4 (2 / 0.1)	31.6 (2 / 0.2)	22.57	30.2	ip	1	10	14	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	1.4 (2 / 0.1)	5.3 (2 / 0.1)	3.79	3.9	ip	1	10	21	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	–	1.4 (2 / 0.1)	2.4 (2 / 0.3)	1.71	1	ip	1	25	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	–	1.4 (2 / 0.1)	1.2 (2 / 0.2)	0.86	–0.2	ip	1	25	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	1.4 (2 / 0.1)	6.6 (2 / 0.1)	4.71	5.2	ip	1	25	10	Hoorn <i>et al.</i> (1993)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	1.4 (2 / 0.1)	6.4 (2 / 0.1)	4.57	5	ip	1	10	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.6 (2 / 0.7)	5.5 (2 / 0.2)	2.12	2.9	ip	1	10	7	Myhr (1991)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.087 (2 / 1.6)	2.3 (2 / 1.4)	26.44	2.213	ip	1	20	28	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	+	0.35 (3 / 2.8)	2.17 (4 / 3.8)	6.2	1.82	ip	1	10	28	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	-	0.77 (3 / 2.2)	0.701 (4 / 3.1)	0.91	-0.069	ip	1	20	28	unpublished
	<i>gpt</i> delta (Spi)	-	0.34 (5 / 6.2)	0.37 (5 / 6.2)	1.09	0.03	ip	1	10	3	unpublished
	<i>gpt</i> delta (Spi)	-	0.34 (5 / 6.2)	0.18 (5 / 5.6)	0.53	-0.16	ip	1	20	3	unpublished
	Muta TM Mouse	+	1.4 (2 / 0.1)	6.7 (2 / 0.1)	4.79	5.3	ip	1	10	7	Hoorn <i>et al.</i> (1993)
	<i>gpt</i> delta (Spi)	-	0.16 (2 / 2.5)	0.34 (3 / 3.9)	2.13	0.18	ip	1	20	28	unpublished
	Muta TM Mouse	+	2.15 (2 / 0.1)	6.3 (2 / 0.1)	2.93	4.15	ip	1	10	3	Hoorn <i>et al.</i> (1993)
	<i>gpt</i> delta (Spi)	-	0.37 (1 / 2.4)	0.197 (2 / 4.1)	0.53	-0.173	ip	1	10	28	unpublished
	<i>gpt</i> delta (Spi)	-	0.37 (1 / 2.4)	0.36 (3 / 4.4)	0.97	-0.01	ip	1	20	28	unpublished
	<i>gpt</i> delta (Spi)	-	0.16 (2 / 2.5)	0.28 (2 / 3.8)	1.75	0.12	ip	1	10	28	unpublished
	Muta TM Mouse	+	3.2 (3 / 0.2)	7.1 (2 / 0.1)	2.22	3.9	ip	1	25	3	Hoorn <i>et al.</i> (1993)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.35 (3 / 2.8)	3.14 (5 / 4.6)	8.97	2.79	ip	1	20	28	unpublished
	Muta TM Mouse	+	7.3 (10 / 6.4)	15.5 (3 / 3.4)	2.12	8.2	ip	5	75	25	Smith <i>et al.</i> (1999)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	4.7 (10 / 17.4)	9.9 (2 / 4.2)	2.11	5.2	ip	5	75	1	Smith <i>et al.</i> (1999)
	Muta TM Mouse	+	7.5 (10 / 15.8)	23.9 (3 / 3.6)	3.19	16.4	ip	5	75	25	Smith <i>et al.</i> (1999)
	Muta TM Mouse	+	3.2 (3 / 0.2)	10.6 (2 / 0.1)	3.31	7.4	ip	1	10	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	-	3.2 (3 / 0.2)	5.5 (2 / 0.2)	1.72	2.3	ip	1	10	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	-	3.2 (3 / 0.2)	5.6 (2 / 0.1)	1.75	2.4	ip	1	10	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.15 (2 / 0.1)	4.3 (2 / 0.1)	2	2.15	ip	1	10	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	-	3.2 (3 / 0.2)	3.5 (2 / 0.2)	1.09	0.3	ip	1	10	21	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	-	1.4 (2 / 0.5)	2.3 (2 / 0.1)	1.64	0.9	ip	1	10	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	-	3.2 (3 / 0.2)	5.8 (2 / 0.2)	1.81	2.6	ip	1	25	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	3.2 (3 / 0.2)	6.8 (2 / 0.1)	2.13	3.6	ip	1	25	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	-	2.15 (2 / 0.1)	2.5 (2 / 0.2)	1.16	0.35	ip	1	10	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.15 (2 / 0.1)	21.7 (2 / 0.1)	10.09	19.55	ip	1	10	14	Hoorn <i>et al.</i> (1993)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Chloroform	Muta TM Mouse	+	2.15 (2 / 0.1)	5.1 (2 / 0.1)	2.37	2.95	ip	1	10	21	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	-	2.15 (2 / 0.1)	1.8 (2 / 0.1)	0.84	-0.35	ip	1	25	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.15 (2 / 0.1)	6.7 (2 / 0.1)	3.12	4.55	ip	1	25	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.15 (2 / 0.1)	7.4 (2 / 0.1)	3.44	5.25	ip	1	25	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	-	3.2 (3 / 0.2)	5.7 (2 / 0.1)	1.78	2.5	ip	1	10	14	Hoorn <i>et al.</i> (1993)
	<i>gpt</i> delta (<i>gpt</i>)	inc.	0.14 (2 / 1.3)	1.72 (3 / 2.8)	12.29	1.58	ip	1	20	28	unpublished
	Big Blue [®] mouse	-	10.1 (5 / 1)	11.7 (5 / 1)	1.16	1.6	inhalation	10	171	10	Butterworth <i>et al.</i> (1998)
	Big Blue [®] mouse	-	10.1 (5 / 1)	12.7 (5 / 1)	1.26	2.6	inhalation	10	1 540	10	Butterworth <i>et al.</i> (1998)
	Big Blue [®] mouse	-	9.5 (5 / 1)	10.4 (5 / 1)	1.09	0.9	inhalation	30	4 600	10	Butterworth <i>et al.</i> (1998)
	Big Blue [®] mouse	-	13 (5 / 1)	14.7 (5 / 1)	1.13	1.7	inhalation	90	13 850	10	Butterworth <i>et al.</i> (1998)
Chrysene	Big Blue [®] mouse	-	12.3 (5 / 1)	13.7 (5 / 1)	1.11	1.4	inhalation	180	27 700	10	Butterworth <i>et al.</i> (1998)
	Muta TM Mouse <i>cII</i>	+	3.02 (4 / 5.898)	5.25 (4 / 9.911)	1.74	2.23	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	8.82 (4 / 2.931)	22.57 (4 / 1.66)	2.56	13.75	ip	28	800	7	Yamada <i>et al.</i> (2005)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	4.56 (4 / 3.535)	13.35 (4 / 4.544)	2.93	8.79	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	6.91 (4 / 2.673)	19.56 (4 / 4.531)	2.83	12.65	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	5.89 (4 / 4.863)	15.87 (4 / 5.733)	2.69	9.98	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	4.65 (4 / 3.887)	7.11 (4 / 3.23)	1.53	2.46	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse	+	7.38 (4 / 2.11)	14.47 (4 / 2.484)	1.96	7.09	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	+	2.45 (4 / 5.165)	5 (4 / 5.387)	2.04	2.55	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	-	3.28 (4 / 4.085)	6.97 (4 / 6.464)	2.13	3.69	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	-	3.73 (4 / 4.137)	4.91 (4 / 4.804)	1.32	1.18	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	-	2.35 (4 / 3.782)	2.59 (4 / 4.948)	1.1	0.24	ip	28	800	7	Yamada <i>et al.</i> (2005)
	Muta TM Mouse <i>cII</i>	-	2.08 (4 / 4.209)	4.13 (4 / 4.366)	1.99	2.05	ip	28	800	7	Yamada <i>et al.</i> (2005)
Cisplatin	<i>lacZ</i> plasmid mouse	+	5 (9 / 4.7)	9.4 (9 / 2.8)	1.9	4.4	ip	1	6	28	Louro, Silva and Boavida (2002)
	<i>lacZ</i> plasmid mouse	+	4.8 (5 / 2.1)	10.8 (4 / 1.9)	2.3	6	ip	1	6	17	Louro, Silva and Boavida (2002)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Clofibrate	<i>lacZ</i> plasmid mouse	–	6.69 (4 / –)	7 (4 / –)	1.05	0.31	nd	14	540	21	Boerrigter (2004)
	<i>lacZ</i> plasmid mouse	–	6.37 (4 / –)	7.7 (4 / –)	1.21	1.33	nd	14	540	21	Boerrigter (2004)
CM 44 glass fibres	Big Blue [®] rat <i>cII</i>	–	18.54 (5 / 1.47)	14.71 (7 / 2.3)	0.79	–3.83	inhalation	5	31.5 mg/m ³	90	Bottin <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	15.92 (5 / 1.11)	15.72 (7 / 1.79)	0.99	–0.2	inhalation	5	31.5 mg/m ³	3	Bottin <i>et al.</i> (2003)
	Big Blue [®] rat	–	2.36 (5 / 1.04)	2.64 (7 / 1.3)	1.12	0.28	inhalation	5	31.5 mg/m ³	90	Bottin <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	14.75 (5 / 1.58)	15.84 (7 / 2.25)	1.07	1.09	inhalation	5	31.5 mg/m ³	28	Bottin <i>et al.</i> (2003)
	Big Blue [®] rat	–	1.72 (5 / 1.54)	1.45 (7 / 1.77)	0.84	–0.27	inhalation	5	31.5 mg/m ³	28	Bottin <i>et al.</i> (2003)
	Big Blue [®] rat	–	1.56 (5 / 1.39)	1.29 (7 / 1.75)	0.83	–0.27	inhalation	5	31.5 mg/m ³	3	Bottin <i>et al.</i> (2003)
	Big Blue [®] rat	–	1.36 (5 / 1.24)	2.22 (7 / 1.58)	1.63	0.86	inhalation	5	31.5 mg/m ³	1	Bottin <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	18.14 (5 / 1.77)	12.09 (7 / 2.93)	0.67	–6.05	inhalation	5	31.5 mg/m ³	1	Bottin <i>et al.</i> (2003)
Coal tar	Muta [™] Mouse	–	21.4 (11 / 0.4)	26.5 (3 / 0.2)	1.24	5.1	topical	1	10 mg/cm ²	32	Thein <i>et al.</i> (2000)
	Muta [™] Mouse	+	17.1 (5 / 0.5)	273.5 (3 / 0.4)	15.99	256.4	topical	1	10 mg/cm ²	32	Thein <i>et al.</i> (2000)
Comfrey	Big Blue [®] rat	+	3 (6 / –)	13.9 (6 / –)	4.63	10.9	diet	84	577 920	0	Mei <i>et al.</i> (2006b)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat <i>cII</i>	+	3 (6 / 2.789)	14.6 (6 / 1.565)	4.87	11.6	diet	84	119 280	0	Mei <i>et al.</i> (2005a)
Conjugated linoleic acid (CLA)	Big Blue [®] rat	-	5.3 (6 / 2.1)	3.1 (5 / 1.7)	0.58	-2.2	diet	54	64 800	7	Yang, Glickman and de Boer (2002)
	Big Blue [®] rat	-	2.4 (4 / 1.4)	1.8 (5 / 2.7)	0.75	-0.6	diet	47	56 400	7	Yang <i>et al.</i> (2003)
	Big Blue [®] rat	-	4.3 (6 / 1.9)	4.9 (7 / 1.7)	1.14	0.6	diet	54	64 800	7	Yang, Glickman and de Boer (2002)
CLA + PhIP	Big Blue [®] rat	+	5.3 (6 / 2.1)	42.8 (5 / 0.56)	8.08	37.5	diet	47	564	7	Yang, Glickman and de Boer (2002)
Crocidolite asbestos	Big Blue [®] rat	+	0.8 (4 / 0.5)	2.6 (5 / 0.6)	3.25	1.8	ip	1	200	168	Unfried, Schurkes and Abel (2002)
	Big Blue [®] mouse	+	6.9 (3 / 1.059)	13.5 (3 / 1.003)	1.96	6.6	inhalation	28	5.75 mg/m ³	0	Rihn <i>et al.</i> (2000a)
	Big Blue [®] mouse	+	8.6 (3 / 1.055)	11 (3 / 1.032)	1.28	2.4	inhalation	84	5.75 mg/m ³	0	Rihn <i>et al.</i> (2000a)
	Big Blue [®] rat	-	3.4 (5 / 0.4)	3.8 (5 / 0.2)	1.12	0.4	ip	1	80	28	Unfried, Schurkes and Abel (2002)
	Big Blue [®] rat	-	3.4 (5 / 0.4)	3.3 (5 / 0.3)	0.97	-0.1	ip	1	200	28	Unfried, Schurkes and Abel (2002)
	Big Blue [®] rat	-	1.6 (5 / 0.4)	2.3 (5 / 0.6)	1.44	0.7	ip	1	80	84	Unfried, Schurkes and Abel (2002)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	+	1.6 (5 / 0.4)	5.5 (5 / 0.5)	3.44	3.9	ip	1	200	84	Unfried, Schurkes and Abel (2002)
	Big Blue [®] rat	-	0.8 (4 / 0.5)	2.6 (5 / 0.6)	3.25	1.8	ip	1	80	168	Unfried, Schurkes and Abel (2002)
	Big Blue [®] mouse	-	8.7 (3 / 1.356)	8.1 (3 / 1.124)	0.93	-0.6	inhalation	7	5.75 mg/m ³	0	Rihn <i>et al.</i> (2000a)
Cyclophosphamide	<i>lacZ</i> plasmid mouse	+	15 (3 / 2.5)	24.4 (2 / 1.3)	1.63	9.4	ip	5	500	7	unpublished
	Muta [™] Mouse	+	8.1 (5 / 1.5)	40.7 (7 / 5.3)	5.02	32.6	ip	5	500	3	unpublished
	Big Blue [®] mouse	-	3 (5 / 0.8)	4.2 (5 / 0.6)	1.4	1.2	ip	1	100	42	Gorelick <i>et al.</i> (1999)
	Big Blue [®] mouse	-	2.2 (5 / 0.5)	3.3 (5 / 0.5)	1.5	1.1	ip	1	100	42	Gorelick <i>et al.</i> (1999)
	Muta [™] Mouse	+	6.8 (8 / 6.9)	42 (7 / 2.8)	6.18	35.2	ip	5	500	21	unpublished
	<i>lacZ</i> plasmid mouse	+	20.6 (3 / 1.7)	75.1 (2 / 1.2)	3.65	54.5	ip	5	500	3	unpublished
	<i>lacZ</i> plasmid mouse	+	15 (3 / 2.5)	35.8 (2 / 1)	2.39	20.8	ip	5	500	3	unpublished
	<i>lacZ</i> plasmid mouse	+	20.6 (3 / 1.7)	54 (2 / 2.2)	2.62	33.4	ip	5	500	7	unpublished
	<i>lacZ</i> plasmid mouse	-	15 (3 / 2.5)	20.8 (2 / 1.1)	1.39	5.8	ip	5	500	21	unpublished
	<i>lacZ</i> plasmid mouse	+	20.6 (3 / 1.7)	47.4 (2 / 2.2)	2.3	26.8	ip	5	500	21	unpublished

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	–	15 (3 / 2.5)	20.3 (3 / 1.5)	1.35	5.3	ip	5	500	62	unpublished
	Muta TM Mouse	+	8.1 (5 / 1.5)	35.1 (8 / 3.1)	4.33	27	ip	5	500	7	unpublished
	Big Blue [®] mouse	+	3.2 (8 / 1.1)	8.7 (6 / 0.7)	2.72	5.5	ip	1	100	42	Gorelick <i>et al.</i> (1999)
	Big Blue [®] mouse	–	6 (8 / 0.9)	9.7 (8 / 1)	1.62	3.7	ip	1	100	42	Gorelick <i>et al.</i> (1999)
	<i>lacZ</i> plasmid mouse	+	20.6 (3 / 1.7)	37.8 (3 / 2.4)	1.83	17.2	ip	5	500	62	unpublished
	Big Blue [®] mouse	–	7.7 (11 / 1.2)	9.4 (14 / 1.4)	1.22	1.7	ip	1	100	42	Walker <i>et al.</i> (1999a)
	Big Blue [®] mouse	–	10.6 (7 / 1.4)	9.3 (7 / 1.5)	0.88	–1.3	ip	1	100	35	Hoyes <i>et al.</i> (1998)
	Big Blue [®] mouse	–	17.1 (7 / 1.3)	13.5 (7 / 1.3)	0.79	–3.6	ip	1	100	35	Hoyes <i>et al.</i> (1998)
	Big Blue [®] mouse	+	6.7 (6 / 1)	12.6 (7 / 1.1)	1.88	5.9	ip	1	100	35	Hoyes <i>et al.</i> (1998)
	Muta TM Mouse	+	1.5 (2 / 0.2)	9.5 (2 / 0.1)	6.33	8	ip	5	500	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	1.5 (2 / 0.2)	8.2 (2 / 0.1)	5.47	6.7	ip	5	500	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	–	1.5 (2 / 0.2)	1.9 (2 / 0.2)	1.27	0.4	ip	5	500	10	Hoorn <i>et al.</i> (1993)
	Big Blue [®] mouse	–	1.7 (6 / 2.6)	2 (3 / 1.1)	1.18	0.3	ip	1	20	3	Kohler <i>et al.</i> (1991b)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	1.7 (6 / 2.6)	4.6 (3 / 0.7)	2.71	2.9	ip	1	100	3	Kohler <i>et al.</i> (1991b)
	Muta TM Mouse	+	6.8 (8 / 6.9)	28.2 (6 / 5.3)	4.15	21.4	ip	5	500	3	unpublished
	Big Blue [®] mouse	-	7.7 (11 / 1.2)	6.7 (16 / 2)	0.87	-1	ip	1	25	42	Walker <i>et al.</i> (1999a)
	Big Blue [®] mouse	+	3.1 (5 / 0.6)	10.6 (5 / 0.7)	3.42	7.5	ip	1	100	42	Gorelick <i>et al.</i> (1999)
	Big Blue [®] mouse	-	3.1 (5 / 0.6)	4.5 (5 / 0.6)	1.32	1	ip	1	25	42	Gorelick <i>et al.</i> (1999)
	Big Blue [®] mouse	-	3 (5 / 0.8)	3.1 (5 / 0.7)	1.03	0.1	ip	1	25	42	Gorelick <i>et al.</i> (1999)
	Muta TM Mouse	+	2.5 (4 / 1.54)	10.1 (4 / 2.7)	4.04	7.6	ip	5	500	21	unpublished
	Muta TM Mouse	+	8.1 (5 / 1.5)	38.2 (8 / 2.8)	4.72	30.1	ip	5	500	21	unpublished
	Muta TM Mouse	+	2.6 (2 / 0.7)	8.2 (2 / 0.1)	3.15	5.6	ip	5	500	7	Myhr (1991)
	Muta TM Mouse	+	2.5 (4 / 1.54)	5.23 (4 / 3)	2.09	2.73	ip	5	500	7	unpublished
	Big Blue [®] mouse	-	2.2 (5 / 0.5)	3.4 (5 / 0.6)	1.55	1.2	ip	1	25	42	Gorelick <i>et al.</i> (1999)
	Muta TM Mouse	+	0.55 (4 / 1.5)	6.7 (5 / 1.4)	12.18	6.15	ip	5	500	3	unpublished
	Muta TM Mouse	+	0.55 (4 / 1.5)	4.2 (4 / 1)	7.64	3.65	ip	5	500	7	unpublished
	Muta TM Mouse	+	0.55 (4 / 1.5)	4.8 (4 / 0.87)	8.73	4.25	ip	5	500	21	unpublished
	Muta TM Mouse	-	10.2 (7 / 0.82)	18.5 (7 / 0.68)	1.81	8.3	ip	5	500	3	unpublished
	Muta TM Mouse	-	10.2 (7 / 0.82)	13.8 (8 / 1.3)	1.35	3.6	ip	5	500	7	unpublished
	Muta TM Mouse	-	10.2 (7 / 0.82)	13.9 (8 / 1.4)	1.36	3.7	ip	5	500	21	unpublished

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Cyproterone acetate	Muta TM Mouse	+	6.8 (8 / 6.9)	29 (8 / 3.1)	4.26	22.2	ip	5	500	7	unpublished
	Muta TM Mouse	-	2.5 (4 / 1.54)	2.74 (3 / 2)	1.1	0.24	ip	5	500	3	unpublished
	Big Blue [®] rat	-	1.8 (2 / 0.665)	2.9 (3 / 0.848)	1.61	1.1	gavage	1	40	2	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	+	1.6 (5 / 1.486)	12.1 (4 / 1.147)	7.56	10.5	gavage	1	80	14	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	+	1.2 (7 / 1.597)	10.9 (3 / 1.002)	9.08	9.7	gavage	1	100	3	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	+	1.2 (7 / 1.597)	14 (4 / 1.236)	11.67	12.8	gavage	1	100	7	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	+	1.2 (7 / 1.597)	15 (6 / 1.634)	12.5	13.8	gavage	1	100	14	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	+	1.2 (7 / 1.597)	5.1 (3 / 0.809)	4.25	3.9	gavage	1	100	28	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	+	1.2 (7 / 1.597)	5.4 (3 / 0.839)	4.5	4.2	gavage	1	100	42	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	+	1.2 (7 / 1.597)	4.8 (3 / 0.896)	4	3.6	gavage	1	100	56	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	-	1.8 (2 / 0.665)	2.8 (3 / 0.833)	1.56	1	gavage	1	40	1	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	+	1.25 (5 / -)	14 (5 / -)	11.2	12.75	gavage	1	100	7	Wolff <i>et al.</i> (2001)
Big Blue [®] rat	-	2.7 (1 / 0.3)	2.6 (1 / 0.3)	0.96	-0.1	gavage	1	25	144	Krebs <i>et al.</i> (1998)	

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	-	2.7 (1 / 0.3)	2.8 (1 / 0.2)	1.04	0.1	gavage	1	50	144	Krebs <i>et al.</i> (1998)
	Big Blue [®] rat	+	2.7 (1 / 0.3)	9.6 (1 / 0.2)	3.56	6.9	gavage	1	100	144	Krebs <i>et al.</i> (1998)
	Big Blue [®] rat	-	1.7 (5 / 1.4)	1.9 (5 / 1.2)	1.12	0.2	gavage	1	25	42	Krebs <i>et al.</i> (1998)
	Big Blue [®] rat	-	1.7 (5 / 1.4)	1.7 (- / 1.2)	1	0	gavage	1	50	42	Krebs <i>et al.</i> (1998)
	Big Blue [®] rat	-	1.7 (5 / 1.4)	2.7 (- / 1.2)	1.59	1	gavage	1	75	42	Krebs <i>et al.</i> (1998)
	Big Blue [®] rat	+	1.8 (2 / 0.665)	4.6 (3 / 0.928)	2.56	2.8	gavage	1	40	3	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	+	1.7 (5 / 1.4)	8 (- / 1.2)	4.71	6.3	gavage	1	200	42	Krebs <i>et al.</i> (1998)
	Big Blue [®] rat	+	1.6 (5 / 1.486)	3.6 (5 / 1.654)	2.25	2	gavage	1	20	14	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	+	2.9 (1 / 0.3)	11 (1 / 0.3)	3.79	8.1	gavage	1	100	77	Krebs <i>et al.</i> (1998)
	Big Blue [®] rat	+	1.25 (5 / -)	13.5 (5 / -)	10.8	12.25	gavage	1	100	3	Wolff <i>et al.</i> (2001)
	Big Blue [®] rat	+	1.7 (5 / 1.4)	3.5 (- / 1.2)	2.06	1.8	gavage	1	100	42	Krebs <i>et al.</i> (1998)
	Big Blue [®] rat	+	1.25 (5 / -)	15.5 (5 / -)	12.4	14.25	gavage	1	100	14	Wolff <i>et al.</i> (2001)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	+	1.25 (5 / -)	5 (5 / -)	4	3.75	gavage	1	100	28	Wolff <i>et al.</i> (2001)
	Big Blue [®] rat	+	1.25 (5 / -)	5.5 (5 / -)	4.4	4.25	gavage	1	100	42	Wolff <i>et al.</i> (2001)
	Big Blue [®] rat	+	1.25 (5 / -)	4.8 (5 / -)	3.84	3.55	gavage	1	100	56	Wolff <i>et al.</i> (2001)
	Big Blue [®] rat	-	1.6 (5 / -)	1.7 (5 / -)	1.0625	0.1	gavage	1	5	14	Wolff <i>et al.</i> (2001)
	Big Blue [®] rat	+	1.6 (5 / -)	2.4 (5 / -)	1.5	0.8	gavage	1	10	14	Wolff <i>et al.</i> (2001)
	Big Blue [®] rat	+	1.6 (5 / -)	3.5 (5 / -)	2.1875	1.9	gavage	1	20	14	Wolff <i>et al.</i> (2001)
	Big Blue [®] rat	+	1.6 (5 / -)	5.2 (5 / -)	3.25	3.6	gavage	1	40	14	Wolff <i>et al.</i> (2001)
	Big Blue [®] rat	+	1.6 (5 / -)	14.5 (5 / -)	9.0625	12.9	gavage	1	80	14	Wolff <i>et al.</i> (2001)
	Big Blue [®] rat	+	1.6 (5 / -)	19 (5 / -)	11.875	17.4	gavage	1	160	14	Wolff <i>et al.</i> (2001)
	Big Blue [®] rat	+	1.25 (5 / -)	10.5 (5 / -)	8.4	9.25	gavage	1	100	2	Wolff <i>et al.</i> (2001)
	Big Blue [®] rat	-	1.6 (5 / 1.486)	1.7 (5 / 1.608)	1.06	0.1	gavage	1	5	14	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	-	1.8 (2 / 0.665)	2.6 (3 / 0.907)	1.44	0.8	gavage	1	100	1	Topinka <i>et al.</i> (2004b)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	+	1.25 (5 / -)	3 (5 / -)	2.4	1.75	gavage	1	100	1	Wolff <i>et al.</i> (2001)
	Big Blue [®] rat	+	1.8 (2 / 0.665)	16 (3 / 0.924)	8.89	14.2	gavage	1	100	3	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	-	2.9 (1 / 0.3)	4.3 (1 / 1.2)	1.48	1.4	gavage	1	50	77	Krebs <i>et al.</i> (1998)
	Big Blue [®] rat	-	1.6 (5 / 1.486)	2.3 (5 / 1.445)	1.44	0.7	gavage	1	10	14	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	+	1.6 (5 / 1.486)	5.3 (5 / 1.425)	3.31	3.7	gavage	1	40	14	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	+	1.6 (5 / 1.486)	18.5 (5 / 1.453)	11.56	16.9	gavage	1	160	14	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	-	1.6 (15 / 4.488)	1.9 (10 / 3.013)	1.19	0.3	gavage	21	4.2	1	Topinka <i>et al.</i> (2004c)
	Big Blue [®] rat	-	1.6 (15 / 4.488)	2.2 (10 / 2.983)	1.38	0.6	gavage	21	21	1	Topinka <i>et al.</i> (2004c)
	Big Blue [®] rat	+	1.6 (15 / 4.488)	4.1 (15 / 4.217)	2.56	2.5	gavage	21	105	1	Topinka <i>et al.</i> (2004c)
	Big Blue [®] rat	+	1.8 (2 / 0.665)	10.4 (3 / 0.81)	5.78	8.6	gavage	1	100	2	Topinka <i>et al.</i> (2004b)
	Big Blue [®] rat	-	2.9 (1 / 0.3)	3 (1 / 0.3)	1.03	0.1	gavage	1	25	77	Krebs <i>et al.</i> (1998)
Daidzein	Big Blue [®] rat	-	2.95 (5 / -)	4.15 (5 / -)	1.41	1.2	diet	112	9 856	0	Manjanatha <i>et al.</i> (2006a)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	–	2.95 (5 / –)	3.3 (5 / –)	1.12	0.35	diet	112	2 464	0	Manjanatha <i>et al.</i> (2006a)
Daidzein + genistein	Big Blue [®] rat	–	2.95 (5 / –)	2.75 (5 / –)	0.93	–0.2	diet	112	9 856	0	Manjanatha <i>et al.</i> (2006a)
Di(2-ethylhexyl)-phthalate (DEHP)	<i>lacZ</i> plasmid mouse	–	5.98 (4 / –)	6 (4 / –)	1	0.02	nd	14	13 998	21	Boerrigter (2004)
	Big Blue [®] mouse	–	10 (3 / 0.5)	12 (3 / 0.3)	1.2	2	diet	120	86 400	0	Gunz, Shephard and Lutz (1993)
	<i>lacZ</i> plasmid mouse	+	6.37 (4 / –)	10.5 (4 / –)	1.65	4.13	nd	14	13 998	21	Boerrigter (2004)
	<i>lacZ</i> plasmid mouse	+	6.69 (4 / –)	10.8 (4 / –)	1.61	4.11	nd	14	13 998	21	Boerrigter (2004)
	<i>gpt</i> delta (Spi)	–	0.43 (5 / 9.341)	0.45 (5 / 7.355)	1.05	0.02	diet	91	60 924.5	0	Kanki <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	–	5.6 (4 / –)	3.6 (4 / –)	0.64	–2	nd	14	13 998	21	Boerrigter (2004)
	<i>gpt</i> delta (<i>gpt</i>)	–	0.55 (5 / 2.976)	0.33 (5 / 3.248)	0.6	–0.22	diet	91	60 924.5	0	Kanki <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	–	6.16 (4 / –)	7.4 (4 / –)	1.2	1.24	nd	14	13 998	21	Boerrigter (2004)
	Big Blue [®] mouse	–	10 (3 / 0.5)	17 (3 / 0.3)	1.7	7	diet	120	43 200	0	Gunz, Shephard and Lutz (1993)
	<i>lacZ</i> plasmid mouse	–	4.59 (4 / –)	4.1 (4 / –)	0.89	–0.49	nd	14	13 998	21	Boerrigter (2004)
Diallyl sulphide	Big Blue [®] rat	–	6.5 (5 / –)	6.2 (5 / –)	0.95	–0.3	gavage	1	200	14	de Boer <i>et al.</i>

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
											(2004)
Diallyl sulphone	Big Blue [®] mouse <i>cII</i>	-	2.6 (6 / -)	3.8 (6 / -)	1.46	1.2	gavage	1	200	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	-	2.3 (6 / -)	5.2 (8 / -)	2.26	2.9	gavage	1	12.5	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	-	2.3 (6 / -)	1.5 (5 / -)	0.65	-0.8	gavage	1	50	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	-	2.3 (6 / -)	1.6 (8 / -)	0.7	-0.7	gavage	1	100	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	-	2.3 (6 / -)	2 (6 / -)	0.87	-0.3	gavage	1	200	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	-	2.6 (6 / -)	2.8 (8 / -)	1.08	0.2	gavage	1	100	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	-	2.3 (6 / -)	3.2 (7 / -)	1.39	0.9	gavage	1	25	28	Hernandez and Forkert (2007b)
Dichloroacetic acid (DCA)	Big Blue [®] mouse	+	4.1 (5 / 1.21)	9.6 (- / 1.4)	2.34	5.5	drinking water	420	325 000	0	Leavitt <i>et al.</i> (1997)
	Big Blue [®] mouse	-	4.3 (5 / 1.2)	4.4 (- / 1.2)	1.02	0.1	drinking water	28	21 500	0	Leavitt <i>et al.</i> (1997)
	Big Blue [®] mouse	-	5.4 (5 / 1)	6.3 (- / 1.1)	1.17	0.9	drinking water	70	53 900	0	Leavitt <i>et al.</i> (1997)
	Big Blue [®] mouse	-	4.3 (5 / 1.2)	4.9 (- / 1.3)	1.14	0.6	drinking water	28	6 160	0	Leavitt <i>et al.</i> (1997)
	Big Blue [®] mouse	+	4.1 (5 / 1.21)	5.3 (- / 1.1)	1.29	1.2	drinking water	420	92 400	0	Leavitt <i>et al.</i> (1997)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Dicyclanil	Big Blue [®] mouse	–	5.4 (5 / 1)	5.3 (– / 1.1)	0.98	–0.1	drinking water	70	15 400	0	Leavitt <i>et al.</i> (1997)
	<i>gpt</i> delta (<i>gpt</i>)	–	0.42 (5 / 4.85)	0.48 (5 / 4.69)	1.14	0.06	diet	91	1 500 mg/kg feed	0	Umemura <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.48 (5 / 4.42)	2.23 (5 / 4.68)	4.65	1.75	diet	91	1 500 mg/kg feed	0	Umemura <i>et al.</i> (2007)
Diesel exhaust	Big Blue [®] rat <i>cII</i>	–	2.23 (6 / 1.787)	2.52 (6 / 2.176)	1.13	0.29	diet	21	20	0	Dybdahl <i>et al.</i> (2003)
	Muta TM Mouse <i>cII</i>	–	3.51 (7 / 8.692)	4.32 (5 / 7.36)	1.23	0.81	inhalation	1	80 mg/m ³	28	Dybdahl <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	–	5.04 (7 / 6.391)	6.38 (6 / 6.82)	1.27	1.34	inhalation	4	20 mg/m ³	28	Dybdahl <i>et al.</i> (2004)
	Muta TM Mouse <i>cII</i>	–	5.04 (7 / 6.391)	5.79 (6 / 7.089)	1.15	0.75	inhalation	4	80 mg/m ³	28	Dybdahl <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	–	2.91 (6 / 2.635)	3.53 (6 / 1.853)	1.21	0.62	diet	21	0.5	0	Dybdahl <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	2.91 (6 / 2.635)	3.56 (6 / 2.798)	1.22	0.65	diet	21	2	0	Dybdahl <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	2.91 (6 / 2.635)	3.97 (6 / 2.696)	1.36	1.06	diet	21	5	0	Dybdahl <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	2.91 (6 / 2.635)	3.12 (6 / 2.066)	1.07	0.21	diet	21	20	0	Dybdahl <i>et al.</i> (2003)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat <i>cII</i>	–	2.91 (6 / 2.635)	3.69 (6 / 1.972)	1.27	0.78	diet	21	200	0	Dybdahl <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	2.23 (6 / 1.787)	2.59 (6 / 3.12)	1.16	0.36	diet	21	5	0	Dybdahl <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	2.23 (6 / 1.787)	3.39 (6 / 3.593)	1.52	1.16	diet	21	50	0	Dybdahl <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	2.23 (6 / 1.787)	3.28 (6 / 3.08)	1.47	1.05	diet	21	200	0	Dybdahl <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	2.91 (6 / 2.635)	5.71 (6 / 1.877)	1.96	2.8	diet	21	50	0	Dybdahl <i>et al.</i> (2003)
	Big Blue [®] rat	+	0.9 (4 / 1)	4.2 (5 / 1.1)	4.67	3.3	inhalation	28	6 800	3	Sato <i>et al.</i> (2000)
	Big Blue [®] rat	–	0.9 (4 / 1)	1 (5 / 1.2)	1.11	0.1	inhalation	28	1 130	3	Sato <i>et al.</i> (2000)
	Big Blue [®] rat <i>cII</i>	–	2.23 (6 / 1.787)	1.93 (6 / 3.897)	0.87	–0.3	diet	21	2	0	Dybdahl <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	3.77 (6 / 2.464)	2.28 (6 / 2.094)	0.6	–1.49	diet	21	15	0	Muller <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	–	3.77 (6 / 2.464)	2.54 (6 / 2.574)	0.67	–1.23	diet	21	363	0	Muller <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	–	3.77 (6 / 2.464)	3.39 (6 / 1.542)	0.9	–0.38	diet	21	153	0	Muller <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	–	3.77 (6 / 2.464)	4.67 (6 / 1.739)	1.24	0.9	diet	21	1 484	0	Muller <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	–	3.77 (6 / 2.464)	2.67 (6 / 1.853)	0.71	–1.1	diet	21	36	0	Muller <i>et al.</i> (2004)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat <i>cII</i>	-	3.77 (6 / 2.464)	2.53 (6 / 2.69)	0.67	-1.24	diet	21	4	0	Muller <i>et al.</i> (2004)
	Muta [™] Mouse <i>cII</i>	-	3.51 (7 / 8.692)	2.37 (6 / 16.213)	0.68	-1.14	inhalation	1	20 mg/m ³	28	Dybdahl <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	-	2.23 (6 / 1.787)	3.59 (6 / 3.098)	1.61	1.36	diet	21	0.5	0	Dybdahl <i>et al.</i> (2003)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.66 (3 / 2.377)	1.78 (3 / 2.254)	2.7	1.12	intra-tracheal	1	0.2 mg	14	Hashimoto <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.59 (4 / 1.95)	1.9 (5 / 3.039)	3.22	1.31	inhalation	84	3 mg/m ³	3	Hashimoto <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.66 (3 / 2.377)	0.97 (3 / 3.632)	1.47	0.31	intra-tracheal	1	0.05 mg	14	Hashimoto <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.66 (3 / 2.377)	1.97 (3 / 2.411)	2.98	1.31	intra-tracheal	1	0.5 mg	14	Hashimoto <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.66 (3 / 2.377)	1.4 (3 / 3.587)	2.12	0.74	intra-tracheal	1	0.25 mg	14	Hashimoto <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.66 (3 / 2.377)	1.16 (3 / 3.371)	1.76	0.5	intra-tracheal	1	0.125 mg	14	Hashimoto <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.82 (3 / 3.528)	2.11 (3 / 1.754)	2.57	1.29	inhalation	168	3 mg/m ³	3	Hashimoto <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.61 (4 / 3.406)	1.06 (5 / 6.611)	1.74	0.45	inhalation	28	3 mg/m ³	3	Hashimoto <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.66 (3 / 2.377)	1.28 (3 / 2.947)	1.94	0.62	intra-tracheal	1	0.1 mg	14	Hashimoto <i>et al.</i> (2007)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>gpt</i> delta (<i>gpt</i>)	+	0.59 (4 / 1.95)	1.84 (4 / 1.906)	3.12	1.25	inhalation	84	1 mg/m ³	3	Hashimoto <i>et al.</i> (2007)
Diethylnitrosamine (DEN)	Muta TM Mouse	-	3.8 (8 / 0.71)	5.3 (6 / 0.49)	1.39	1.5	ip	5	175	25	unpublished
	Muta TM Mouse	-	3.8 (8 / 0.71)	5 (6 / 0.38)	1.32	1.2	ip	5	175	35	unpublished
	Muta TM Mouse	-	3.6 (5 / 0.32)	3.3 (7 / 0.5)	0.92	-0.3	ip	5	175	55	unpublished
	Muta TM Mouse	+	4.7 (6 / 0.45)	205.7 (6 / 0.18)	43.77	201	ip	5	175	5	unpublished
	Muta TM Mouse	+	5.8 (11 / 0.77)	234.5 (6 / 0.21)	40.43	228.7	ip	5	175	15	unpublished
	Muta TM Mouse	+	5.8 (11 / 0.77)	312.7 (6 / 0.1)	53.91	306.9	ip	5	175	35	unpublished
	Muta TM Mouse	-	3.8 (11 / 0.76)	4.7 (6 / 0.4)	1.24	0.9	ip	5	175	45	unpublished
	Muta TM Mouse	-	3.4 (5 / 0.37)	6.1 (4 / 0.26)	1.79	2.7	ip	5	175	5	unpublished
	Muta TM Mouse	-	3.8 (11 / 0.76)	0.9 (6 / 0.4)	0.24	-2.9	ip	5	175	25	unpublished
	Muta TM Mouse	-	3.8 (8 / 0.71)	4.7 (6 / 0.42)	1.24	0.9	ip	5	175	15	unpublished
	Big Blue [®] mouse <i>cII</i>	+	11.4 (3 / 0.962)	54.3 (4 / 0.847)	4.76	42.9	ip	5	45	298	Mirsalis <i>et al.</i> (2005)
	Muta TM Mouse	+	7 (5 / 0.32)	428.3 (7 / 0.43)	61.19	421.3	ip	5	175	55	unpublished
	Muta TM Mouse	-	3.9 (5 / 0.39)	2.6 (6 / 0.39)	0.67	-1.3	ip	5	175	5	unpublished
	<i>gpt</i> delta (Spi)	-	0.32 (5 / 30.3)	0.43 (2 / 2.1)	1.34	0.11	ip	1	150	14	unpublished
	<i>gpt</i> delta (Spi)	-	0.32 (5 / 30.3)	0.39 (5 / 57.2)	1.22	0.07	ip	1	50	14	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	+	1.1 (5 / 14.5)	5.3 (3 / 6.39)	4.82	4.2	ip	1	100	14	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	+	1.1 (5 / 14.5)	2.3 (5 / 14.7)	2.09	1.2	ip	1	50	14	unpublished

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>gpt</i> delta (Spi)	+	0.255 (3 / 4)	0.483 (4 / 6.7)	1.89	0.228	ip	1	80	28	unpublished
	Muta TM Mouse	-	4 (6 / 0.39)	3.8 (5 / 0.3)	0.95	-0.2	ip	5	175	55	unpublished
	Big Blue [®] mouse <i>cII</i>	+	14.8 (5 / 2.067)	60 (2 / 0.3982)	4.05	45.2	ip	5	45	725	Mirsalis <i>et al.</i> (2005)
	<i>gpt</i> delta (Spi)	-	0.32 (5 / 30.3)	0.47 (3 / 17)	1.47	0.15	ip	1	100	14	unpublished
	Big Blue [®] mouse <i>cII</i>	+	4.9 (3 / 0.8588)	58.9 (3 / 0.73)	12.02	54	ip	5	45	185	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] mouse <i>cII</i>	+	11 (4 / 1.337)	70 (4 / 0.7864)	6.36	59	ip	5	45	298	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] mouse <i>cII</i>	+	14.4 (3 / 0.9542)	102.3 (3 / 0.9202)	7.1	87.9	ip	5	45	511	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] mouse <i>cII</i>	+	14.2 (4 / 0.717)	70.6 (2 / 0.617)	4.97	56.4	ip	5	45	511	Mirsalis <i>et al.</i> (2005)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.94 (4 / 7.8)	2.2 (4 / 6)	2.34	1.26	ip	1	80	14	unpublished
	Muta TM Mouse	+	5.5 (8 / 3)	35.7 (4 / 1.5)	6.49	30.2	ip	1	66	28	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	-	4.1 (8 / 1.2)	4.4 (4 / 0.6)	1.07	0.3	ip	1	66	0	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	+	5.5 (8 / 3)	14.1 (2 / 0.5)	2.56	8.6	ip	1	66	3	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	+	3.7 (2 / 0.3)	12.5 (2 / 0.3)	3.38	8.8	ip	1	100	7	Suzuki, Hayashi and Sofuni (1994)
	Muta TM Mouse	-	3.7 (2 / 0.3)	3.4 (1 / 0.3)	0.92	-0.3	ip	1	100	7	Suzuki, Hayashi and Sofuni (1994)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	1.5 (2 / 1.8)	9 (2 / 1.8)	6	7.5	ip	1	50	28	Okada <i>et al.</i> (1997)
	Muta TM Mouse	+	1.6 (4 / 1.7)	8.2 (2 / 0.7)	5.13	6.6	ip	1	50	21	Okada <i>et al.</i> (1997)
	Muta TM Mouse	-	4.1 (8 / 1.2)	4.2 (4 / 1.3)	1.02	0.1	ip	1	66	1	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	+	3.1 (2 / 0.7)	6.6 (2 / 0.4)	2.13	3.5	ip	1	50	7	Okada <i>et al.</i> (1997)
	Muta TM Mouse	-	4.1 (8 / 1.2)	3.7 (2 / 0.9)	0.9	-0.4	ip	1	66	3	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	+	2.3 (3 / 0.7)	33.6 (2 / 0.4)	14.61	31.3	ip	1	100	28	Okada <i>et al.</i> (1997)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.94 (4 / 7.8)	6.7 (5 / 7.2)	7.13	5.76	ip	1	80	28	unpublished
	Muta TM Mouse	+	5.5 (8 / 3)	33.3 (4 / 0.7)	6.05	27.8	ip	1	66	14	Mientjes <i>et al.</i> (1998)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.94 (4 / 7.8)	2.2 (4 / 5.6)	2.34	1.26	ip	1	80	7	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	+	0.94 (4 / 7.8)	2.3 (4 / 11)	2.45	1.36	ip	1	40	28	unpublished
	<i>gpt</i> delta (Spi)	-	0.2 (2 / 4.3)	0.113 (4 / 5.2)	0.57	-0.08	ip	1	80	28	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	+	1.1 (5 / 14.5)	9.7 (2 / 1.96)	8.82	8.6	ip	1	150	14	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	-	0.71 (4 / 3.8)	1 (3 / 2.6)	1.41	0.29	ip	1	80	28	unpublished
	<i>gpt</i> delta (Spi)	-	0.19 (1 / 1.6)	0.183 (2 / 4.4)	0.96	-0.00	ip	1	80	28	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	+	0.62 (3 / 7.7)	3.4 (5 / 5.3)	5.48	2.78	ip	1	80	28	unpublished

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>gpt</i> delta (Spi)	–	0.1 (4 / 4.4)	0.13 (5 / 8.2)	1.3	0.03	ip	1	80	3	unpublished
	<i>gpt</i> delta (Spi)	+	0.255 (3 / 4)	0.681 (4 / 5.7)	2.67	0.426	ip	1	40	28	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	–	0.17 (5 / 3.4)	0.115 (5 / 7.4)	0.68	–0.05 5	ip	1	80	3	unpublished
	Muta TM Mouse	–	4.1 (8 / 1.2)	4.4 (4 / 0.1)	1.07	0.3	ip	1	66	14	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	+	2.1 (3 / 0.6)	38.8 (3 / 0.5)	18.48	36.7	ip	1	100	7	Okada <i>et al.</i> (1997)
DEN + phenobarbital	Big Blue [®] mouse <i>cII</i>	+	4.9 (3 / 0.8588)	75.6 (3 / 0.327)	15.43	70.7	ip + diet	5	45	122	Mirsalis <i>et al.</i> (2005)
	Muta TM Mouse	+	1.5 (2 / 1.8)	35.5 (4 / 1.3)	23.67	34	ip + diet	1	50	28	Okada <i>et al.</i> (1997)
	Big Blue [®] mouse <i>cII</i>	+	11 (4 / 1.337)	79.6 (4 / 1.094)	7.24	68.6	ip + diet	5	45	298	Mirsalis <i>et al.</i> (2005)
	Muta TM Mouse	+	1.6 (4 / 1.7)	14.8 (3 / 1.4)	9.25	13.2	ip + diet	1	50	21	Okada <i>et al.</i> (1997)
	Muta TM Mouse	+	2.5 (3 / 0.6)	49.7 (3 / 0.5)	19.88	47.2	ip + diet	1	100	28	Okada <i>et al.</i> (1997)
	Big Blue [®] mouse <i>cII</i>	+	4.9 (3 / 0.8588)	98.7 (5 / 0.637)	20.14	93.8	ip + diet	5	45	185	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] mouse <i>cII</i>	+	4.9 (3 / 0.8588)	111.4 (4 / 1.034)	22.73	106.5	ip + diet	5	45	232	Mirsalis <i>et al.</i> (2005)
Dimethylarsinic acid	Muta TM Mouse <i>cII</i>	–	6.8 (5 / 1.7)	7.8 (5 / 8)	1.15	1	ip	5	53	14	Noda <i>et al.</i> (2002)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Dimethylnitrosamine (DMN)	Muta TM Mouse	–	5.7 (5 / 3)	7.6 (5 / 2.5)	1.33	1.9	ip	5	53	14	Noda <i>et al.</i> (2002)
	Muta TM Mouse	–	5.4 (5 / 1.5)	10.6 (5 / 1.5)	1.96	5.2	ip	5	53	14	Noda <i>et al.</i> (2002)
	Muta TM Mouse	–	7.5 (3 / 0.48)	4.5 (2 / 0.1)	0.6	–3	ip	5	53	14	Noda <i>et al.</i> (2002)
	Muta TM Mouse	–	2.4 (3 / 0.8)	5 (3 / 1.1)	2.08	2.6	ip	5	53	14	Noda <i>et al.</i> (2002)
	Muta TM Mouse	–	2.8 (4 / –)	3.1 (4 / –)	1.11	0.3	ip	1	5	7	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	+	5.9 (4 / –)	11 (4 / –)	1.86	5.1	ip	1	5	49	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	+	5.9 (4 / –)	10.6 (4 / –)	1.8	4.7	ip	1	5	28	Souliotis <i>et al.</i> (1998)
	Big Blue [®] mouse	+	2.4 (3 / 1.1)	11.2 (4 / 1.8)	4.67	8.8	gavage	1	10	7	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	–	2.7 (3 / 1.8)	2.8 (4 / 1.9)	1.04	0.1	gavage	1	10	7	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	?pos	4.5 (3 / 1.6)	11.2 (3 / 1.7)	2.49	6.7	gavage	1	10	7	Tinwell, Lefevre and Ashby (1994a)
Big Blue [®] mouse	+	7.2 (4 / 2.1)	13.6 (4 / 2.2)	1.89	6.4	gavage	1	10	10	Tinwell, Lefevre and Ashby (1994a)	
Big Blue [®] mouse	?pos	7.1 (3 / 1.6)	11.6 (3 / 1.7)	1.63	4.5	gavage	1	10	20	Tinwell, Lefevre and Ashby (1994a)	

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	9.8 (6 / 3.2)	18.7 (6 / 3.4)	1.91	8.9	gavage	1	10	7	Tinwell, Lefevre and Ashby (1994a)
	Muta TM Mouse	+	5.9 (4 / -)	9.7 (4 / -)	1.64	3.8	ip	1	5	7	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	+	5.9 (4 / -)	10.9 (4 / -)	1.85	5	ip	1	5	14	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	-	5.4 (4 / -)	6.1 (4 / -)	1.13	0.7	ip	1	10	14	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	-	2.8 (4 / -)	4.1 (3 / -)	1.46	1.3	ip	1	5	14	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	+	6.4 (4 / 2)	21.2 (1 / 0.4)	3.31	14.8	gavage	1	10	20	Lefevre <i>et al.</i> (1994)
	Muta TM Mouse	-	4 (4 / -)	4.8 (3 / -)	1.2	0.8	ip	1	10	28	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	+	6.4 (4 / -)	13.7 (4 / -)	2.14	7.3	ip	10	10	28	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	-	3.3 (4 / -)	3.2 (4 / -)	0.97	-0.1	ip	10	10	14	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	-	3.3 (4 / -)	3.1 (4 / -)	0.94	-0.2	ip	10	10	28	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	-	5.4 (4 / -)	5.8 (4 / -)	1.07	0.4	ip	10	10	14	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	-	5.4 (4 / -)	6.4 (4 / -)	1.19	1	ip	10	10	28	Souliotis <i>et al.</i> (1998)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	4 (4 / -)	3.5 (4 / -)	0.88	-0.5	ip	10	10	14	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	-	4 (4 / -)	6.9 (4 / -)	1.73	2.9	ip	10	10	28	Souliotis <i>et al.</i> (1998)
	Big Blue [®] mouse	+	4.2 (3 / 0.6)	35.8 (2 / 0.3)	8.52	31.6	ip	5	10	8	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	+	5 (4 / 2.1)	11.6 (1 / 0.5)	2.32	6.6	gavage	1	10	20	Lefevre <i>et al.</i> (1994)
	Muta TM Mouse	-	6.4 (4 / -)	10.2 (4 / -)	1.59	3.8	ip	10	10	14	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	+	4 (4 / -)	6.3 (4 / -)	1.58	2.3	ip	1	10	28	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	-	4 (4 / -)	4.7 (3 / -)	1.18	0.7	ip	1	10	14	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	-	5.4 (4 / -)	5.6 (4 / -)	1.04	0.2	ip	1	10	28	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	-	2.8 (4 / -)	2.8 (4 / -)	1	0	ip	1	5	28	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	+	5.7 (4 / -)	20.5 (4 / -)	3.6	14.8	ip	1	10	28	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	+	5.7 (4 / -)	21.9 (4 / -)	3.84	16.2	ip	1	10	14	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	-	3.5 (4 / -)	3.5 (4 / -)	1	0	ip	1	5	49	Souliotis <i>et al.</i> (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	3.5 (4 / –)	2.5 (4 / –)	0.71	–1	ip	1	5	28	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	–	3.5 (4 / –)	4.3 (4 / –)	1.23	0.8	ip	1	5	14	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	–	3.5 (4 / –)	6.5 (4 / –)	1.86	3	ip	1	5	7	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	–	6.3 (4 / –)	7.1 (4 / –)	1.13	0.8	ip	1	5	49	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	–	6.3 (4 / –)	5.6 (4 / –)	0.89	–0.7	ip	1	5	28	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	–	6.3 (4 / –)	5.6 (4 / –)	0.89	–0.7	ip	1	5	14	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	–	6.3 (4 / –)	6.1 (4 / –)	0.97	–0.2	ip	1	5	7	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	–	2.8 (4 / –)	3.2 (4 / –)	1.14	0.4	ip	1	5	49	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	–	4 (4 / –)	3.8 (4 / –)	0.95	–0.2	ip	1	10	14	Souliotis <i>et al.</i> (1998)
	Muta TM Mouse	–	4 (5 / 4)	6.7 (5 / 3.1)	1.68	2.7	gavage	1	6	30	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	–	6.5 (2 / –)	5 (2 / –)	0.77	–1.5	ip	4	4	14	Suzuki <i>et al.</i> (1998)
	Muta TM Mouse	–	6.3 (5 / 3.8)	7.5 (5 / 2.8)	1.19	1.2	gavage	1	2	90	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	–	7.3 (5 / 3.5)	8.4 (5 / 3.1)	1.15	1.1	gavage	1	10	30	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	–	7.3 (5 / 3.5)	13.3 (5 / 3.6)	1.82	6	gavage	1	6	30	Jiao <i>et al.</i> (1997)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	7.3 (5 / 3.5)	22.7 (5 / 2.2)	3.11	15.4	gavage	1	2	30	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	5.8 (5 / 1.6)	8.5 (5 / 1.7)	1.47	2.7	gavage	1	10	90	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	5.8 (5 / 1.6)	7.7 (5 / 2)	1.33	1.9	gavage	1	6	90	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	+	6.3 (5 / 3.8)	26.9 (5 / 3.6)	4.27	20.6	gavage	1	10	90	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	4 (5 / 4)	4.4 (5 / 3.6)	1.1	0.4	gavage	1	10	30	Jiao <i>et al.</i> (1997)
	Big Blue [®] mouse	+	5 (9 / 1.8)	28.6 (- / 1.2)	5.72	23.6	ip	5	30	15	Shane <i>et al.</i> (1999)
	Muta TM Mouse	-	4 (5 / 4)	4.3 (4 / 2.5)	1.08	0.3	gavage	1	2	30	Jiao <i>et al.</i> (1997)
	Big Blue [®] mouse	+	5 (9 / 1.8)	28.6 (5 / 1.3)	5.72	23.6	ip	5	30	15	Shane <i>et al.</i> (2000b)
	Big Blue [®] mouse	+	12.3 (4 / 0.8)	39.7 (4 / 0.8)	3.23	27.4	gavage	4	16	183	Butterworth <i>et al.</i> (1998)
	Muta TM Mouse	+	4.6 (3 / 0.3)	21.5 (3 / 0.2)	4.67	16.9	ip	4	4	14	Suzuki <i>et al.</i> (1998)
	Muta TM Mouse	+	5 (2 / -)	11.5 (2 / -)	2.3	6.5	ip	4	4	14	Suzuki <i>et al.</i> (1998)
	Muta TM Mouse	+	6.5 (2 / -)	20 (2 / -)	3.08	13.5	ip	4	4	14	Suzuki <i>et al.</i> (1998)
	Big Blue [®] mouse	+	3.9 (3 / 0.8)	26.1 (2 / 0.4)	6.69	22.2	ip	14	28	1	Mirsalis <i>et al.</i> (1993)
	Muta TM Mouse	-	5.8 (5 / 1.6)	5.9 (5 / 1.6)	1.02	0.1	gavage	1	2	90	Jiao <i>et al.</i> (1997)
	Big Blue [®] mouse	+	13 (4 / 0.8)	35.7 (4 / 0.8)	2.75	22.7	gavage	4	16	93	Butterworth <i>et al.</i> (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat <i>cII</i>	+	9.9 (4 / 1.4)	23.3 (4 / 0.7)	2.35	13.4	gavage	11	18	1	Gollapudi, Jackson and Stott (1998)
	Big Blue [®] rat <i>cII</i>	+	9.9 (4 / 1.4)	41.5 (4 / 0.8)	4.19	31.6	gavage	11	54	1	Gollapudi, Jackson and Stott (1998)
	Big Blue [®] mouse	+	10.1 (4 / 0.8)	23 (4 / 0.8)	2.28	12.9	gavage	4	8	13	Butterworth <i>et al.</i> (1998)
	Big Blue [®] mouse	+	10.1 (4 / 0.8)	35.4 (4 / 0.8)	3.5	25.3	gavage	4	16	13	Butterworth <i>et al.</i> (1998)
	Big Blue [®] mouse	+	10.1 (4 / 0.8)	54.3 (4 / 0.8)	5.38	44.2	gavage	4	32	0	Butterworth <i>et al.</i> (1998)
	Big Blue [®] mouse	+	9.5 (4 / 0.8)	15.8 (4 / 0.8)	1.66	6.3	gavage	4	8	33	Butterworth <i>et al.</i> (1998)
	Big Blue [®] mouse	+	9.5 (4 / 0.8)	31.9 (4 / 0.8)	3.36	22.4	gavage	4	16	33	Butterworth <i>et al.</i> (1998)
	Muta TM Mouse	+	6.3 (5 / 3.8)	16.5 (5 / 3.4)	2.62	10.2	gavage	1	6	90	Jiao <i>et al.</i> (1997)
	Big Blue [®] mouse	+	13 (4 / 0.8)	20.8 (4 / 0.8)	1.6	7.8	gavage	4	8	93	Butterworth <i>et al.</i> (1998)
	Big Blue [®] mouse	-	8 (2 / 0.7)	9 (2 / 0.4)	1.13	1	diet	105	31.5	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	+	12.3 (4 / 0.8)	29.7 (4 / 0.8)	2.41	17.4	gavage	4	8	183	Butterworth <i>et al.</i> (1998)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat <i>cII</i>	-	9.9 (4 / 1.4)	12.1 (4 / 1.3)	1.22	2.2	gavage	11	5.4	1	Gollapudi, Jackson and Stott (1998)
	Big Blue [®] rat <i>cII</i>	-	9.9 (4 / 1.4)	10.6 (4 / 1.4)	1.07	0.7	gavage	11	1.8	1	Gollapudi, Jackson and Stott (1998)
	Big Blue [®] rat	+	8.5 (4 / 0.4)	40 (4 / 0.4)	4.71	31.5	gavage	11	54	1	Gollapudi, Jackson and Stott (1998)
	Big Blue [®] rat	+	8.5 (4 / 0.4)	16 (4 / 0.3)	1.88	7.5	gavage	11	18	1	Gollapudi, Jackson and Stott (1998)
	Big Blue [®] rat	-	8.5 (4 / 0.4)	11.5 (4 / 0.5)	1.35	3	gavage	11	5.4	1	Gollapudi, Jackson and Stott (1998)
	Big Blue [®] rat	-	8.5 (4 / 0.4)	12.5 (4 / 0.5)	1.47	4	gavage	11	1.8	1	Gollapudi, Jackson and Stott (1998)
	Big Blue [®] mouse	+	2.9 (4 / 0.9)	25.2 (4 / 1)	8.69	22.3	ip	5	20	14	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse <i>cII</i>	+	5.8 (6 / 2.1)	18.7 (6 / 1.7)	3.22	12.9	ip	5	20	21	Shane <i>et al.</i> (2000b)
	Muta [™] Mouse	+	6.7 (3 / 0.2)	20.4 (3 / 0.2)	3.04	13.7	ip	4	4	14	Suzuki <i>et al.</i> (1998)
	Big Blue [®] mouse	+	4.8 (4 / 1)	24.8 (3 / 0.8)	5.17	20	ip	5	30	14	Mirsalis <i>et al.</i> (1993)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	2.8 (4 / 0.9)	20.8 (4 / 1)	7.43	18	ip	5	20	14	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	+	2.8 (4 / 0.9)	15.7 (2 / 0.5)	5.61	12.9	ip	5	30	14	Mirsalis <i>et al.</i> (1993)
	Muta [™] Mouse	+	1.8 (6 / 2.6)	10.9 (6 / 2)	6.06	9.1	gavage	1	10	14	Tinwell, Lefevre and Ashby (1998)
	Muta [™] Mouse	+	1.8 (6 / 2.6)	14.4 (3 / 0.4)	8	12.6	gavage	1	10	14	Tinwell, Lefevre and Ashby (1998)
	Muta [™] Mouse	+	3 (6 / 0.3)	21 (4 / 0.2)	7	18	gavage	1	10	14	Fletcher, Tinwell and Ashby (1998)
	Big Blue [®] mouse	+	4.6 (4 / 1)	27.2 (2 / 0.5)	5.91	22.6	ip	5	30	14	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	+	6.2 (6 / 1.6)	23.2 (6 / 1.6)	3.74	17	ip	5	20	21	Shane <i>et al.</i> (2000b)
	Big Blue [®] mouse	+	4.6 (4 / 1)	20.4 (4 / 1.2)	4.43	15.8	ip	5	20	14	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	+	1.7 (3 / 0.7)	10.6 (3 / 1)	6.24	8.9	ip	5	5	7	Suzuki <i>et al.</i> (1996b)
	Big Blue [®] mouse	+	1.9 (3 / 0.7)	4.6 (3 / 0.7)	2.42	2.7	ip	5	5	7	Suzuki <i>et al.</i> (1996b)
	Big Blue [®] mouse	+	1.3 (3 / 1.4)	2.9 (3 / 1.5)	2.23	1.6	ip	5	5	7	Suzuki <i>et al.</i> (1996b)
	Big Blue [®] mouse	-	1.4 (3 / 0.5)	1.7 (3 / 0.9)	1.21	0.3	ip	5	5	7	Suzuki <i>et al.</i> (1996b)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	-	1.3 (3 / 0.9)	1.7 (3 / 0.8)	1.31	0.4	ip	5	5	7	Suzuki <i>et al.</i> (1996b)
	Big Blue [®] mouse	-	0.5 (3 / 1)	0.4 (3 / 1)	0.8	-0.1	ip	5	5	7	Suzuki <i>et al.</i> (1996b)
	Big Blue [®] mouse	+	0.7 (3 / 1.4)	2.7 (3 / 1.4)	3.86	2	ip	1	5	14	Suzuki <i>et al.</i> (1996b)
	Muta [™] Mouse	+	5.6 (6 / 3.6)	29.2 (2 / 0.6)	5.21	23.6	gavage	1	10	14	Fletcher, Tinwell and Ashby (1998)
	Big Blue [®] mouse	+	1.4 (3 / 2)	6.2 (3 / 1.6)	4.43	4.8	ip	1	10	14	Tinwell <i>et al.</i> (1995)
	Big Blue [®] mouse	+	8 (2 / 0.8)	15 (2 / 0.4)	1.88	7	diet	105	31.5	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	-	7 (2 / 1.1)	9 (2 / 0.8)	1.29	2	diet	105	31.5	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	+	10 (5 / -)	31 (5 / -)	3.1	21	ip	5	30	15	Cunningham <i>et al.</i> (1996)
	Big Blue [®] mouse	+	5.7 (5 / 0.7)	31.2 (3 / 0.3)	5.47	25.5	ip	5	30	15	Hayward <i>et al.</i> (1995)
	Muta [™] Mouse	+	4.5 (6 / 2.5)	15.5 (5 / 1.8)	3.44	11	gavage	1	10	14	Tinwell <i>et al.</i> (1995)
	Muta [™] Mouse	+	1.8 (6 / 2.6)	10.9 (5 / 1.5)	6.06	9.1	gavage	1	10	14	Tinwell <i>et al.</i> (1995)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	5.7 (6 / 2.2)	10.3 (5 / 2)	1.81	4.6	gavage	1	10	14	Tinwell <i>et al.</i> (1995)
	Big Blue [®] mouse	+	4.8 (4 / 1)	19.9 (4 / 1.2)	4.15	15.1	ip	5	20	14	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	+	6.1 (3 / 1)	13.3 (3 / 1.1)	2.18	7.2	ip	1	10	14	Tinwell <i>et al.</i> (1995)
	Big Blue [®] mouse	+	0.7 (3 / 1.4)	6 (3 / 1.2)	8.57	5.3	ip	1	10	14	Suzuki <i>et al.</i> (1996b)
	Muta TM Mouse	+	6.2 (4 / 1.8)	23.8 (4 / 2)	3.84	17.6	gavage	1	10	7	Tinwell, Lefevre and Ashby (1994b)
	Muta TM Mouse	+	4 (4 / 2.1)	14.4 (4 / 1.5)	3.6	10.4	gavage	1	10	10	Tinwell, Lefevre and Ashby (1994b)
	Muta TM Mouse	+	4.1 (3 / 1.7)	21.2 (4 / 1.6)	5.17	17.1	gavage	1	10	20	Tinwell, Lefevre and Ashby (1994b)
	Big Blue [®] mouse	+	3.6 (3 / 0.8)	22.9 (2 / 0.4)	6.36	19.3	ip	5	10	1	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	+	4.6 (3 / 0.6)	59 (2 / 0.4)	12.83	54.4	ip	5	10	22	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	+	2.5 (3 / 0.7)	39.5 (3 / 0.6)	15.8	37	ip	21	42	1	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	+	2.9 (4 / 0.9)	37.8 (3 / 0.8)	13.03	34.9	ip	5	30	14	Mirsalis <i>et al.</i> (1993)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Dinitropyrenes	Big Blue [®] mouse	+	8.3 (3 / 1.5)	13 (3 / 1.5)	1.57	4.7	ip	1	10	14	Tinwell <i>et al.</i> (1995)
	Big Blue [®] mouse	-	4 (3 / 0.6)	3 (3 / 0.7)	0.75	-1	ip	5	10	8	Mirsalis <i>et al.</i> (1993)
	Muta TM Mouse	-	3.5 (5 / 1.7)	7.2 (5 / 0.72)	2.1	3.7	i.g. injection	28	800	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse <i>cII</i>	+	1.5 (5 / 2.1)	4.4 (5 / 0.8)	2.9	2.9	i.g. injection	28	800	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse <i>cII</i>	-	2.5 (5 / 1.5)	5.3 (5 / 1.4)	2.1	2.8	i.g. injection	28	1 600	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse <i>cII</i>	+	2.5 (5 / 1.5)	10.9 (5 / 1.4)	4.4	8.4	i.g. injection	28	800	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse <i>cII</i>	+	2.7 (5 / 1.5)	22.5 (5 / 2.6)	8.3	19.8	i.g. injection	28	1 600	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse <i>cII</i>	+	2.7 (5 / 1.5)	13.3 (5 / 1)	4.9	10.6	i.g. injection	28	800	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse <i>cII</i>	-	5.9 (5 / 6.5)	8.2 (5 / 6.6)	1.4	2.3	i.g. injection	28	1 600	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse	-	3.5 (5 / 1.7)	6.9 (5 / 2.4)	2	3.4	i.g. injection	28	1 600	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse <i>cII</i>	+	1.5 (5 / 2.1)	3.8 (5 / 2.3)	2.5	2.3	i.g. injection	28	1 600	7	Kohara <i>et al.</i> (2002b)
Muta TM Mouse	+	5.5 (5 / 1.4)	16.1 (5 / 1.1)	2.9	10.6	i.g. injection	28	1 600	7	Kohara <i>et al.</i> (2002b)	

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	5.5 (5 / 1.4)	8 (5 / 1.2)	1.5	2.5	i.g. injection	28	800	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse	+	7.5 (5 / 1.4)	43.3 (5 / 1.6)	5.8	35.8	i.g. injection	28	1 600	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse	+	7.5 (5 / 1.4)	17.4 (5 / 0.85)	2.3	9.9	i.g. injection	28	800	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse	+	7.6 (5 / 5.1)	13.4 (5 / 6.3)	1.8	5.8	i.g. injection	28	1 600	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse	+	3.1 (5 / 1.2)	8.3 (5 / 1.8)	2.7	5.2	i.g. injection	28	1 600	7	Kohara <i>et al.</i> (2002b)
	Muta TM Mouse <i>cII</i>	-	1.6 (5 / 1.6)	1.6 (5 / 2.5)	1	0	i.g. injection	28	1 600	7	Kohara <i>et al.</i> (2002b)
Dipropylnitrosamine (DPN)	Muta TM Mouse	+	5.9 (8 / 4.3)	22 (4 / 2.4)	3.73	16.1	ip	1	250	14	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	-	7.4 (6 / 2.7)	6.9 (4 / 1.8)	0.93	-0.5	ip	1	250	28	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	-	7.4 (6 / 2.7)	7.3 (4 / 1.5)	0.99	-0.1	ip	1	250	14	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	-	7.4 (6 / 2.7)	6.5 (5 / 1.5)	0.88	-0.9	ip	1	250	7	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	+	6.3 (8 / 4.3)	9 (6 / 2.8)	1.43	2.7	ip	1	250	28	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	+	6.3 (8 / 4.3)	8.3 (6 / 4.7)	1.32	2	ip	1	250	14	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	-	2.5 (7 / 4.9)	3.7 (6 / 3.3)	1.48	1.2	ip	1	250	7	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	+	5.9 (8 / 4.3)	22.2 (4 / 1.5)	3.76	16.3	ip	1	250	28	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	-	3.1 (4 / 1.3)	1.7 (4 / 1.3)	0.55	-1.4	ip	1	250	28	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	+	5.9 (8 / 4.3)	10.8 (4 / 2.2)	1.83	4.9	ip	1	250	7	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	+	4.5 (8 / 3.8)	61.9 (4 / 1.1)	13.76	57.4	ip	1	250	28	Itoh <i>et al.</i> (1999)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
d-Limonene	Muta TM Mouse	+	4.5 (8 / 3.8)	37.7 (4 / 1.3)	8.38	33.2	ip	1	250	14	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	+	4.5 (8 / 3.8)	12 (4 / 1.6)	2.67	7.5	ip	1	250	7	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	+	2.5 (7 / 4.9)	4.9 (5 / 3)	1.96	2.4	ip	1	250	28	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	-	2.5 (7 / 4.9)	4 (6 / 3.8)	1.6	1.5	ip	1	250	14	Itoh <i>et al.</i> (1999)
	Muta TM Mouse	-	6.3 (8 / 4.3)	4.8 (6 / 3.5)	0.76	-1.5	ip	1	250	7	Itoh <i>et al.</i> (1999)
	Big Blue [®] rat	-	1.78 (9 / 2)	2.17 (10 / 2.4)	1.22	0.39	diet	10	nd	14	Turner <i>et al.</i> (2001)
	Big Blue [®] rat	-	1.44 (6 / 1.2)	1.62 (7 / 1.4)	1.13	0.18	diet	10	nd	14	Turner <i>et al.</i> (2001)
Ellagic acid	Big Blue [®] rat	-	7 (5 / -)	7.4 (2 / -)	1.06	0.4	diet	14	nd	14	de Boer <i>et al.</i> (2004)
Ethylene oxide	Big Blue [®] mouse	-	4.5 (6 / 1)	4.8 (5 / 1)	1.07	0.3	inhalation	168	45 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	-	5 (5 / 1)	4.5 (5 / 1)	0.9	-0.5	inhalation	84	180 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	-	5 (5 / 1)	7.4 (5 / 1)	1.48	2.4	inhalation	84	360 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	-	6.6 (6 / 1)	8.1 (4 / 1)	1.23	1.5	inhalation	168	45 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	-	3.6 (6 / 1)	4.2 (6 / 1)	1.17	0.6	inhalation	336	360 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	+	3.6 (6 / 1)	8.5 (6 / 1)	2.36	4.9	inhalation	336	180 mg/m ³	3	Recio <i>et al.</i> (2004)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	2.5 (6 / 1)	6.2 (6 / 1)	2.48	3.7	inhalation	336	90 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	+	2.5 (6 / 1)	5.8 (6 / 1)	2.32	3.3	inhalation	336	45 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	+	4.5 (6 / 1)	7.2 (5 / 1)	1.6	2.7	inhalation	168	360 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	-	4.5 (6 / 1)	4.5 (5 / 1)	1	0	inhalation	168	90 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	-	7.3 (6 / 1)	11.3 (6 / 1)	1.55	4	inhalation	336	45 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	-	3.1 (5 / 1)	3.4 (5 / 1)	1.1	0.3	inhalation	84	360 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	-	3.1 (5 / 1)	3 (5 / 1)	0.97	-0.1	inhalation	84	180 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	-	3.1 (5 / 1)	2.8 (5 / 1)	0.9	-0.3	inhalation	84	90 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	-	3.1 (5 / 1)	2.8 (5 / 1)	0.9	-0.3	inhalation	84	45 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	+	6.9 (6 / 1)	25.3 (6 / 1)	3.67	18.4	inhalation	336	360 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	+	7.3 (6 / 1)	14.1 (6 / 1)	1.93	6.8	inhalation	336	180 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	-	5 (5 / 1)	8.7 (4 / 1)	1.74	3.7	inhalation	84	90 mg/m ³	3	Recio <i>et al.</i> (2004)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	–	7.3 (6 / 1)	9.3 (6 / 1)	1.27	2	inhalation	336	90 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	–	6.6 (6 / 1)	7.2 (5 / 1)	1.09	0.6	inhalation	168	90 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	–	6.6 (6 / 1)	8.2 (6 / 1)	1.24	1.6	inhalation	168	180 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	–	4.5 (6 / 1)	6 (5 / 1)	1.33	1.5	inhalation	168	180 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	–	4.2 (4 / 1.8)	7.8 (4 / 1)	1.86	3.6	inhalation	28	2 500	14	Sisk <i>et al.</i> (1997)
	Big Blue [®] mouse	–	5 (5 / 1)	4.1 (5 / 1)	0.82	–0.9	inhalation	84	45 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	–	3 (4 / 0.8)	12.4 (4 / 0.7)	4.13	9.4	inhalation	28	2 500	42	Sisk <i>et al.</i> (1997)
	Big Blue [®] mouse	–	3 (4 / 0.8)	2.8 (4 / 0.8)	0.93	–0.2	inhalation	28	1 250	42	Sisk <i>et al.</i> (1997)
	Big Blue [®] mouse	–	3 (4 / 0.8)	2.3 (3 / 0.6)	0.77	–0.7	inhalation	28	625	42	Sisk <i>et al.</i> (1997)
	Big Blue [®] mouse	–	3.4 (2 / 0.4)	2.9 (3 / 0.7)	0.85	–0.5	inhalation	28	2 500	42	Sisk <i>et al.</i> (1997)
	Big Blue [®] mouse	–	4.2 (4 / 1.8)	5.4 (4 / 1.1)	1.29	1.2	inhalation	28	2 500	42	Sisk <i>et al.</i> (1997)
	Big Blue [®] mouse	–	2.5 (4 / 1.1)	4.7 (4 / 1)	1.88	2.2	inhalation	28	2 500	42	Sisk <i>et al.</i> (1997)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	-	3 (4 / 1.2)	4.4 (4 / 1.2)	1.47	1.4	inhalation	28	2 500	14	Sisk <i>et al.</i> (1997)
	Big Blue [®] mouse	+	6.2 (4 / 1.8)	9.1 (4 / 1.3)	1.47	2.9	inhalation	28	2 500	42	Sisk <i>et al.</i> (1997)
	Big Blue [®] mouse	-	6.6 (6 / 1)	10.5 (5 / 1)	1.59	3.9	inhalation	168	360 mg/m ³	3	Recio <i>et al.</i> (2004)
	Big Blue [®] mouse	-	2.5 (4 / 0.8)	2.5 (3 / 1.7)	1	0	inhalation	28	2 500	14	Sisk <i>et al.</i> (1997)
Ethylmethanesulphonate (EMS)	Muta TM Mouse	-	5.5 (8 / 3)	6.9 (2 / 0.3)	1.25	1.4	ip	1	250	14	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	-	5.6 (5 / 0.5)	6.4 (5 / 0.5)	1.14	0.8	ip	1	250	100	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	+	4.1 (8 / 1.2)	12.1 (2 / 0.3)	2.95	8	ip	1	250	0	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	-	4.1 (8 / 1.2)	6.9 (2 / 0.3)	1.68	2.8	ip	1	250	14	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	-	4.8 (6 / 1.7)	3.4 (2 / 0.3)	0.71	-1.4	ip	1	250	1	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	-	4.8 (6 / 1.7)	7.8 (2 / 0.3)	1.63	3	ip	1	250	14	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	-	5.5 (8 / 3)	5.3 (2 / 0.6)	0.96	-0.2	ip	1	250	1	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	+	3.7 (2 / 0.5)	20.6 (2 / 0.5)	5.57	16.9	ip	1	400	7	Suzuki, Hayashi and Sofuni (1994)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.7 (2 / 0.5)	6.6 (2 / 0.5)	1.78	2.9	ip	1	400	7	Suzuki, Hayashi and Sofuni (1994)
	Muta TM Mouse	-	3.1 (8 / 2.4)	4.2 (3 / 0.7)	1.35	1.1	gavage	1	100	14	Cosentino and Heddle (1999a)
	Muta TM Mouse	-	3.2 (5 / 0.5)	2.9 (2 / 0.2)	0.91	-0.3	ip	1	250	0	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	-	3.2 (3 / 2.2)	5.7 (2 / 0.5)	1.78	2.5	ip	1	400	7	Suzuki <i>et al.</i> (1997a)
	Muta TM Mouse	+	3.7 (3 / 3.2)	17.8 (2 / 0.5)	4.81	14.1	ip	1	400	7	Suzuki <i>et al.</i> (1997a)
	Muta TM Mouse	-	3.7 (3 / 3.2)	6.7 (1 / 0.5)	1.81	3	ip	1	200	7	Suzuki <i>et al.</i> (1997a)
	Muta TM Mouse	-	3.1 (8 / 2.4)	3.3 (4 / 0.7)	1.06	0.2	gavage	1	50	14	Cosentino and Heddle (1999a)
	Muta TM Mouse	inc.	4.1 (8 / 1.2)	10.5 (1 / 0.1)	2.56	6.4	ip	1	250	1	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	+	3.7 (5 / 0.5)	7.5 (7 / 0.7)	2.03	3.8	ip	1	250	7	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	-	3.1 (8 / 2.4)	5.9 (4 / 0.8)	1.9	2.8	gavage	1	250	14	Cosentino and Heddle (1999a)
Etoposide	<i>lacZ</i> plasmid mouse	-	10.2 (2 / 0.7)	10.1 (2 / 1.1)	0.99	-0.1	ip	5	125	3	unpublished
	<i>lacZ</i> plasmid mouse	-	11.9 (2 / 0.6)	14 (2 / 0.9)	1.18	2.1	ip	5	125	35	unpublished

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	–	11.7 (1 / 0.3)	10.7 (2 / 0.5)	0.91	–1	ip	5	125	3	unpublished
	<i>lacZ</i> plasmid mouse	–	11.7 (1 / 0.3)	6.7 (2 / 0.6)	0.57	–5	ip	5	125	35	unpublished
	<i>lacZ</i> plasmid mouse	–	7.8 (3 / 1)	9.7 (3 / 0.9)	1.24	1.9	ip	5	125	35	unpublished
	<i>lacZ</i> plasmid mouse	–	10.2 (2 / 0.7)	9.9 (2 / 0.6)	0.97	–0.3	ip	5	125	35	unpublished
	<i>lacZ</i> plasmid mouse	–	11.7 (1 / 0.3)	9.5 (2 / 1)	0.81	–2.2	ip	5	125	14	unpublished
	<i>lacZ</i> plasmid mouse	–	7.8 (3 / 1)	12.1 (3 / 0.6)	1.55	4.3	ip	5	125	3	unpublished
	Muta TM Mouse	–	2.9 (6 / 6.2)	3.9 (6 / 1.8)	1.34	1	ip	1	1	14	Tinwell, Lefevre and Ashby (1998)
	<i>lacZ</i> plasmid mouse	–	11.9 (2 / 0.6)	14.3 (2 / 0.8)	1.2	2.4	ip	5	125	14	unpublished
	<i>lacZ</i> plasmid mouse	–	11.9 (2 / 0.6)	13.5 (2 / 0.7)	1.13	1.6	ip	5	125	3	unpublished
	<i>lacZ</i> plasmid mouse	–	7.8 (3 / 1)	7.6 (4 / 1.4)	0.97	–0.2	ip	5	125	14	unpublished
	<i>lacZ</i> plasmid mouse	–	10.2 (2 / 0.7)	14.1 (2 / 0.5)	1.38	3.9	ip	5	125	14	unpublished
Eugenol	Muta TM Mouse	–	7.1 (4 / 1.4)	6.4 (4 / 1.3)	0.9	–0.7	diet	58	27 840	0	Rompelberg <i>et al.</i> (1996)
<i>Fasciola hepatica</i>	Big Blue [®]	+	2.1 (6 / 1.6)	1.7 (7 / 1.7)	0.81	–0.4	gavage	1	2	23	Gentile <i>et al.</i>

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	mouse										(1998)
Ferric nitrilotriacetate	<i>gpt</i> delta (<i>gpt</i>)	+	5.6 (3 / -)	13.7 (3 / -)	2.45	8.1	ip	7	19	2	Jiang <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	-	5.6 (3 / -)	7.9 (3 / -)	1.41	2.3	ip	14	44	2	Jiang <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	-	5.6 (3 / -)	6.2 (3 / -)	1.11	0.6	ip	21	69	2	Jiang <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	+	7.5 (3 / -)	13.5 (3 / -)	1.8	6	ip	7	19	2	Jiang <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	-	7.5 (3 / -)	9.6 (3 / -)	1.28	2.1	ip	21	69	2	Jiang <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	-	7.5 (3 / -)	9.1 (3 / -)	1.21	1.6	ip	14	44	2	Jiang <i>et al.</i> (2006)
Flumequine	<i>gpt</i> delta (Spi)	-	0.33 (5 / 7.587)	0.48 (5 / 5.477)	1.45	0.15	diet	91	69 433	0	Kuroiwa <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.8 (5 / 3.378)	1.01 (5 / 6.126)	1.26	0.21	diet	91	53 690	0	Kuroiwa <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.46 (5 / 5.166)	0.65 (5 / 6.864)	1.41	0.19	diet	91	69 433	0	Kuroiwa <i>et al.</i> (2007)
	<i>gpt</i> delta (Spi)	-	0.4 (5 / 4.932)	0.38 (5 / 5.351)	0.95	-0.02	diet	91	53 690	0	Kuroiwa <i>et al.</i> (2007)
Folic acid	Muta TM Mouse	-	2.9 (6 / 3.5)	2.1 (7 / 5)	0.72	-0.8	tp				Trentin, Moody and Heddle (1998)
	Muta TM Mouse	-	2.9 (6 / 3.5)	2.2 (5 / 0.4)	0.76	-0.7	tp				Trentin, Moody and Heddle (1998)
	Muta TM Mouse	-	2.9 (6 / 3.5)	2.2 (2 / 0.9)	0.76	-0.7	tp				Trentin, Moody and Heddle (1998)
	Muta TM Mouse	-	1.9 (6 / 0.5)	1.9 (9 / 1.1)	1	0	tp				Trentin, Moody and Heddle (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	1.9 (6 / 0.5)	1.7 (4 / 0.4)	0.89	–0.2	tp				Trentin, Moody and Heddle (1998)
	Muta TM Mouse	–	1.9 (6 / 0.5)	1 (2 / 0.2)	0.53	–0.9	tp				Trentin, Moody and Heddle (1998)
	Muta TM Mouse	–	1.9 (6 / 0.5)	1.6 (8 / 0.7)	0.84	–0.3	tp				Trentin, Moody and Heddle (1998)
	Muta TM Mouse	–	2.9 (6 / 3.5)	2.9 (4 / 3.1)	1	0	tp				Trentin, Moody and Heddle (1998)
Fructose	Big Blue [®] rat <i>cII</i>	–	22 (13 / –)	29 (12 / –)	1.32	7	diet	35	700 g/kg	0	Hansen <i>et al.</i> (2008)
	Big Blue [®] rat <i>cII</i>	–	22 (13 / –)	31 (12 / –)	1.41	9	diet	35	700 g/kg	0	Hansen <i>et al.</i> (2008)
Gamma rays	Big Blue [®] mouse	–	2.4 (43 / –)	2.8 (12 / –)	1.17	0.4	whole-body irradiation of male parents	1	2		Luke, Riches and Bryant (1997)
	Big Blue [®] mouse	–	10.6 (7 / 1.4)	15.3 (7 / 1.5)	1.44	4.7	whole-body irradiation	1	1 Gy	35	Hoyes <i>et al.</i> (1998)
	Big Blue [®] mouse	–	17.1 (7 / 1.3)	26.4 (7 / 1.4)	1.54	9.3	whole-body irradiation	1	1 Gy	35	Hoyes <i>et al.</i> (1998)
	Big Blue [®] mouse	+	6.7 (6 / 1)	31.5 (7 / 1.2)	4.7	24.8	whole-body irradiation	1	1 Gy	35	Hoyes <i>et al.</i> (1998)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.8 (2 / 0.2)	12.6 (2 / 0.1)	3.32	8.8	whole-body irradiation	5	7.5 Gy	9	Takahashi, Kubota and Sato (1998)
	Big Blue [®] mouse	-	2.7 (1 / 0.3)	5.3 (2 / 0.1)	1.96	2.6	whole-body irradiation	1	0.1 Gy	7	Winegar <i>et al.</i> (1994)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.23 (3 / -)	0.77 (3 / -)	3.3	0.54	whole-body irradiation	1	10 Gy	2	Masumura <i>et al.</i> (2002)
	<i>gpt</i> delta (Spi)	-	0.22 (3 / -)	0.3 (3 / -)	1.4	0.09	whole-body irradiation	1	10 Gy	2	Masumura <i>et al.</i> (2002)
	Big Blue [®] mouse	+	2.7 (1 / 0.3)	15.9 (2 / 0.3)	5.89	13.2	whole-body irradiation	1	14 Gy	2	Winegar <i>et al.</i> (1994)
	Big Blue [®] mouse	+	2.7 (1 / 0.3)	15.6 (2 / 0.5)	5.78	12.9	whole-body irradiation	1	3 Gy	7	Winegar <i>et al.</i> (1994)
	Big Blue [®] mouse	+	2.7 (1 / 0.3)	22.9 (2 / 0.2)	8.48	20.2	whole-body irradiation	1	1 Gy	14	Winegar <i>et al.</i> (1994)
	Muta TM Mouse	+	3.8 (2 / 0.3)	8.5 (2 / 0.3)	2.24	4.7	whole-body irradiation	5	7.5 Gy	9	Takahashi, Kubota and Sato (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	–	2.7 (1 / 0.3)	5.4 (2 / 0.2)	2	2.7	whole-body irradiation	1	0.1 Gy	14	Winegar <i>et al.</i> (1994)
	Big Blue [®] mouse	–	4.6 (2 / 0.525)	5 (2 / 0.52)	1.09	0.4	irradiation	1	3.5 Gy	28	Larsen <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	?	– (– / –)	2 (1 / 1.4)			whole-body irradiation	1	5 Gy	3	Nohmi <i>et al.</i> (1996)
	<i>gpt</i> delta (Spi)	?	– (– / –)	1.2 (1 / 1.5)			whole-body irradiation	1	5 Gy	3	Nohmi <i>et al.</i> (1996)
	<i>gpt</i> delta (Spi)	?	– (– / –)	1.4 (1 / 0.7)			whole-body irradiation	1	5 Gy	3	Nohmi <i>et al.</i> (1996)
	Big Blue [®] mouse	+	2.4 (43 / –)	4.3 (5 / –)	1.79	1.9	whole-body irradiation of male parents	1	4		Luke, Riches and Bryant (1997)
	Muta TM Mouse	–	3.6 (2 / 0.3)	6.6 (2 / 0.2)	1.83	3	whole-body irradiation	5	7.5 Gy	9	Takahashi, Kubota and Sato (1998)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	2.4 (43 / -)	2.9 (19 / -)	1.21	0.5	whole-body irradiation of male parents	1	1		Luke, Riches and Bryant (1997)
	Big Blue [®] mouse	+	2.7 (1 / 0.3)	11.6 (2 / 0.3)	4.3	8.9	whole-body irradiation	1	1 Gy	7	Winegar <i>et al.</i> (1994)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.81 (6 / -)	0.87 (6 / -)	1.07	6.00 E-02	irradiation	31	0.34 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (Spi)	-	0.411 (6 / 18.25)	0.409 (6 / 14.67)	1	-0.002	irradiation	31	0.68 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (Spi)	-	0.411 (6 / 18.25)	0.465 (6 / 13.12)	1.13	0.054	irradiation	31	1.02 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.423 (6 / 8.274)	0.469 (6 / 6.823)	1.11	0.046	irradiation	31	0.34 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.423 (6 / 8.274)	0.206 (6 / 8.252)	0.49	-0.217	irradiation	31	0.68 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.423 (6 / 8.274)	0.273 (6 / 9.89)	0.65	-0.15	irradiation	31	1.02 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.81 (6 / -)	0.68 (6 / -)	0.84	-0.13	irradiation	31	1.02 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (Spi)	-	0.411 (6 / 18.25)	0.506 (6 / 11.86)	1.23	0.095	irradiation	31	0.34 Gy	0	Ikeda <i>et al.</i> (2007)
	Big Blue [®] mouse	-	4.72 (3 / 0.212)	3.29 (5 / 0.365)	0.7	-1.43	irradiation	90	3 Gy	0	Wickliffe <i>et al.</i> (2003)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	–	2.4 (43 / –)	2.2 (15 / –)	0.92	–0.2	whole-body irradiation of male parents	1	0.1		Luke, Riches and Bryant (1997)
Gamma rays + NNK	<i>gpt</i> delta (<i>gpt</i>)	–	0.81 (6 / –)	0.8 (6 / –)	0.99	–0.01	irradiation	31	0.68 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (Spi)	–	0.411 (6 / 18.25)	0.547 (6 / 8.775)	1.33	0.136	irradiation	31	0.34 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.81 (6 / –)	10.1 (6 / –)	12.47	9.29	irradiation	31	0.68 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.81 (6 / –)	10.5 (6 / –)	12.96	9.69	irradiation	31	0.34 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.423 (6 / 8.274)	1.718 (6 / 6.345)	4.06	1.295	irradiation + diet	31	1.02 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.423 (6 / 8.274)	1.518 (6 / 5.468)	3.59	1.095	irradiation + diet	31	0.68 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.423 (6 / 8.274)	2.068 (6 / 5.609)	4.89	1.645	irradiation + diet	31	0.34 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.81 (6 / –)	12.8 (6 / –)	15.8	11.99	irradiation	31	1.02 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (Spi)	–	0.411 (6 / 18.25)	0.539 (6 / 8.349)	1.31	0.128	irradiation	31	1.02 Gy	0	Ikeda <i>et al.</i> (2007)
	<i>gpt</i> delta (Spi)	–	0.411 (6 / 18.25)	0.536 (6 / 8.022)	1.3	0.125	irradiation	31	0.68 Gy	0	Ikeda <i>et al.</i> (2007)
Genistein	Big Blue [®] rat	–	1.74 (5 / 0.986)	3.42 (5 / 0.928)	1.97	1.68	diet	112	11 200	112	Manjanatha <i>et al.</i> (2005)
	Big Blue [®] rat	–	2.95 (5 / –)	2.7 (5 / –)	0.92	–0.25	diet	112	9 856	0	Manjanatha <i>et al.</i> (2006a)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	–	2.95 (5 / –)	3.42 (5 / –)	1.16	0.47	diet	112	2 464	0	Manjanatha <i>et al.</i> , 2006a)
	Big Blue [®] rat	–	1.74 (5 / 0.986)	3.78 (5 / 0.933)	2.17	2.04	diet	112	2 800	112	Manjanatha <i>et al.</i> (2005)
Glass wool fibres	Big Blue [®] rat	–	3.11 (5 / 1.644)	3.87 (5 / 1.725)	1.24	0.76	intratracheal	1	8	28	Topinka <i>et al.</i> (2006b)
	Big Blue [®] rat	–	3.51 (5 / 1.292)	4.02 (5 / 1.416)	1.15	0.51	intratracheal	28	30	112	Topinka <i>et al.</i> (2006a)
	Big Blue [®] rat	–	3.36 (5 / 1.654)	4.89 (5 / 1.488)	1.46	1.53	intratracheal	1	8	112	Topinka <i>et al.</i> (2006a)
	Big Blue [®] rat	–	3.77 (5 / 1.925)	4.65 (5 / 1.814)	1.23	0.88	intratracheal	28	32	28	Topinka <i>et al.</i> (2006b)
	Big Blue [®] rat	–	3.36 (5 / 1.654)	4.09 (5 / 1.537)	1.22	0.73	intratracheal	1	4	112	Topinka <i>et al.</i> (2006a)
	Big Blue [®] rat	–	3.11 (5 / 1.644)	3.52 (5 / 1.563)	1.13	0.41	intratracheal	1	4	28	Topinka <i>et al.</i> (2006b)
	Big Blue [®] rat	–	3.11 (5 / 1.644)	3.52 (5 / 1.563)	1.13	0.41	intratracheal	1	4	28	Topinka <i>et al.</i> (2006a)
	Big Blue [®] rat	–	3.11 (5 / 1.644)	3.87 (5 / 1.725)	1.24	0.76	intratracheal	1	8	28	Topinka <i>et al.</i> (2006a)
	Big Blue [®] rat	–	3.77 (5 / 1.925)	4.65 (5 / 1.814)	1.23	0.88	intratracheal	28	30	28	Topinka <i>et al.</i> (2006a)
Glass wool fibres + B(a)P	Big Blue [®] rat	+	3.11 (5 / 1.644)	15.19 (3 / 0.597)	4.88	12.08	intratracheal	1	8	28	Topinka <i>et al.</i> (2006b)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	+	3.77 (5 / 1.925)	11.45 (3 / 0.93)	3.04	7.68	intratracheal	28	32	28	Topinka <i>et al.</i> (2006b)
	Big Blue [®] rat	+	3.11 (5 / 1.644)	9.26 (3 / 0.931)	2.98	6.15	intratracheal	1	4	28	Topinka <i>et al.</i> (2006b)
Glucose	Big Blue [®] rat <i>cII</i>	-	22 (13 / -)	25 (12 / -)	1.14	3	diet	35	700 g/kg	0	Hansen <i>et al.</i> (2008)
	Big Blue [®] rat <i>cII</i>	-	22 (13 / -)	35 (12 / -)	1.59	13	diet	35	700 g/kg	0	Hansen <i>et al.</i> (2008)
Glycidamide	Big Blue [®] mouse <i>cII</i>	+	2.84 (7 / 2.204)	6.72 (6 / 1.85)	2.37	3.88	drinking water	28	2 464	21	Manjanatha <i>et al.</i> (2006b)
	Big Blue [®] mouse <i>cII</i>	-	2.65 (7 / 2.013)	3.35 (6 / 2.31)	1.26	0.7	drinking water	28	980	21	Manjanatha <i>et al.</i> (2006b)
	Big Blue [®] mouse <i>cII</i>	-	2.84 (7 / 2.204)	2.35 (6 / 1.47)	0.83	-0.49	drinking water	28	700	21	Manjanatha <i>et al.</i> (2006b)
	Big Blue [®] mouse <i>cII</i>	+	2.65 (7 / 2.013)	6.02 (6 / 2.275)	2.27	3.37	drinking water	28	3 108	21	Manjanatha <i>et al.</i> (2006b)
Green tea	Big Blue [®] rat	-	7 (5 / -)	6.4 (3 / -)	0.91	-0.6	drinking water	14	33 600	14	de Boer <i>et al.</i> (2004)
Heavy-ion radiation	<i>gpt</i> delta (Spi)	+	0.22 (3 / -)	0.74 (3 / -)	3.4	0.53	whole-body irradiation	1	10 Gy	2	Masumura <i>et al.</i> (2002)
	<i>gpt</i> delta (Spi)	-	0.24 (3 / -)	0.26 (3 / -)	1.1	0.02	whole-body irradiation	1	10 Gy	2	Masumura <i>et al.</i> (2002)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>gpt</i> delta (Spi)	+	0.26 (3 / -)	0.73 (3 / -)	2.8	0.47	whole-body irradiation	1	10 Gy	2	Masumura <i>et al.</i> (2002)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.23 (3 / -)	0.37 (3 / -)	1.6	0.14	whole-body irradiation	1	10 Gy	2	Masumura <i>et al.</i> (2002)
	<i>gpt</i> delta (Spi)	+	0.18 (3 / -)	0.5 (3 / -)	2.8	0.32	whole-body irradiation	1	10 Gy	2	Masumura <i>et al.</i> (2002)
Heptachlor	Big Blue [®] mouse	-	10 (3 / 0.5)	25 (3 / 0.3)	2.5	15	diet	120	144	0	Gunz, Shephard and Lutz (1993)
	Big Blue [®] mouse	-	10 (3 / 0.5)	14 (3 / 0.3)	1.4	4	diet	120	288	0	Gunz, Shephard and Lutz (1993)
Hexachlorobutadiene	Muta TM Mouse	-	8 (7 / 6.1)	8.2 (7 / 5.3)	1.03	0.2	gavage	5	100	55	unpublished
	Muta TM Mouse	+	4.3 (8 / 3.4)	11.7 (8 / 3.9)	2.72	7.4	gavage	5	60	5	unpublished
	Muta TM Mouse	+	4.3 (8 / 3.4)	11.7 (9 / 3.8)	2.72	7.4	gavage	5	100	5	unpublished
	Muta TM Mouse	-	6.6 (9 / 3.8)	11.6 (10 / 3.5)	1.76	5	gavage	5	60	10	unpublished
	Muta TM Mouse	-	6.6 (9 / 3.8)	12.1 (9 / 3.5)	1.83	5.5	gavage	5	100	10	unpublished
	Muta TM Mouse	-	6.2 (7 / 3.1)	6 (9 / 3.4)	0.97	-0.2	gavage	5	60	55	unpublished
	Muta TM Mouse	-	6.6 (10 / 4.4)	11.4 (10 / 4.1)	1.73	4.8	gavage	5	60	17	unpublished
	Muta TM Mouse	-	6.6 (10 / 4.4)	7.9 (9 / 3.4)	1.2	1.3	gavage	5	100	17	unpublished
	Muta TM Mouse	-	6.2 (7 / 3.1)	9.4 (8 / 2.9)	1.52	3.2	gavage	5	100	55	unpublished
	Muta TM Mouse	-	8 (7 / 6.1)	8.8 (9 / 6.2)	1.1	0.8	gavage	5	60	55	unpublished
	Muta TM Mouse	-	6.6 (7 / 7.1)	7.9 (6 / 4.4)	1.2	1.3	gavage	5	100	20	unpublished

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	7.2 (8 / 5.8)	10.5 (8 / 7.1)	1.46	3.3	gavage	5	60	10	unpublished
	Muta TM Mouse	-	6.6 (7 / 3)	6.6 (5 / 2.5)	1	0	gavage	5	100	20	unpublished
	Muta TM Mouse	-	6.6 (7 / 3)	6 (9 / 3.8)	0.91	-0.6	gavage	5	60	20	unpublished
	Muta TM Mouse	-	5 (7 / 2.5)	8.9 (6 / 2.3)	1.78	3.9	gavage	5	100	10	unpublished
	Muta TM Mouse	-	5 (7 / 2.5)	6.2 (7 / 2.9)	1.24	1.2	gavage	5	60	10	unpublished
	Muta TM Mouse	-	4.4 (7 / 2.5)	4.5 (7 / 3.4)	1.02	0.1	gavage	5	100	55	unpublished
	Muta TM Mouse	-	4.4 (7 / 2.5)	3.8 (9 / 3.6)	0.86	-0.6	gavage	5	60	55	unpublished
	Muta TM Mouse	-	5.2 (7 / 3.2)	4.2 (6 / 2.9)	0.81	-1	gavage	5	100	20	unpublished
	Muta TM Mouse	-	5.2 (7 / 3.2)	4.7 (8 / 3.3)	0.9	-0.5	gavage	5	60	20	unpublished
	Muta TM Mouse	-	5.7 (8 / 4.1)	5.3 (6 / 2.6)	0.93	-0.4	gavage	5	100	10	unpublished
	Muta TM Mouse	-	5.7 (8 / 4.1)	5.1 (7 / 3.9)	0.89	-0.6	gavage	5	60	10	unpublished
	Muta TM Mouse	-	6.6 (7 / 7.1)	8.4 (9 / 7.2)	1.27	1.8	gavage	5	60	20	unpublished
	Muta TM Mouse	-	7.2 (8 / 5.8)	9.4 (6 / 5.5)	1.31	2.2	gavage	5	100	10	unpublished
Hexavalent chromium	Muta TM Mouse	-	4.6 (5 / 0.7)	3.9 (5 / 7.3)	0.85	-0.7	ip	1	40	7	Itoh and Shimada (1998)
	Big Blue [®] mouse	-	2.6 (4 / 0.5)	4.1 (4 / 0.5)	1.58	1.5	intratracheal	1	1.7	28	Cheng, Liu and Dixon (1998)
	Muta TM Mouse	+	3.6 (3 / 1)	7.2 (2 / 0.9)	2	3.6	ip	2	80	7	Itoh and Shimada (1997)
	Muta TM Mouse	+	5.1 (5 / 2.3)	10.4 (5 / 1.7)	2.04	5.3	ip	1	40	7	Itoh and Shimada (1998)
	Muta TM Mouse	-	5.1 (5 / 2.3)	4.3 (5 / 0.7)	0.84	-0.8	ip	1	40	1	Itoh and Shimada (1998)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	4.6 (5 / 0.7)	7.7 (5 / 5)	1.67	3.1	ip	1	40	1	Itoh and Shimada (1998)
	Big Blue [®] mouse	+	2.6 (4 / 0.5)	12.5 (4 / 0.4)	4.81	9.9	intratracheal	1	6.8	28	Cheng, Liu and Dixon (1998)
	Big Blue [®] mouse	+	2.6 (4 / 0.5)	7.7 (4 / 0.4)	2.96	5.1	intratracheal	1	3.4	28	Cheng, Liu and Dixon (1998)
	Big Blue [®] mouse	-	3.4 (3 / 0.319)	4.6 (3 / 0.263)	1.35	1.2	intratracheal	1	6.75	7	Cheng <i>et al.</i> (2000)
	Big Blue [®] mouse	+	3.4 (3 / 0.319)	8.8 (3 / 0.453)	2.59	5.4	intratracheal	1	6.75	14	Cheng <i>et al.</i> (2000)
	Big Blue [®] mouse	+	3.4 (3 / 0.319)	14.6 (3 / 0.316)	4.29	11.2	intratracheal	1	6.75	28	Cheng <i>et al.</i> (2000)
	Big Blue [®] mouse	+	2.6 (4 / 0.492)	12.45 (4 / 0.361)	4.79	9.85	intratracheal	1	6.75	28	Cheng <i>et al.</i> (2000)
	Big Blue [®] mouse	-	2 (4 / 0.405)	3.8 (4 / 0.65)	1.9	1.8	intratracheal	1	6.75	28	Cheng <i>et al.</i> (2000)
	Muta TM Mouse	-	2.9 (3 / 1)	3.2 (3 / 0.9)	1.1	0.3	ip	2	80	7	Itoh and Shimada (1997)
	Big Blue [®] mouse	+	1.8 (4 / 0.383)	6.7 (4 / 0.456)	3.72	4.9	intratracheal	1	6.75	28	Cheng <i>et al.</i> (2000)
High-energy charged particle (Fe)	<i>lacZ</i> plasmid mouse	+	3.5 (4 / 1.7)	5.6 (4 / 1.5)	1.6	2.1	irradiation	1	1 Gy	56	Chang <i>et al.</i> (2001b)
	<i>lacZ</i> plasmid mouse	+	2.5 (3 / 2.5)	5.9 (3 / 2)	2.36	3.4	irradiation	1	1 Gy	56	Chang <i>et al.</i> (2001b)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	–	2.5 (3 / 2.5)	4.2 (4 / 3.5)	1.68	1.7	irradiation	1	1 Gy	28	Chang <i>et al.</i> (2001b)
	<i>lacZ</i> plasmid mouse	–	2.5 (3 / 2.5)	2.9 (4 / 2.8)	1.16	0.4	irradiation	1	1 Gy	7	Chang <i>et al.</i> (2001b)
	<i>lacZ</i> plasmid mouse	–	3.3 (6 / 2.5)	4 (3 / 1.5)	1.21	0.7	irradiation	1	1 Gy	7	Chang <i>et al.</i> (2001b)
	<i>lacZ</i> plasmid mouse	–	3.3 (6 / 2.5)	4.1 (3 / 2.1)	1.24	0.8	irradiation	1	1 Gy	14	Chang <i>et al.</i> (2001b)
	<i>lacZ</i> plasmid mouse	–	3.3 (6 / 2.5)	4.1 (4 / 2.2)	1.24	0.8	irradiation	1	1 Gy	56	Chang <i>et al.</i> (2001b)
	<i>lacZ</i> plasmid mouse	–	3.3 (6 / 2.5)	3.3 (4 / 2.4)	1	0	irradiation	1	1 Gy	112	Chang <i>et al.</i> (2001b)
	<i>lacZ</i> plasmid mouse	–	3.5 (4 / 1.7)	3.7 (3 / 1.6)	1.06	0.2	irradiation	1	1 Gy	14	Chang <i>et al.</i> (2001b)
	<i>lacZ</i> plasmid mouse	+	2.5 (3 / 2.5)	4.5 (3 / 1.7)	1.8	2	irradiation	1	1 Gy	112	Chang <i>et al.</i> (2001b)
	<i>lacZ</i> plasmid mouse	–	3.5 (4 / 1.7)	4.8 (1 / 0.3)	1.37	1.3	irradiation	1	1 Gy	112	Chang <i>et al.</i> (2001b)
	<i>lacZ</i> plasmid mouse	+	3.5 (4 / 1.7)	7.2 (3 / 1.1)	2.06	3.7	irradiation	1	1 Gy	7	Chang <i>et al.</i> (2001b)
High-fat diet	Big Blue [®] mouse <i>cII</i>	–	3 (7 / 1.707)	5 (8 / 1.99)	1.67	2	diet	133	nd	0	Hernandez and Heddle (2005)
	Big Blue [®] mouse	–	8.8 (5 / 0.5)	8.9 (7 / 0.8)	1.01	0.1	diet	35	nd	0	Zhang <i>et al.</i> (1996b)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse <i>cII</i>	–	0.8 (8 / 9.562)	0.9 (7 / 7.073)	1.13	0.1	diet	47	nd	0	Hernandez and Heddle (2005)
	Big Blue [®] mouse <i>cII</i>	–	2.4 (8 / 1.903)	2.1 (7 / 2.283)	0.88	–0.3	diet	47	nd	0	Hernandez and Heddle (2005)
	Big Blue [®] mouse <i>cII</i>	–	5.8 (9 / 0.826)	3.9 (5 / 0.644)	0.67	–1.9	diet	42	nd	0	Hernandez and Heddle (2005)
	Big Blue [®] mouse <i>cII</i>	–	2.8 (11 / 4.207)	6.4 (8 / 0.871)	2.29	3.6	diet	84	nd	0	Hernandez and Heddle (2005)
	Big Blue [®] mouse	–	8.8 (5 / 0.5)	9.4 (6 / 0.7)	1.07	0.6	diet	35	nd	0	Zhang <i>et al.</i> (1996b)
	Big Blue [®] mouse <i>cII</i>	–	4.6 (19 / 8.639)	3.3 (9 / 5.774)	0.72	–1.3	diet	84	nd	0	Hernandez and Heddle (2005)
	Big Blue [®] mouse <i>cII</i>	–	3.7 (10 / 3.806)	3.1 (8 / 4.55)	0.84	–0.6	diet	133	nd	0	Hernandez and Heddle (2005)
	Big Blue [®] mouse	–	11.5 (3 / 0.4)	13.3 (7 / 0.8)	1.16	1.8	diet	63	nd	0	Zhang <i>et al.</i> (1996b)
	Big Blue [®] mouse	–	11.5 (3 / 0.4)	12.3 (8 / 0.9)	1.07	0.8	diet	63	nd	0	Zhang <i>et al.</i> (1996b)
	Big Blue [®] mouse <i>cII</i>	–	2 (12 / 12.228)	2.5 (8 / 9.523)	1.25	0.5	diet	42	nd	0	Hernandez and Heddle (2005)
Hydrazine sulphate	Muta [™] Mouse	–	9.5 (5 / 2.9)	10.1 (5 / 2)	1.06	0.6	gavage	1	270	14	Douglas, Gingerich and Soper (1995)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	9.5 (5 / 2.9)	10.3 (4 / 2.6)	1.08	0.8	gavage	1	400	14	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	9.9 (5 / 2.3)	6.5 (4 / 1.7)	0.66	–3.4	gavage	1	400	56	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	9.9 (5 / 2.3)	6.6 (5 / 2.6)	0.67	–3.3	gavage	1	270	56	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	8.2 (5 / 3.2)	7.6 (4 / 1.7)	0.93	–0.6	gavage	1	400	14	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	8.2 (5 / 3.2)	6.6 (5 / 2.3)	0.8	–1.6	gavage	1	350	14	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	8.2 (5 / 3.2)	6.1 (5 / 1.9)	0.74	–2.1	gavage	1	270	14	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	8.2 (5 / 3.2)	7.5 (5 / 2.5)	0.91	–0.7	gavage	1	135	14	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	8.6 (5 / 1.7)	11.6 (4 / 1.3)	1.35	3	gavage	1	400	56	Douglas, Gingerich and Soper (1995)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	8.6 (5 / 1.7)	12.5 (5 / 2.3)	1.45	3.9	gavage	1	350	56	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	13.4 (5 / 2.1)	11.9 (4 / 3.1)	0.89	–1.5	gavage	1	400	56	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	8.6 (5 / 1.7)	8.8 (4 / 2.6)	1.02	0.2	gavage	1	135	56	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	10.3 (5 / 2.8)	11.3 (5 / 1.9)	1.1	1	gavage	1	135	14	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	9.5 (5 / 2.9)	12 (5 / 1.9)	1.26	2.5	gavage	1	350	14	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	9.9 (5 / 2.3)	5.4 (4 / 2.5)	0.55	–4.5	gavage	1	135	56	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	9.5 (5 / 2.9)	9.2 (5 / 2.9)	0.97	–0.3	gavage	1	135	14	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	13.4 (5 / 2.1)	17.3 (5 / 2.6)	1.29	3.9	gavage	1	350	56	Douglas, Gingerich and Soper (1995)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	13.4 (5 / 2.1)	13.4 (4 / 2)	1	0	gavage	1	270	56	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	13.4 (5 / 2.1)	14.6 (4 / 1.9)	1.09	1.2	gavage	1	135	56	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	10.3 (5 / 2.8)	9.8 (4 / 1.7)	0.95	–0.5	gavage	1	400	14	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	10.3 (5 / 2.8)	14 (5 / 2.2)	1.36	3.7	gavage	1	350	14	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	10.3 (5 / 2.8)	15 (5 / 2.3)	1.46	4.7	gavage	1	270	14	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	8.6 (5 / 1.7)	12.9 (5 / 3)	1.5	4.3	gavage	1	270	56	Douglas, Gingerich and Soper (1995)
	Muta TM Mouse	–	9.9 (5 / 2.3)	13.7 (5 / 3.6)	1.38	3.8	gavage	1	350	56	Douglas, Gingerich and Soper (1995)
Hydroxyurea	<i>lacZ</i> plasmid mouse	–	8.9 (3 / –)	13.7 (6 / –)	1.54	4.8	ip	1	1 000	75	Martus <i>et al.</i> (1999)
	<i>lacZ</i> plasmid mouse	+	6.6 (3 / –)	18.3 (6 / –)	2.77	11.7	ip	1	1 000	75	Martus <i>et al.</i> (1999)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Hydroxyurea + X-rays	<i>lacZ</i> plasmid mouse	+	6.7 (3 / -)	27.8 (6 / -)	4.15	21.1	ip	1	1 000	75	Martus <i>et al.</i> (1999)
	<i>lacZ</i> plasmid mouse	+	6.7 (3 / -)	63 (5 / -)	9.4	56.3	ip + whole-body irradiation	1	4 Gy	90	Martus <i>et al.</i> (1999)
	<i>lacZ</i> plasmid mouse	?	-(3 / -)	15.3 (5 / -)			ip + whole-body irradiation	1	4 Gy	90	Martus <i>et al.</i> (1999)
	<i>lacZ</i> plasmid mouse	-	8.9 (3 / -)	9.8 (5 / -)	1.1	0.9	ip + whole-body irradiation	1	4 Gy	90	Martus <i>et al.</i> (1999)
	<i>lacZ</i> plasmid mouse	+	6.6 (3 / -)	18.1 (5 / -)	2.74	11.5	ip + whole-body irradiation	1	4 Gy	90	Martus <i>et al.</i> (1999)
Hyperglycaemia	Big Blue [®] rat	+	2.2 (19 / -)	14.2 (17 / 0)	6.45	12					Lee, Reis and Eriksson (1999)
Isopropylmethane-sulphonate (iPMS)	Muta TM Mouse	-	0.53 (3 / 0.6)	1.8 (4 / 0.5)	3.4	1.27	ip	1	200	12	Katoh <i>et al.</i> (1994)
	Muta TM Mouse	-	0.53 (3 / 0.6)	1.5 (4 / 0.5)	2.83	0.97	ip	1	200	12	Katoh <i>et al.</i> (1994)
	Muta TM Mouse	-	0.52 (2 / 0.4)	2.2 (2 / 0.3)	4.23	1.68	ip	1	200	3	Katoh <i>et al.</i> (1994)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	0.52 (2 / 0.4)	2.8 (2 / 0.3)	5.38	2.28	ip	1	200	12	Katoh <i>et al.</i> (1994)
	Muta TM Mouse	-	0.53 (3 / 0.6)	2 (4 / 0.5)	3.77	1.47	ip	1	200	3	Katoh <i>et al.</i> (1994)
	Big Blue [®] mouse	+	1.1 (9 / 3.3)	3 (9 / 3.1)	2.73	1.9	ip	1	200	3	Provost <i>et al.</i> (1997)
	Big Blue [®] mouse	+	1.7 (5 / 1)	5.7 (4 / 0.5)	3.35	4	ip	1	200	3	Putman <i>et al.</i> (1997)
	Muta TM Mouse	+	2.4 (8 / 3)	18.1 (10 / 2)	7.54	15.7	ip	1	200	91	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	+	2.7 (10 / 3.9)	7.8 (8 / 2.2)	2.89	5.1	ip	1	200	25	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	+	3 (9 / 3.8)	11.8 (6 / 0.6)	3.93	8.8	ip	1	200	91	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	+	3.3 (10 / 4.1)	5.6 (7 / 1.9)	1.7	2.3	ip	1	200	25	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	+	9.5 (7 / 2.6)	23.1 (7 / 1.8)	2.43	13.6	ip	1	100	52	Liegibel and Schmezer (1997)
	Big Blue [®] mouse	+	7.2 (9 / 1.3)	9.6 (10 / 1.8)	1.33	2.4	ip	1	200	3	Gorelick <i>et al.</i> (1997)
	Muta TM Mouse	-	0.53 (3 / 0.6)	2.2 (4 / 0.5)	4.15	1.67	ip	1	200	3	Katoh <i>et al.</i> (1994)
	Big Blue [®] mouse	-	2.1 (10 / 2.6)	1.7 (10 / 3.3)	0.81	-0.4	ip	1	200	3	Provost <i>et al.</i> (1997)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Jervine	Muta TM Mouse	+	3 (-/-)	8.1 (1 / 0.1)	2.7	5.1	ip	3	600	8	Crawford and Myhr (1995)
	Muta TM Mouse	+	3 (-/-)	6 (1 / 0.3)	2	3	ip	3	600	8	Crawford and Myhr (1995)
Kojic acid	Muta TM Mouse	-	10.3 (10 / 8.137)	9.02 (8 / 8.748)	0.88	-1.28	gavage	28	44 800	7	Nohynek <i>et al.</i> (2004)
	Muta TM Mouse	-	10.3 (10 / 8.137)	8.97 (10 / 8.667)	0.87	-1.33	gavage	28	22 400	7	Nohynek <i>et al.</i> (2004)
Leucomalachite green	Big Blue [®] rat <i>cII</i>	-	45 (6 / 1.235)	46.7 (6 / 1.649)	1.04	1.7	diet	112	5 264	0	Mittelstaedt <i>et al.</i> (2004)
	Big Blue [®] rat	-	2.1 (6 / 1.5)	1.9 (6 / 3.5)	0.9	-0.2	diet	28	924	0	Culp <i>et al.</i> (2002)
	Big Blue [®] rat	-	2.1 (6 / 1.5)	2 (6 / 1.1)	0.95	-0.1	diet	28	1 820	0	Culp <i>et al.</i> (2002)
	Big Blue [®] rat	-	1.8 (6 / 1.6)	1.1 (6 / 1.3)	0.61	-0.7	diet	112	1 232	0	Culp <i>et al.</i> (2002)
	Big Blue [®] rat	-	1.8 (6 / 1.6)	2.2 (6 / 1.5)	1.2	0.4	diet	112	3 696	0	Culp <i>et al.</i> (2002)
	Big Blue [®] rat	-	1.8 (6 / 1.6)	3.6 (6 / 1.4)	2	1.8	diet	112	7 280	0	Culp <i>et al.</i> (2002)
	Big Blue [®] rat	-	2.6 (6 / 1.7)	2.6 (6 / 1.3)	1	0	diet	224	7 392	0	Culp <i>et al.</i> (2002)
	Big Blue [®] rat	-	2.6 (6 / 1.7)	3.8 (6 / 1.7)	1.5	1.2	diet	224	14 560	0	Culp <i>et al.</i> (2002)
	Big Blue [®] mouse <i>cII</i>	+	44.3 (6 / 1.526)	76 (6 / 1.524)	1.72	31.7	diet	112	7 952	0	Mittelstaedt <i>et al.</i> (2004)
Levofloxacin	Muta TM Mouse	-	2.6 (5 / 3)	2.9 (5 / 1.7)	1.12	0.3	ip	1	300	1	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	-	2.6 (5 / 3)	2.6 (5 / 2.9)	1	0	ip	1	600	1	Itoh, Miura and Shimada (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	2.6 (5 / 3)	3.2 (5 / 1.8)	1.23	0.6	ip	1	600	10	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	–	2.3 (4 / 1.3)	3 (5 / 1.9)	1.3	0.7	ip	1	300	1	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	–	1.7 (5 / 1.9)	1.5 (5 / 1.8)	0.88	–0.2	ip	1	300	1	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	–	1.7 (5 / 1.9)	1.8 (5 / 2.8)	1.06	0.1	ip	1	600	1	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	–	1.7 (5 / 1.9)	1 (5 / 2.4)	0.59	–0.7	ip	1	300	10	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	–	1.7 (5 / 1.9)	1.1 (5 / 1.5)	0.65	–0.6	ip	1	600	10	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	–	2.3 (4 / 1.3)	2 (5 / 1.8)	0.87	–0.3	ip	1	600	1	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	–	2.3 (4 / 1.3)	3.1 (5 / 2.3)	1.35	0.8	ip	1	600	10	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	–	4.9 (5 / 1.4)	4.5 (5 / 2)	0.92	–0.4	ip	1	300	10	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	–	4.9 (5 / 1.4)	5 (5 / 1.4)	1.02	0.1	ip	1	600	10	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	–	2.6 (5 / 3)	3.2 (5 / 2.4)	1.23	0.6	ip	1	300	10	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	–	2.3 (4 / 1.3)	2.9 (5 / 1.6)	1.26	0.6	ip	1	300	10	Itoh, Miura and Shimada (1998)
Malachite green	Big Blue [®]	–	44.3 (6 /	55 (6 / 1.655)	1.24	10.7	diet	112	8 736	0	Mittelstaedt <i>et al.</i>

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	mouse <i>cH</i>		1.526)								(2004)
Methyl bromide	Muta TM Mouse	-	6.6 (2 / 0.6)	4.6 (3 / 0.8)	0.7	-2	gavage	10	250	14	Pletsa <i>et al.</i> (1999)
	Muta TM Mouse	-	5 (4 / 1.8)	6.6 (4 / 1.8)	1.32	1.6	gavage	10	250	14	Pletsa <i>et al.</i> (1999)
Methyl clofenapate	Big Blue [®] mouse	-	5 (4 / 2.1)	6.2 (3 / 1.5)	1.24	1.2	gavage	9	225	10	Lefevre <i>et al.</i> (1994)
	Muta TM Mouse	-	6.4 (4 / 2)	5.2 (4 / 1.7)	0.81	-1.2	gavage	9	225	10	Lefevre <i>et al.</i> (1994)
Methyl clofenapate + DMN	Muta TM Mouse	+	6.4 (4 / 2)	25.5 (3 / 1.5)	3.98	19.1	gavage	9	225	10	Lefevre <i>et al.</i> (1994)
	Big Blue [®] mouse	+	5 (4 / 2.1)	12.3 (4 / 2.1)	2.46	7.3	gavage	9	225	10	Lefevre <i>et al.</i> (1994)
Methylmethane-sulphonate (MMS)	Big Blue [®] mouse	-	1.7 (5 / 1)	0.9 (5 / 0.7)	0.53	-0.8	ip	1	40	3	Putman <i>et al.</i> (1997)
	Muta TM Mouse	-	3.1 (8 / 2.4)	4.1 (4 / 0.7)	1.32	1	gavage	1	100	14	Cosentino and Heddle (1999a)
	Muta TM Mouse	-	3.2 (4 / 1.1)	3.4 (5 / 1.7)	1.06	0.2	ip	1	40	14	Suzuki <i>et al.</i> (1997b)
	Muta TM Mouse	+	1.2 (4 / 2)	1.6 (5 / 2.6)	1.33	0.4	ip	1	40	14	Suzuki <i>et al.</i> (1997b)
	Big Blue [®] mouse	-	2.1 (10 / 2.6)	2 (9 / 2.8)	0.95	-0.1	ip	1	40	3	Provost <i>et al.</i> (1997)
	Big Blue [®] mouse	-	1.1 (9 / 3.3)	1.5 (8 / 2.8)	1.36	0.4	ip	1	40	3	Provost <i>et al.</i> (1997)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	–	3.6 (3 / –)	3 (3 / 0.7)	0.83	–0.6	ip	5	100	1	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	–	4.2 (3 / 0.6)	3.6 (3 / 0.7)	0.86	–0.6	ip	5	100	8	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	–	4.6 (3 / 0.6)	6.1 (3 / 0.7)	1.33	1.5	ip	5	100	22	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	–	3.9 (3 / 0.8)	3.4 (3 / 0.7)	0.87	–0.5	ip	14	280	1	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	–	2.5 (3 / 0.7)	4.3 (2 / 0.6)	1.72	1.8	ip	21	420	1	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	–	5.1 (3 / 0.5)	2.3 (3 / 1)	0.45	–2.8	ip	5	100	1	Mirsalis <i>et al.</i> (1993)
	Big Blue [®] mouse	–	4 (3 / 0.6)	2.6 (3 / 1)	0.65	–1.4	ip	5	100	8	Mirsalis <i>et al.</i> (1993)
	Muta [™] Mouse	–	2.9 (5 / 1.6)	2.3 (5 / 1.2)	0.79	–0.6	ip	1	40	3	Suzuki <i>et al.</i> (1997b)
	Muta [™] Mouse	–	3.1 (8 / 2.4)	2.5 (4 / 0.3)	0.81	–0.6	gavage	1	50	14	Cosentino and Heddle (1999a)
	Big Blue [®] mouse	–	5.2 (8 / 0.3)	4.6 (8 / 0.2)	0.88	–0.6	ip	1	160	3	Sui <i>et al.</i> (1999)
	Muta [™] Mouse	–	3.1 (8 / 2.4)	5.8 (4 / 0.8)	1.87	2.7	gavage	1	150	14	Cosentino and Heddle (1999a)
	Muta [™] Mouse	+	2.8 (5 / 1.6)	4 (5 / 1.3)	1.43	1.2	ip	1	100	14	Tinwell, Lefevre and Ashby (1998)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.1 (5 / 1.9)	5.6 (6 / 1.9)	1.81	2.5	ip	1	100	14	Tinwell, Lefevre and Ashby (1998)
	Muta TM Mouse	+	2.8 (5 / 1.6)	5.2 (6 / 1.3)	1.86	2.4	ip	5	100	14	Tinwell, Lefevre and Ashby (1998)
	Muta TM Mouse	+	2.4 (6 / 1.6)	4.4 (6 / 1.2)	1.83	2	ip	1	20	14	Tinwell, Lefevre and Ashby (1998)
	Muta TM Mouse	+	2.9 (6 / 2.7)	4.4 (5 / 1.2)	1.52	1.5	ip	1	100	14	Tinwell, Lefevre and Ashby (1998)
	Muta TM Mouse	-	2.9 (6 / 2.6)	3.9 (6 / 2)	1.34	1	ip	5	100	14	Tinwell, Lefevre and Ashby (1998)
	Big Blue [®] mouse	-	2.6 (8 / 0.3)	3.9 (8 / 0.2)	1.5	1.3	ip	1	160	3	Sui <i>et al.</i> (1999)
	Muta TM Mouse	+	3.7 (5 / 0.5)	5.5 (6 / 0.6)	1.49	1.8	ip	1	60	7	Piegorsch <i>et al.</i> (1997)
	Big Blue [®] mouse	-	25.6 (5 / 0.2)	25 (5 / 0.1)	0.98	-0.6	ip	1	100	14	Tao, Urlando and Heddle (1993b)
	Muta TM Mouse	+	1.4 (5 / 2.4)	1.1 (5 / 4.3)	0.79	-0.3	ip	1	40	3	Suzuki <i>et al.</i> (1997b)
	Big Blue [®] mouse	-	3.4 (5 / 0.2)	4.7 (5 / 0.2)	1.38	1.3	ip	1	40	3	Winegar, Carr and Mirsalis (1997)
	Big Blue [®] mouse	-	3.1 (3 / 0.5)	3.8 (3 / 0.9)	1.23	0.7	ip	5	100	22	Mirsalis <i>et al.</i> (1993)
	Muta TM Mouse	-	2 (5 / 1.7)	1.8 (5 / 1.8)	0.9	-0.2	ip	1	80	7	Itoh, Miura and Shimada (1997)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	25.6 (5 / 0.2)	58.4 (5 / 0.2)	2.28	32.8	ip	10	1 000	14	Tao, Urlando and Heddle (1993b)
	Big Blue [®] mouse	-	7.2 (9 / 1.3)	8.1 (10 / 1.3)	1.13	0.9	ip	1	40	3	Gorelick <i>et al.</i> (1997)
	Muta TM Mouse	-	5.6 (5 / 0.5)	4.2 (4 / 0.4)	0.75	-1.4	ip	1	60	100	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	-	5 (5 / 0.5)	4.2 (11 / 1.1)	0.84	-0.8	ip	1	40	91	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	-	2 (5 / 1.7)	2.5 (5 / 1.6)	1.25	0.5	ip	1	80	3	Itoh, Miura and Shimada (1997)
	Muta TM Mouse	-	2.2 (5 / 1.6)	2.6 (5 / 2)	1.18	0.4	ip	1	80	10	Itoh, Miura and Shimada (1997)
	Muta TM Mouse	-	2.2 (5 / 1.6)	2.3 (5 / 2.3)	1.05	0.1	ip	1	80	14	Itoh, Miura and Shimada (1997)
	Muta TM Mouse	-	3.1 (5 / 2.6)	3.2 (5 / 1.3)	1.03	0.1	ip	1	80	3	Itoh, Miura and Shimada (1997)
	Muta TM Mouse	-	3.1 (5 / 2.6)	3.4 (5 / 2.9)	1.1	0.3	ip	1	80	7	Itoh, Miura and Shimada (1997)
	Muta TM Mouse	-	2.5 (5 / 1.3)	2.5 (5 / 1.4)	1	0	ip	1	80	10	Itoh, Miura and Shimada (1997)
	Muta TM Mouse	-	2.5 (5 / 1.3)	2.6 (5 / 1.3)	1.04	0.1	ip	1	80	14	Itoh, Miura and Shimada (1997)
	Muta TM Mouse	-	5.6 (5 / 2.7)	6.1 (5 / 3.1)	1.09	0.5	ip	1	80	10	Itoh, Miura and Shimada (1997)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	5.6 (5 / 2.7)	5.6 (5 / 2.3)	1	0	ip	1	80	14	Itoh, Miura and Shimada (1997)
	Muta TM Mouse	–	3.3 (10 / 4.1)	2.6 (10 / 3.8)	0.79	–0.7	ip	1	40	25	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	+	0.95 (5 / 0.5)	2.8 (10 / 1)	2.95	1.85	ip	1	40	14	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	–	2.9 (10 / 1.7)	2.9 (10 / 2.8)	1	0	ip	1	100	25	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	–	2.9 (10 / 1.7)	1.8 (10 / 2.9)	0.62	–1.1	ip	1	75	25	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	–	3.7 (10 / 3.4)	2.7 (10 / 4.4)	0.73	–1	ip	1	75	91	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	–	9.5 (7 / 2.6)	9.4 (8 / 2.7)	0.99	–0.1	ip	1	80	52	Liegibel and Schmezer (1997)
	Muta TM Mouse	–	3.7 (10 / 3.4)	3.3 (10 / 2.9)	0.89	–0.4	ip	1	100	91	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	–	2 (10 / 4.9)	2 (10 / 5.3)	1	0	ip	1	100	91	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	–	2 (10 / 4.9)	2.5 (10 / 5.6)	1.25	0.5	ip	1	75	91	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	–	2.3 (10 / 2.3)	2.2 (10 / 3.6)	0.96	–0.1	ip	1	100	25	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	–	2.3 (10 / 2.3)	1.7 (10 / 4)	0.74	–0.6	ip	1	75	25	Douglas <i>et al.</i> (1997)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	2.4 (8 / 3)	3.2 (11 / 3.4)	1.33	0.8	ip	1	40	91	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	-	2.7 (10 / 3.9)	2.6 (10 / 4.3)	0.96	-0.1	ip	1	40	25	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	-	3 (9 / 3.8)	3.3 (11 / 4.3)	1.1	0.3	ip	1	40	91	Douglas <i>et al.</i> (1997)
MMS + 4-AAF	Muta TM Mouse	+	2.8 (5 / 1.6)	7.4 (5 / 1.5)	2.64	4.6	ip + gavage	5	100	14	Tinwell, Lefevre and Ashby (1998)
MMS + DMN	Muta TM Mouse	+	2.4 (6 / 1.6)	15.9 (6 / 1.2)	6.63	13.5	ip + gavage	5	100	14	Tinwell, Lefevre and Ashby (1998)
	Muta TM Mouse	+	2.8 (5 / 1.6)	14 (4 / 0.4)	5	11.2	ip + gavage	5	100	14	Tinwell, Lefevre and Ashby (1998)
Metronidazole	Big Blue [®] mouse	-	8.3 (4 / 0.7)	6.2 (4 / 0.8)	0.75	-2.1	gavage	7	145	21	Touati <i>et al.</i> (2000)
	Big Blue [®] mouse	-	7.2 (- / -)	10.3 (3 / -)	1.43	3.1	gavage	5	200	21	Touati <i>et al.</i> (2000)
	Big Blue [®] mouse	-	10.6 (5 / 1)	10.6 (5 / 1)	1	0	gavage	7	145	21	Touati <i>et al.</i> (2000)
	Big Blue [®] mouse	-	7.2 (5 / 0.9)	8.5 (4 / 0.5)	1.18	1.3	gavage	7	145	21	Touati <i>et al.</i> (2000)
Mitomycin-C	Muta TM Mouse	-	3.1 (8 / 2.4)	3.1 (4 / 0.6)	1	0	gavage	1	2	14	Cosentino and Heddle (1999a)
	Muta TM Mouse	-	3.1 (8 / 2.4)	4.1 (4 / 0.7)	1.32	1	gavage	1	4	14	Cosentino and Heddle (1999a)
	<i>gpt</i> delta (Spi)	+	0.17 (4 / 7.3)	0.71 (3 / 9.4)	4.16	0.54	ip	1	4	3	unpublished

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>gpt</i> delta (Spi)	+	0.17 (4 / 7.3)	0.63 (4 / 13.2)	3.71	0.46	ip	1	4	7	unpublished
	<i>gpt</i> delta (Spi)	+	0.17 (4 / 7.3)	0.32 (3 / 9.3)	1.88	0.15	ip	1	4	14	unpublished
	<i>gpt</i> delta (Spi)	+	0.15 (4 / 9)	0.21 (3 / 11.6)	1.4	0.06	ip	1	4	28	unpublished
	<i>gpt</i> delta (Spi)	+	0.2 (4 / 16.1)	0.249 (3 / 10.5)	1.25	0.049	ip	1	4	3	unpublished
	<i>gpt</i> delta (Spi)	-	0.18 (4 / 34.5)	0.14 (4 / 11.5)	0.78	-0.04	ip	1	4	28	unpublished
	<i>gpt</i> delta (Spi)	+	0.2 (4 / 16.1)	0.481 (3 / 10.3)	2.41	0.281	ip	1	4	7	unpublished
	<i>gpt</i> delta (Spi)	+	0.2 (4 / 16.1)	0.53 (3 / 6.9)	2.65	0.33	ip	1	4	14	unpublished
	<i>gpt</i> delta (Spi)	+	0.15 (3 / 10.7)	0.4 (4 / 13.8)	2.67	0.25	ip	1	4	28	unpublished
	<i>gpt</i> delta (Spi)	-	0.12 (4 / 18.1)	0.13 (4 / 22.7)	1.08	0.01	ip	1	4	3	unpublished
	<i>gpt</i> delta (Spi)	-	0.12 (4 / 18.1)	0.146 (2 / 8.6)	1.22	0.026	ip	1	4	7	unpublished
	<i>gpt</i> delta (Spi)	-	0.12 (4 / 18.1)	0.085 (2 / 2.4)	0.71	-0.035	ip	1	4	14	unpublished
	<i>gpt</i> delta (Spi)	-	0.13 (3 / 11.1)	0.15 (5 / 18)	1.15	0.02	ip	1	2	14	Okada <i>et al.</i> (1999)
	Muta TM Mouse	-	3.7 (3 / 3.1)	2.6 (2 / 1.1)	0.7	-1.1	ip	1	2	7	Suzuki <i>et al.</i> (1993)
	Muta TM Mouse	-	3.1 (8 / 2.4)	2.1 (3 / 0.7)	0.68	-1	gavage	1	1	14	Cosentino and Heddle (1999a)
	<i>gpt</i> delta (Spi)	-	0.18 (7 / -)	0.25 (6 / -)	1.3	0.07	ip	5	5	28	Takeiri <i>et al.</i> (2003)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.82 (7 / -)	1.4 (6 / -)	1.7	0.58	ip	5	5	7	Takeiri <i>et al.</i> (2003)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>gpt</i> delta (<i>gpt</i>)	–	0.82 (7 / –)	0.9 (6 / –)	1.1	0.08	ip	5	5	28	Takeiri <i>et al.</i> (2003)
	<i>gpt</i> delta (Spi)	–	0.13 (3 / 11.1)	0.18 (5 / 9.1)	1.38	0.05	ip	1	0.5	14	Okada <i>et al.</i> (1999)
	Muta TM Mouse	–	3.7 (3 / 3.1)	1.2 (2 / 1.2)	0.32	–2.5	ip	1	1	7	Suzuki <i>et al.</i> (1993)
	<i>gpt</i> delta (Spi)	+	0.13 (3 / 11.1)	0.25 (5 / 18.7)	1.92	0.12	ip	1	4	14	Okada <i>et al.</i> (1999)
	<i>gpt</i> delta (Spi)	+	0.18 (7 / –)	0.52 (6 / –)	2.9	0.34	ip	5	5	7	Takeiri <i>et al.</i> (2003)
	Muta TM Mouse	–	3.7 (3 / 3.1)	1.4 (2 / 1.1)	0.38	–2.3	ip	1	2	14	Suzuki <i>et al.</i> (1993)
	Muta TM Mouse	–	3.7 (3 / 3.1)	1.9 (2 / 1.2)	0.51	–1.8	ip	1	2	21	Suzuki <i>et al.</i> (1993)
	Muta TM Mouse	–	3.2 (3 / 2.2)	1.8 (2 / 1)	0.56	–1.4	ip	1	2	7	Suzuki <i>et al.</i> (1993)
	Muta TM Mouse	–	5.7 (3 / 1.6)	8.5 (1 / 0.5)	1.49	2.8	ip	5	10	3	Suzuki <i>et al.</i> (1993)
	Muta TM Mouse	–	5.7 (3 / 1.6)	8.6 (1 / 0.5)	1.51	2.9	ip	3	6	5	Suzuki <i>et al.</i> (1993)
	Muta TM Mouse	–	–(– / –)	1.7 (2 / 1.2)			ip	5	5	3	Suzuki <i>et al.</i> (1993)
	<i>gpt</i> delta (Spi)	–	0.13 (3 / 11.1)	0.2 (5 / 7.1)	1.54	0.07	ip	1	1	14	Okada <i>et al.</i> (1999)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
N7-Methyldibenzo-(c,g)carbazole (NMDBC)	Muta TM Mouse	-	3.6 (8 / 2.6)	4.1 (5 / 1.3)	1.14	0.5	topical	1	10	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	-	3.6 (8 / 2.6)	3.7 (5 / 1.6)	1.03	0.1	topical	1	30	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.6 (8 / 2.6)	7.8 (5 / 1.5)	2.17	4.2	topical	1	90	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.1 (8 / 2.2)	5.4 (5 / 1.2)	1.74	2.3	topical	1	10	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.1 (8 / 2.2)	5.5 (5 / 1.1)	1.77	2.4	topical	1	30	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	3.1 (8 / 2.2)	8.4 (5 / 1.1)	2.71	5.3	topical	1	90	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	-	3.1 (8 / 2.6)	6.2 (5 / 1.6)	2	3.1	topical	1	90	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	4.2 (8 / 2.7)	14.3 (5 / 1.5)	3.4	10.1	topical	1	10	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	4.2 (8 / 2.7)	21 (5 / 1.3)	5	16.8	topical	1	30	28	Renault <i>et al.</i> (1998)
	Muta TM Mouse	+	4.2 (8 / 2.7)	33 (5 / 1.3)	7.86	28.8	topical	1	90	28	Renault <i>et al.</i> (1998)
N-Ethyl-N-nitrosourea (ENU)	Muta TM Mouse	+	0.8 (2 / 0.1)	14.1 (2 / 0.1)	17.63	13.3	ip	5	100	3	Hoorn <i>et al.</i> (1993)
	Big Blue [®] mouse <i>cII</i>	+	13.8 (5 / 1.7)	36.8 (5 / 2.1)	2.67	23	ip	1	100	30	Zimmer <i>et al.</i> (1999)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	5 (3 / 0.2)	90 (3 / 0.2)	18	85	ip	1	125	nd	Tao, Urlando and Heddle (1993a)
	Big Blue [®] mouse	+	5 (3 / 0.2)	45 (3 / 0.2)	9	40	ip	1	63	nd	Tao, Urlando and Heddle (1993a)
	Big Blue [®] mouse	+	5 (3 / 0.2)	250 (3 / 0.2)	50	245	ip	1	250	56	Tao, Urlando and Heddle (1993a)
	Big Blue [®] mouse	+	5 (3 / 0.2)	240 (3 / 0.2)	48	235	ip	1	250	42	Tao, Urlando and Heddle (1993a)
	Big Blue [®] mouse	+	5 (3 / 0.2)	260 (3 / 0.2)	52	255	ip	1	250	28	Tao, Urlando and Heddle (1993a)
	Big Blue [®] mouse	+	5 (3 / 0.2)	370 (3 / 0.2)	74	365	ip	1	250	21	Tao, Urlando and Heddle (1993a)
	Big Blue [®] mouse	+	5 (3 / 0.2)	210 (3 / 0.2)	42	205	ip	1	250	14	Tao, Urlando and Heddle (1993a)
	Big Blue [®] mouse	+	5 (3 / 0.2)	220 (3 / 0.2)	44	215	ip	1	250	7	Tao, Urlando and Heddle (1993a)
	Big Blue [®] mouse	+	2.1 (4 / 0.8)	71.4 (3 / 0.6)	34	69.3	ip	1	250	14	Recio <i>et al.</i> (1996)
	Muta [™] Mouse	+	2.6 (2 / 0.7)	16.4 (2 / 0.2)	6.31	13.8	ip	1	250	7	Myhr (1991)
	Big Blue [®] mouse <i>cII</i>	+	5.8 (5 / 1.1)	22.8 (5 / 1.2)	3.93	17	ip	1	100	30	Zimmer <i>et al.</i> (1999)
	Big Blue [®] mouse	+	5 (3 / 0.2)	100 (3 / 0.2)	20	95	ip	1	125	nd	Tao, Urlando and Heddle (1993a)
	Big Blue [®] mouse <i>cII</i>	+	8.8 (5 / 1.8)	73.6 (5 / 1.5)	8.36	64.8	ip	1	100	30	Zimmer <i>et al.</i> (1999)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	3.4 (5 / 1)	19.2 (5 / 1)	5.65	15.8	ip	1	100	30	Zimmer <i>et al.</i> (1999)
	Big Blue [®] mouse	+	4.5 (5 / 1)	19.7 (5 / 1.1)	4.38	15.2	ip	1	100	30	Zimmer <i>et al.</i> (1999)
	Big Blue [®] mouse	+	3 (5 / 0.8)	39.1 (5 / 0.8)	13.03	36.1	ip	1	100	30	Zimmer <i>et al.</i> (1999)
	Big Blue [®] mouse	-	7.5 (8 / 0.2)	12.7 (8 / 0.3)	1.69	5.2	ip	1	250	3	Sui <i>et al.</i> (1999)
	Big Blue [®] mouse	-	7.5 (8 / 0.2)	6.1 (8 / 0.2)	0.81	-1.4	ip	1	125	3	Sui <i>et al.</i> (1999)
	Big Blue [®] mouse	-	6.1 (8 / 0.2)	6.2 (8 / 0.3)	1.02	0.1	ip	1	250	3	Sui <i>et al.</i> (1999)
	Big Blue [®] mouse	-	6.1 (8 / 0.2)	7.2 (8 / 0.3)	1.18	1.1	ip	1	125	3	Sui <i>et al.</i> (1999)
	Muta [™] Mouse	+	1.5 (3 / 1)	8.2 (3 / 0.3)	5.47	6.7	ip	1	100	7	Lynch, Gooderham and Boobis (1996)
	Muta [™] Mouse	+	2 (3 / 2.1)	12.5 (4 / 1.9)	6.25	10.5	ip	1	100	7	Lynch, Gooderham and Boobis (1996)
	Big Blue [®] mouse	+	3.5 (- / -)	50 (6 / 0.1)	14.29	46.5	ip	1	100	7	Zhang <i>et al.</i> (1996a)
	Muta [™] Mouse	+	4.1 (8 / 1.2)	56.9 (4 / 0.6)	13.88	52.8	ip	1	150	14	Mientjes <i>et al.</i> (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	1.3 (3 / 0.1)	59 (5 / 0.1)	45.38	57.7	ip	5	250	63	Sun, Shima and Heddle (1999)
	Muta TM Mouse	+	1.3 (3 / 0.1)	66 (8 / 0.3)	50.77	64.7	ip	5	250	42	Sun, Shima and Heddle (1999)
	Muta TM Mouse	+	1.3 (3 / 0.1)	69 (6 / 0.2)	53.08	67.7	ip	5	250	28	Sun, Shima and Heddle (1999)
	Muta TM Mouse	+	8.3 (4 / 0.4)	39 (3 / 0.4)	4.7	30.7	ip	5	250	14	Sun, Shima and Heddle (1999)
	Muta TM Mouse	+	8.3 (4 / 0.4)	18 (3 / 0.8)	2.17	9.7	ip	5	250	7	Sun, Shima and Heddle (1999)
	Big Blue [®] mouse	+	1 (4 / 1.9)	19.9 (4 / 2.3)	19.9	18.9	ip	15	300	69	Provost and Short (1994)
	Big Blue [®] mouse	+	1.1 (4 / 1.5)	3.2 (4 / 1.8)	2.91	2.1	ip	1	250	3	Provost and Short (1994)
	Muta TM Mouse	-	4.8 (6 / 1.7)	5.1 (3 / 1.1)	1.06	0.3	ip	1	150	28	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	-	4.8 (6 / 1.7)	4.8 (6 / 0.7)	1	0	ip	1	150	14	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	-	4.8 (6 / 1.7)	7.5 (4 / 0.4)	1.56	2.7	ip	1	150	3	Mientjes <i>et al.</i> (1998)
	Big Blue [®] mouse	+	5 (3 / 0.2)	250 (3 / 0.2)	50	245	ip	1	250	nd	Tao, Urlando and Heddle (1993a)
	Muta TM Mouse	-	4.8 (6 / 1.7)	2.9 (4 / 1.3)	0.6	-1.9	ip	1	150	0	Mientjes <i>et al.</i> (1998)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	5 (3 / 0.2)	55 (3 / 0.2)	11	50	ip	1	63	nd	Tao, Urlando and Heddle (1993a)
	Muta TM Mouse	+	4.1 (8 / 1.2)	95.1 (4 / 1)	23.2	91	ip	1	150	3	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	+	4.1 (8 / 1.2)	40 (2 / 0.1)	9.76	35.9	ip	1	150	1	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	-	4.1 (8 / 1.2)	6.4 (4 / 1)	1.56	2.3	ip	1	150	0	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	+	5.5 (8 / 3)	32.8 (3 / 1.1)	5.96	27.3	ip	1	150	28	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	+	5.5 (8 / 3)	22 (6 / 1.3)	4	16.5	ip	1	150	14	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	+	5.5 (8 / 3)	8.9 (5 / 1)	1.62	3.4	ip	1	150	3	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	-	5.5 (8 / 3)	8.2 (2 / 0.8)	1.49	2.7	ip	1	150	1	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	-	5.5 (8 / 3)	7.9 (2 / 1.1)	1.44	2.4	ip	1	150	0	Mientjes <i>et al.</i> (1998)
	Big Blue [®] mouse	+	5 (3 / 0.2)	260 (3 / 0.2)	52	255	ip	1	250	nd	Tao, Urlando and Heddle (1993a)
	Muta TM Mouse	+	10.4 (3 / 0.9)	70.7 (5 / 1.6)	6.8	60.3	ip + partial hepatectomy	1	50	14	Hara <i>et al.</i> (1999b)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	4.8 (6 / 1.7)	3 (2 / 0.9)	0.63	-1.8	ip	1	150	1	Mientjes <i>et al.</i> (1998)
	Muta TM Mouse	+	2 (2 / -)	6.2 (2 / -)	3.1	4.2	ip	1	250	7	Myhr (1991)
	Muta TM Mouse	+	3.5 (2 / 0.5)	10.5 (3 / 0.5)	3	7	ip	1	100	7	Lynch, Gooderham and Boobis (1996)
	Muta TM Mouse	+	3 (2 / -)	27.1 (2 / -)	9.03	24.1	ip	1	250	10	Myhr (1991)
	Muta TM Mouse	+	3 (2 / -)	14.3 (2 / -)	4.77	11.3	ip	1	250	7	Myhr (1991)
	Muta TM Mouse	+	3 (2 / -)	7.1 (2 / -)	2.37	4.1	ip	1	250	3	Myhr (1991)
	Muta TM Mouse	+	3 (2 / -)	8.6 (2 / -)	2.87	5.6	ip	1	100	10	Myhr (1991)
	Muta TM Mouse	+	3 (2 / -)	5.7 (2 / -)	1.9	2.7	ip	1	100	3	Myhr (1991)
	Muta TM Mouse	+	3 (2 / -)	100 (2 / -)	33.33	97	ip	5	250	10	Myhr (1991)
	Muta TM Mouse	+	3 (2 / -)	57.1 (2 / -)	19.03	54.1	ip	5	250	7	Myhr (1991)
	Muta TM Mouse	+	3 (2 / -)	34.3 (2 / -)	11.43	31.3	ip	5	250	3	Myhr (1991)
	Muta TM Mouse	+	3 (2 / -)	50 (2 / -)	16.67	47	ip	5	100	10	Myhr (1991)
	Muta TM Mouse	+	8 (4 / -)	370 (6 / -)	46.25	362	drinking water	20	415	10	Cosentino and Heddle (2000)
	Muta TM Mouse	+	3 (2 / -)	10 (2 / -)	3.33	7	ip	5	100	3	Myhr (1991)
	Muta TM Mouse	+	8 (4 / -)	490 (6 / -)	61.25	482	drinking water	30	620	10	Cosentino and Heddle (2000)
	Muta TM Mouse	-	2 (2 / -)	3.3 (2 / -)	1.65	1.3	ip	1	100	10	Myhr (1991)
	Muta TM Mouse	+	2 (2 / -)	12.3 (2 / -)	6.15	10.3	ip	1	100	7	Myhr (1991)
	Muta TM Mouse	+	2 (2 / -)	32.5 (2 / -)	16.25	30.5	ip	1	100	3	Myhr (1991)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	2 (2 / -)	20 (2 / -)	10	18	ip	5	250	10	Myhr (1991)
	Muta TM Mouse	+	2 (2 / -)	22.7 (2 / -)	11.35	20.7	ip	5	250	7	Myhr (1991)
	Muta TM Mouse	+	2 (2 / -)	6.5 (2 / -)	3.25	4.5	ip	5	250	3	Myhr (1991)
	Muta TM Mouse	+	2 (2 / -)	8.8 (2 / -)	4.4	6.8	ip	5	100	10	Myhr (1991)
	Muta TM Mouse	+	2 (2 / -)	12.3 (2 / -)	6.15	10.3	ip	5	100	7	Myhr (1991)
	Muta TM Mouse	+	2 (2 / -)	14 (2 / -)	7	12	ip	5	100	3	Myhr (1991)
	Muta TM Mouse	+	2.6 (2 / 0.7)	62.4 (2 / 0.1)	24	59.8	ip	5	250	7	Myhr (1991)
	Muta TM Mouse	+	3 (2 / -)	11.4 (2 / -)	3.8	8.4	ip	5	100	7	Myhr (1991)
	Muta TM Mouse	-	26 (4 / 1)	20 (6 / 1.5)	0.77	-6	drinking water	480	30	10	Cosentino and Heddle (1999b)
	Muta TM Mouse	+	9 (3 / 0.1)	62 (4 / 0.1)	6.89	53	ip	1	250	70	Sun, Shima and Heddle (1999)
	Muta TM Mouse	-	8 (4 / 1.2)	10.5 (5 / 1.5)	1.31	2.5	ip	1	50	14	Hara <i>et al.</i> (1999b)
	Muta TM Mouse	+	32 (4 / 1)	115 (6 / 1.5)	3.59	83	ip	1	250	360	Cosentino and Heddle (1999b)
	Muta TM Mouse	+	26 (4 / 1)	120 (6 / 1.5)	4.62	94	ip	1	250	240	Cosentino and Heddle (1999b)
	Muta TM Mouse	+	17 (4 / 1)	110 (6 / 1.5)	6.47	93	ip	1	250	120	Cosentino and Heddle (1999b)
	Muta TM Mouse	+	8 (4 / 1)	100 (6 / 1.5)	12.5	92	ip	1	250	10	Cosentino and Heddle (1999b)
	Muta TM Mouse	-	26 (4 / 1)	46 (6 / 1.5)	1.77	20	drinking water	480	300	10	Cosentino and Heddle (1999b)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	26 (4 / 1)	23 (6 / 1.5)	0.88	-3	drinking water	240	150	10	Cosentino and Heddle (1999b)
	Muta TM Mouse	-	17 (4 / 1)	10 (6 / 1.5)	0.59	-7	drinking water	120	75	10	Cosentino and Heddle (1999b)
	Muta TM Mouse	-	26 (4 / 1)	28 (6 / 1.5)	1.08	2	drinking water	480	100	10	Cosentino and Heddle (1999b)
	Muta TM Mouse	+	8 (4 / -)	240 (6 / -)	30	232	drinking water	10	210	10	Cosentino and Heddle (2000)
	Muta TM Mouse	-	17 (4 / 1)	8 (6 / 1.5)	0.47	-9	drinking water	120	25	10	Cosentino and Heddle (1999b)
	Muta TM Mouse	+	2.8 (3 / 1.1)	12.6 (4 / 1.8)	4.5	9.8	ip	1	100	7	Lynch, Gooderham and Boobis (1996)
	Muta TM Mouse	-	26 (4 / 1)	14 (6 / 1.5)	0.54	-12	drinking water	240	15	10	Cosentino and Heddle (1999b)
	Muta TM Mouse	-	17 (4 / 1)	15 (6 / 1.5)	0.88	-2	drinking water	120	7.5	10	Cosentino and Heddle (1999b)
	Muta TM Mouse	+	8 (4 / 1)	1 150 (6 / 1.5)	143.75	1 142	drinking water	90	1 850	10	Cosentino and Heddle (1999b)
	Muta TM Mouse	+	8 (4 / 1)	1 050 (6 / 1.5)	131.25	1 042	drinking water	60	1 250	10	Cosentino and Heddle (1999b)
	Muta TM Mouse	+	3.5 (3 / -)	18 (4 / -)	5.14	14.5	drinking water	30	620	21	Cosentino and Heddle (2000)
	Muta TM Mouse	+	2 (3 / -)	10.5 (4 / -)	5.25	8.5	drinking water	20	415	21	Cosentino and Heddle (2000)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	2 (3 / -)	7 (4 / -)	3.5	5	drinking water	10	210	21	Cosentino and Heddle (2000)
	Muta TM Mouse	+	3.5 (3 / -)	33 (4 / -)	9.43	29.5	drinking water	30	620	21	Cosentino and Heddle (2000)
	Muta TM Mouse	+	3.5 (3 / -)	24 (4 / -)	6.86	20.5	drinking water	20	415	21	Cosentino and Heddle (2000)
	Muta TM Mouse	+	3.5 (3 / -)	10.5 (4 / -)	3	7	drinking water	10	210	21	Cosentino and Heddle (2000)
	Muta TM Mouse	-	26 (4 / 1)	12 (6 / 1.5)	0.46	-14	drinking water	240	50	10	Cosentino and Heddle (1999b)
	Muta TM Mouse	+	7.8 (4 / 3.234)	76.8 (4 / 1.818)	9.85	69	ip	1	80	4	Yauk <i>et al.</i> (2005)
	Big Blue [®] mouse	+	3.4 (6 / 1.903)	25.3 (3 / 0.673)	7.44	21.9	ip	1	120	1	Wang <i>et al.</i> (2004)
	Muta TM Mouse	+	8.1 (6 / 2.825)	71.4 (4 / 2.549)	8.81	63.3	ip	1	80	12	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	8.1 (6 / 2.825)	59.2 (4 / 1.582)	7.31	51.1	ip	1	80	8	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	8.1 (6 / 2.825)	68.9 (3 / 1.359)	8.51	60.8	ip	1	80	5	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	8.1 (6 / 2.825)	76.8 (4 / 3.079)	9.48	68.7	ip	1	80	3	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	8.1 (6 / 2.825)	30 (4 / 1.12)	3.7	21.9	ip	1	80	1	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6.6 (3 / 0.958)	66.9 (3 / 0.126)	10.14	60.3	ip	1	80	8	Yauk <i>et al.</i> (2005)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	6.6 (3 / 0.958)	68.4 (2 / 0.103)	10.36	61.8	ip	1	80	5	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6.6 (3 / 0.958)	78.7 (3 / 0.203)	11.92	72.1	ip	1	80	4	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6.6 (3 / 0.958)	84.4 (1 / 0.712)	12.79	77.8	ip	1	80	3	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	8.1 (6 / 2.825)	61.5 (4 / 2.014)	7.59	53.4	ip	1	80	20	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6.6 (3 / 0.958)	37.5 (3 / 0.493)	5.68	30.9	ip	1	80	1	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6.4 (6 / 3.609)	43 (4 / 1.723)	6.72	36.6	ip	1	80	1	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	7.8 (4 / 3.234)	83.7 (4 / 0.823)	10.73	75.9	ip	1	80	3	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	7.8 (4 / 3.234)	59.4 (5 / 1.383)	7.62	51.6	ip	1	80	2	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	7.8 (4 / 3.234)	34.5 (4 / 1.368)	4.42	26.7	ip	1	80	1	Yauk <i>et al.</i> (2005)
	Big Blue [®] mouse	+	3.4 (6 / 1.903)	19 (4 / 1.333)	5.59	15.6	ip	1	120	120	Wang <i>et al.</i> (2004)
	Big Blue [®] mouse	+	3.4 (6 / 1.903)	23.8 (3 / 0.9)	7	20.4	ip	1	120	30	Wang <i>et al.</i> (2004)
	Muta TM Mouse	+	3 (- / -)	10 (- / -)	3.33	7	ip	1	250	15	Cruz-Munoz <i>et al.</i> (2000)
	Big Blue [®] mouse	+	3.4 (6 / 1.903)	23.6 (3 / 1.109)	6.94	20.2	ip	1	120	15	Wang <i>et al.</i> (2004)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.7 (3 / 3.1)	22.8 (2 / 0.5)	6.16	19.1	ip	1	100	7	Suzuki <i>et al.</i> (1993)
	Big Blue [®] mouse	+	3.4 (6 / 1.903)	27.8 (4 / 1.238)	8.18	24.4	ip	1	120	7	Wang <i>et al.</i> (2004)
	Muta TM Mouse	+	5.6 (5 / 0.3)	69 (5 / 0.2)	12.32	63.4	ip	5	250	84	Sun, Shima and Heddle (1999)
	Muta TM Mouse	+	6.6 (3 / 0.958)	73.8 (3 / 0.294)	11.18	67.2	ip	1	80	2	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6 (6 / 4.057)	46.1 (4 / 3.067)	7.68	40.1	ip	1	80	1	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	3.5 (4 / 1.217)	41.1 (3 / 0.446)	11.74	37.6	ip	1	150	2	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	3.5 (4 / 1.217)	49.1 (3 / 0.28)	14.03	45.6	ip	1	100	2	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	3.5 (4 / 1.217)	29.9 (3 / 0.452)	8.54	26.4	ip	1	50	2	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	4.5 (4 / 2.934)	108.1 (2 / 0.396)	24.02	103.6	ip	1	150	2	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	4.5 (4 / 2.934)	75 (3 / 0.737)	16.67	70.5	ip	1	100	2	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	4.5 (4 / 2.934)	55 (3 / 1.785)	12.22	50.5	ip	1	50	2	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6 (6 / 4.057)	74.8 (4 / 2.653)	12.47	68.8	ip	1	80	20	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6 (6 / 4.057)	80.9 (2 / 1.372)	13.48	74.9	ip	1	80	16	Yauk <i>et al.</i> (2005)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	6 (6 / 4.057)	79.8 (4 / 2.258)	13.3	73.8	ip	1	80	12	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6 (6 / 4.057)	82.5 (4 / 2.125)	13.75	76.5	ip	1	80	8	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	8.1 (6 / 2.825)	65.9 (2 / 0.767)	8.14	57.8	ip	1	80	16	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6 (6 / 4.057)	118 (4 / 2.834)	19.67	112	ip	1	80	3	Yauk <i>et al.</i> (2005)
	Big Blue [®] mouse	+	5.35 (6 / 2.186)	26.8 (3 / 0.803)	5.01	21.45	ip	1	120	120	Wang <i>et al.</i> (2004)
	Muta TM Mouse	+	4.4 (4 / 2.964)	71.1 (4 / 1.908)	16.16	66.7	ip	1	80	12	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	4.4 (4 / 2.964)	82.9 (3 / 1.053)	18.84	78.5	ip	1	80	8	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	4.4 (4 / 2.964)	80.8 (3 / 1.552)	18.36	76.4	ip	1	80	5	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	4.4 (4 / 2.964)	88.8 (4 / 2.004)	20.18	84.4	ip	1	80	4	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	4.4 (4 / 2.964)	90 (4 / 2.54)	20.45	85.6	ip	1	80	3	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	4.4 (4 / 2.964)	77.7 (4 / 2.383)	17.66	73.3	ip	1	80	2	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	4.4 (4 / 2.964)	50.1 (4 / 2.154)	11.39	45.7	ip	1	80	1	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6.4 (6 / 3.609)	98.7 (4 / 1.686)	15.42	92.3	ip	1	80	4	Yauk <i>et al.</i> (2005)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	6.4 (6 / 3.609)	115.6 (4 / 1.312)	18.06	109.2	ip	1	80	3	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6.4 (6 / 3.609)	86.8 (5 / 2.121)	13.56	80.4	ip	1	80	2	Yauk <i>et al.</i> (2005)
	Muta TM Mouse	+	6 (6 / 4.057)	84.3 (3 / 1.989)	14.05	78.3	ip	1	80	5	Yauk <i>et al.</i> (2005)
	<i>gpt</i> delta (<i>gpt</i>)	+	2.5 (5 / 0.5)	12 (4 / 0.1)	4.8	9.5	ip	10	0.94	14	Swiger <i>et al.</i> (2001)
	Big Blue [®] mouse	+	3.4 (6 / 1.903)	37.4 (4 / 1.107)	11	34	ip	1	120	3	Wang <i>et al.</i> (2004)
	Big Blue [®] mouse <i>cH</i>	+	4.5 (5 / 1.605)	27.9 (4 / 1.475)	6.2	23.4	tp	1	120	42	Mei <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cH</i>	+	4.2 (- / -)	29 (- / -)	6.9	24.8	tp	1	120	168	Mei <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cH</i>	+	3.6 (- / -)	27.1 (- / -)	7.53	23.5	tp	1	120	84	Mei <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cH</i>	+	4.5 (- / -)	27.9 (- / -)	6.2	23.4	tp	1	120	42	Mei <i>et al.</i> (2005b)
	Muta TM Mouse	-	7.25 (7 / -)	22.75 (3 / -)	3.14	15.5	gavage	5	250	10	Suter <i>et al.</i> (2002)
	Muta TM Mouse	+	9.58 (7 / -)	197.65 (3 / -)	20.63	188.0	gavage	5	250	10	Suter <i>et al.</i> (2002)
	Big Blue [®] rat	+	1.9 (6 / 0.4)	29 (2 / 0.1)	15.26	27.1	ip	1	125	28	da Costa <i>et al.</i> (2002)
	Big Blue [®] rat	+	1 (6 / 1.5)	10 (2 / 0.2)	10	9	ip	1	125	28	da Costa <i>et al.</i> (2002)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	10.72 (2 / 0.4)	61.4 (8 / 0.9)	5.73	50.68	ip	8	240	29	unpublished
	Big Blue [®] mouse <i>cII</i>	+	4.5 (5 / 1.605)	44.2 (5 / 1.544)	9.82	39.7	ip	1	120	42	Mei <i>et al.</i> (2005b)
	<i>gpt</i> delta (<i>gpt</i>)	+	2.5 (5 / 0.5)	40 (5 / 0.1)	16	37.5	ip	30	2.82	14	Swiger <i>et al.</i> (2001)
	Big Blue [®] mouse <i>cII</i>	+	4.5 (5 / 1.605)	41.6 (7 / 2.606)	9.24	37.1	ip	1	120	42	Mei <i>et al.</i> (2005b)
	<i>gpt</i> delta (<i>gpt</i>)	+	2.5 (5 / 0.5)	130 (5 / 0.4)	52	127.5	ip	1	250	10	Swiger <i>et al.</i> (2001)
	<i>gpt</i> delta (<i>gpt</i>)	+	2.5 (5 / 0.5)	75 (5 / 0.2)	30	72.5	ip	1	150	10	Swiger <i>et al.</i> (2001)
	<i>gpt</i> delta (<i>gpt</i>)	+	2.5 (5 / 0.5)	41 (5 / 0.3)	16.4	38.5	ip	1	50	10	Swiger <i>et al.</i> (2001)
	<i>gpt</i> delta (<i>gpt</i>)	+	2.5 (5 / 0.5)	130 (5 / 0.4)	52	127.5	ip	1	250	28	Swiger <i>et al.</i> (2001)
	<i>gpt</i> delta (<i>gpt</i>)	+	2.5 (5 / 0.5)	125 (5 / 0.4)	50	122.5	ip	1	250	14	Swiger <i>et al.</i> (2001)
	Big Blue [®] mouse	+	3.4 (5 / 0.2)	17.2 (5 / 0.3)	5.06	13.8	ip	1	150	3	Winegar, Carr and Mirsalis (1997)
	Muta TM Mouse	+	7 (7 / 0.7)	144 (5 / 0.7)	20.57	137	ip	5	250	63	Sun, Shima and Heddle (1999)
	Muta TM Mouse	+	7 (7 / 0.7)	133 (4 / 0.8)	19	126	ip	5	250	42	Sun, Shima and Heddle (1999)
	Muta TM Mouse	+	7 (7 / 0.7)	138 (4 / 0.3)	19.71	131	ip	5	250	28	Sun, Shima and Heddle (1999)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	2 (2 / -)	5.8 (2 / -)	2.9	3.8	ip	1	250	3	Myhr (1991)
	Muta TM Mouse	+	8.49 (8 / 3.5)	171.3 (10 / 3.5)	20.18	162.8 1	ip	8	240	29	unpublished
	Big Blue [®] mouse <i>cII</i>	+	4.7 (5 / 1.439)	11.7 (5 / 1.597)	2.49	7	ip	1	120	42	Slikker, Mei and Chen (2004)
	Big Blue [®] mouse	+	5.35 (6 / 2.186)	28.9 (3 / 0.867)	5.4	23.55	ip	1	120	30	Wang <i>et al.</i> (2004)
	Big Blue [®] mouse	+	5.35 (6 / 2.186)	21 (4 / 1.828)	3.93	15.65	ip	1	120	15	Wang <i>et al.</i> (2004)
	Big Blue [®] mouse	+	5.35 (6 / 2.186)	15 (4 / 1.523)	2.8	9.65	ip	1	120	7	Wang <i>et al.</i> (2004)
	Big Blue [®] mouse	-	5.35 (6 / 2.186)	6.7 (3 / 1.115)	1.25	1.35	ip	1	120	3	Wang <i>et al.</i> (2004)
	Big Blue [®] mouse	-	5.35 (6 / 2.186)	6.3 (3 / 0.99)	1.18	0.95	ip	1	120	1	Wang <i>et al.</i> (2004)
	Big Blue [®] mouse	+	7.3 (8 / 3.219)	38.2 (3 / 0.743)	5.23	30.9	ip	1	120	120	Wang <i>et al.</i> (2004)
	Big Blue [®] mouse	+	7.3 (8 / 3.219)	22.4 (4 / 1.565)	3.07	15.1	ip	1	120	30	Wang <i>et al.</i> (2004)
	Big Blue [®] mouse	-	7.3 (8 / 3.219)	10.6 (5 / 1.493)	1.45	3.3	ip	1	120	15	Wang <i>et al.</i> (2004)
	Big Blue [®] mouse	-	7.3 (8 / 3.219)	8.7 (5 / 1.51)	1.19	1.4	ip	1	120	7	Wang <i>et al.</i> (2004)
	Big Blue [®] mouse	-	7.3 (8 / 3.219)	7.1 (5 / 1.776)	0.97	-0.2	ip	1	120	3	Wang <i>et al.</i> (2004)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse <i>cII</i>	+	4.5 (5 / 1.605)	20.6 (5 / 1.339)	4.58	16.1	ip	1	120	42	Mei <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cII</i>	-	4.4 (5 / 1.351)	6.2 (4 / 1.242)	1.41	1.8	ip	1	120	42	Slikker, Mei and Chen (2004)
	Muta TM Mouse	+	9 (3 / 0.1)	52 (4 / 0.2)	5.78	43	ip	1	250	70	Sun, Shima and Heddle (1999)
	Big Blue [®] mouse <i>cII</i>	+	4.7 (5 / 1.439)	27.7 (5 / 1.657)	5.89	23	tp	1	120	42	Slikker, Mei and Chen (2004)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.64 (- / -)	5.5 (- / -)	8.59	4.86	ip	1	100	18	Miyazaki <i>et al.</i> (2005)
	Big Blue [®] mouse <i>cII</i>	+	3.9 (5 / 1.53)	14.5 (5 / 1.547)	3.72	10.6	ip	1	120	42	Mei <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cII</i>	+	3.9 (5 / 1.53)	38.8 (4 / 1.179)	9.95	34.9	ip	1	120	42	Mei <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cII</i>	+	3.9 (5 / 1.53)	53.1 (5 / 1.281)	13.62	49.2	ip	1	120	42	Mei <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cII</i>	+	3.9 (5 / 1.53)	64.6 (5 / 1.501)	16.56	60.7	ip	1	120	42	Mei <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cII</i>	+	3.9 (5 / 1.53)	20.1 (4 / 1.284)	5.15	16.2	ip	1	120	42	Mei <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cII</i>	+	3.9 (5 / 1.53)	38.2 (4 / 1.184)	9.79	34.3	tp	1	120	42	Mei <i>et al.</i> (2005b)
	Big Blue [®] mouse <i>cII</i>	+	4.1 (5 / 1.394)	13.6 (4 / 1.151)	3.32	9.5	ip	1	120	42	Mei <i>et al.</i> (2005b)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse <i>cII</i>	+	3.6 (4 / 1.934)	15.8 (5 / 1.482)	4.39	12.2	ip	1	120	42	Mei <i>et al.</i> (2005b)
	Big Blue [®] mouse	-	7.3 (8 / 3.219)	7.3 (5 / 1.241)	1	0	ip	1	120	1	Wang <i>et al.</i> (2004)
	Muta [™] Mouse	+	3 (9 / 3.8)	25.6 (12 / 5)	8.53	22.6	ip	1	150	91	Douglas <i>et al.</i> (1997)
	Muta [™] Mouse	-	4.8 (6 / 1.7)	2.9 (4 / 1.3)	0.6	-1.9	ip	1	150	0	Mientjes <i>et al.</i> (1996)
	Muta [™] Mouse	+	0.75 (5 / 0.7)	4 (5 / 0.9)	5.33	3.25	ip	1	150	3	Suzuki <i>et al.</i> (1997b)
	Muta [™] Mouse	-	3.2 (4 / 1.1)	3.8 (5 / 1.6)	1.19	0.6	ip	1	150	14	Suzuki <i>et al.</i> (1997b)
	Muta [™] Mouse	-	2.9 (5 / 1.6)	3.1 (5 / 1.8)	1.07	0.2	ip	1	150	3	Suzuki <i>et al.</i> (1997b)
	Big Blue [®] mouse	-	3.9 (3 / 0.1)	7.2 (6 / 0.4)	1.85	3.3	ip	1	150	3	Gorelick <i>et al.</i> (1997)
	Big Blue [®] mouse	+	7.2 (9 / 1.3)	11.7 (10 / 1.2)	1.63	4.5	ip	1	150	3	Gorelick <i>et al.</i> (1997)
	Muta [™] Mouse	+	2 (10 / 4.9)	32.6 (10 / 5.6)	16.3	30.6	ip	1	150	91	Douglas <i>et al.</i> (1997)
	Muta [™] Mouse	+	2.3 (10 / 2.3)	26.1 (10 / 4.5)	11.35	23.8	ip	1	150	25	Douglas <i>et al.</i> (1997)
	Muta [™] Mouse	+	2.4 (8 / 3)	25.7 (12 / 4.2)	10.71	23.3	ip	1	150	91	Douglas <i>et al.</i> (1997)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	2.7 (10 / 3.9)	18.6 (10 / 3.5)	6.89	15.9	ip	1	150	25	Douglas <i>et al.</i> (1997)
	Big Blue [®] mouse	+	1.7 (5 / 1)	3.4 (5 / 0.9)	2	1.7	ip	1	150	3	Putman <i>et al.</i> (1997)
	Muta TM Mouse	-	2.9 (10 / 1.7)	3.3 (10 / 2)	1.14	0.4	ip	1	150	25	Douglas <i>et al.</i> (1997)
	Big Blue [®] mouse	-	2.1 (10 / 2.6)	1.5 (10 / 3.1)	0.71	-0.6	ip	1	150	3	Provost <i>et al.</i> (1997)
	Muta TM Mouse	-	3.3 (10 / 4.1)	3.8 (8 / 2.6)	1.15	0.5	ip	1	150	25	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	+	9.5 (7 / 2.6)	65.3 (8 / 3.3)	6.87	55.8	ip	1	150	52	Liegibel and Schmezer (1997)
	Big Blue [®] mouse	+	2 (9 / 0.7)	18 (6 / 0.5)	9	16	ip	1	150	93	Katoh, Horiya and Valdivia (1997)
	Big Blue [®] mouse	+	2 (9 / 0.7)	4.7 (8 / 0.6)	2.35	2.7	ip	1	150	22	Katoh, Horiya and Valdivia (1997)
	Big Blue [®] mouse	+	2 (9 / 0.7)	5.8 (7 / 0.7)	2.9	3.8	ip	1	150	14	Katoh, Horiya and Valdivia (1997)
	Big Blue [®] mouse	-	2 (9 / 0.7)	3.8 (7 / 0.6)	1.9	1.8	ip	1	150	3	Katoh, Horiya and Valdivia (1997)
	Big Blue [®] mouse	+	2 (9 / 0.7)	19.7 (6 / 0.2)	9.85	17.7	ip	1	150	93	Katoh, Horiya and Valdivia (1997)
	Big Blue [®] mouse	+	2 (9 / 0.7)	4.6 (8 / 0.7)	2.3	2.6	ip	1	150	22	Katoh, Horiya and Valdivia (1997)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	2 (9 / 0.7)	6.2 (7 / 0.5)	3.1	4.2	ip	1	150	14	Kato, Horiya and Valdivia (1997)
	Muta TM Mouse	+	3.6 (3 / 1)	20.5 (2 / 0.2)	5.69	16.9	ip	2	200	7	Itoh and Shimada (1997)
	Muta TM Mouse	+	3.7 (10 / 3.4)	33.8 (10 / 4)	9.14	30.1	ip	1	150	91	Douglas <i>et al.</i> (1997)
	Muta TM Mouse	+	2 (2 / -)	24.2 (2 / -)	12.1	22.2	ip	1	250	10	Myhr (1991)
	Muta TM Mouse	+	5.5 (8 / 3.1)	22 (6 / 1.3)	4	16.5	ip	1	150	14	Mientjes <i>et al.</i> (1996)
	Muta TM Mouse	-	5.5 (8 / 3.1)	8 (2 / 1.1)	1.45	2.5	ip	1	150	0	Mientjes <i>et al.</i> (1996)
	Muta TM Mouse	-	4.4 (3 / 0.2)	5.8 (3 / 0.2)	1.32	1.4	ip	1	150	14	Mientjes <i>et al.</i> (1996)
	Muta TM Mouse	-	4.4 (3 / 0.2)	2.9 (2 / 0.2)	0.66	-1.5	ip	1	150	0	Mientjes <i>et al.</i> (1996)
	Muta TM Mouse	+	4.6 (5 / 0.3)	16.3 (4 / 0.3)	3.54	11.7	ip	1	150	14	Mientjes <i>et al.</i> (1996)
	Muta TM Mouse	-	4.6 (5 / 0.3)	6.8 (2 / 0.2)	1.48	2.2	ip	1	150	0	Mientjes <i>et al.</i> (1996)
	Big Blue [®] mouse	+	4.7 (6 / 1.1)	14.1 (6 / 1.2)	3	9.4	ip	1	250	10	Piegorsch <i>et al.</i> (1995)
	Big Blue [®] mouse	+	6.4 (6 / 1.7)	16.9 (6 / 1.6)	2.64	10.5	ip	1	250	10	Piegorsch <i>et al.</i> (1995)
	Big Blue [®] mouse	+	7.4 (6 / 1.2)	17.1 (6 / 1.2)	2.31	9.7	ip	1	250	10	Piegorsch <i>et al.</i> (1995)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	57.2 (5 / 1.3)	91.8 (5 / 1.6)	1.6	34.6	ip	1	50	100	van Delft and Baan (1995)
	Muta TM Mouse	+	1.2 (4 / 1.1)	5.8 (5 / 1.3)	4.83	4.6	ip	1	150	14	Suzuki <i>et al.</i> (1997b)
	Muta TM Mouse	+	57.2 (5 / 1.3)	370 (5 / 1.3)	6.47	312.8	ip	1	150	100	van Delft and Baan (1995)
	Big Blue [®] mouse	+	2 (10 / 2.5)	6.7 (9 / 1.4)	3.35	4.7	ip	1	13.5	21	Skopek, Kort and Marino (1995)
	Muta TM Mouse	-	33.5 (4 / 1.2)	27.6 (5 / 1.2)	0.82	-5.9	ip	1	150	7	van Delft and Baan (1995)
	Muta TM Mouse	-	33.5 (4 / 1.2)	32.7 (6 / 1.6)	0.98	-0.8	ip	1	150	0	van Delft and Baan (1995)
	Muta TM Mouse	-	4.7 (4 / 1.1)	4.9 (5 / 1.8)	1.04	0.2	ip	1	25	5	Morrison, Tinwell and Ashby (1995)
	Muta TM Mouse	+	2.4 (14 / 3.8)	9.5 (17 / 5.8)	3.96	7.1	ip	1	25	5	Morrison, Tinwell and Ashby (1995)
	Muta TM Mouse	+	3.1 (5 / 0.5)	14.9 (- / 0.2)	4.81	11.8	ip	5	250	55	Douglas <i>et al.</i> (1995)
	Muta TM Mouse	+	4.4 (4 / 0.3)	19 (- / 0.1)	4.32	14.6	ip	5	250	35	Douglas <i>et al.</i> (1995)
	Muta TM Mouse	+	4.4 (4 / 0.3)	12.5 (- / 0.1)	2.84	8.1	ip	5	250	25	Douglas <i>et al.</i> (1995)
	Muta TM Mouse	-	4.4 (4 / 0.3)	6.9 (- / 0.5)	1.57	2.5	ip	5	250	20	Douglas <i>et al.</i> (1995)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	3.4 (7 / 1.9)	11.4 (7 / 1.6)	3.35	8	ip	1	40	42	Walker <i>et al.</i> (1996)
	Big Blue [®] mouse	+	1.1 (9 / 3.3)	3 (10 / 3.2)	2.73	1.9	ip	1	150	3	Provost <i>et al.</i> (1997)
	Big Blue [®] mouse	+	1.7 (6 / 2.6)	14.9 (3 / 0.8)	8.76	13.2	ip	5	250	3	Kohler <i>et al.</i> (1991b)
	Muta TM Mouse	+	5 (6 / -)	30 (6 / -)	6	25	ip	1	50	10	Swiger <i>et al.</i> (1999)
	Muta TM Mouse	-	5.6 (5 / 0.5)	7.7 (5 / 0.5)	1.38	2.1	ip	1	25	100	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	+	1.4 (5 / 0.5)	11.1 (3 / 0.3)	7.93	9.7	ip	1	150	50	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	-	3.7 (5 / 0.5)	3 (5 / 0.5)	0.81	-0.7	ip	1	150	7	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	-	3.2 (5 / 0.5)	3.2 (6 / 0.6)	1	0	ip	1	150	0	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	+	2.2 (5 / 0.5)	17.6 (5 / 0.5)	8	15.4	ip	1	150	50	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	+	1.2 (5 / 0.5)	4.5 (5 / 0.5)	3.75	3.3	ip	1	150	25	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	+	0.95 (5 / 0.5)	9.1 (8 / 0.8)	9.58	8.15	ip	1	150	14	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse <i>cII</i>	+	5 (6 / -)	125 (6 / -)	25	120	ip	1	250	10	Swiger <i>et al.</i> (1999)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse <i>cII</i>	+	5 (6 / -)	50 (6 / -)	10	45	ip	1	150	10	Swiger <i>et al.</i> (1999)
	Muta TM Mouse <i>cII</i>	+	5 (6 / -)	22 (6 / -)	4.4	17	ip	1	50	10	Swiger <i>et al.</i> (1999)
	Muta TM Mouse	+	2.9 (3 / 1)	182 (2 / 0.2)	62.76	179.1	ip	2	200	7	Itoh and Shimada (1997)
	Muta TM Mouse	+	5 (6 / -)	82 (6 / -)	16.4	77	ip	1	150	10	Swiger <i>et al.</i> (1999)
	Muta TM Mouse	+	0.98 (5 / 0.5)	10 (5 / 0.5)	10.2	9.02	ip	1	150	25	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse <i>cII</i>	+	5 (6 / -)	120 (6 / -)	24	115	ip	1	250	70	Swiger <i>et al.</i> (1999)
	Muta TM Mouse	+	5 (6 / -)	150 (6 / -)	30	145	ip	1	250	10	Swiger <i>et al.</i> (1999)
	Muta TM Mouse	+	5 (6 / -)	130 (6 / -)	26	125	ip	1	250	70	Swiger <i>et al.</i> (1999)
	Muta TM Mouse	+	5 (6 / -)	140 (6 / -)	28	135	ip	1	250	10	Swiger <i>et al.</i> (1999)
	Muta TM Mouse	+	2.4 (4 / 1.3)	5.7 (5 / 1.4)	2.38	3.3	ip	1	100	10	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	+	1.7 (5 / 1.9)	5.8 (5 / 1.7)	3.41	4.1	ip	1	100	10	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	+	4.9 (5 / 1.4)	17.2 (5 / 2)	3.51	12.3	ip	1	100	10	Itoh, Miura and Shimada (1998)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	2.6 (5 / 3)	135 (5 / 2.7)	51.92	132.4	ip	1	100	10	Itoh, Miura and Shimada (1998)
	Muta TM Mouse	+	5 (- / -)	25 (- / -)	5	20	ip	1	250	70	Cruz-Munoz <i>et al.</i> (2000)
	Muta TM Mouse	+	5 (- / -)	10 (- / -)	2	5	ip	1	250	35	Cruz-Munoz <i>et al.</i> (2000)
	Muta TM Mouse	+	5 (6 / -)	150 (6 / -)	30	145	ip	1	250	10	Swiger <i>et al.</i> (1999)
	Big Blue [®] mouse	+	0.71 (8 / 0.3)	7.5 (6 / 0)	10.56	6.79	ip	1	150	22	Katoh, Horiya and Valdivia (1997)
	Muta TM Mouse	-	57.2 (5 / 1.3)	79.2 (5 / 1.7)	1.38	22	ip	1	25	100	van Delft and Baan (1995)
	Big Blue [®] mouse	-	2 (10 / 2.5)	3 (10 / 1.9)	1.5	1	ip	1	4.5	21	Skopek, Kort and Marino (1995)
	Muta TM Mouse	-	3.2 (3 / 2.2)	5.7 (2 / 0.2)	1.78	2.5	ip	1	200	7	Suzuki <i>et al.</i> (1997a)
	Muta TM Mouse	-	3.2 (3 / 2.2)	3.2 (2 / 2)	1	0	ip	1	100	7	Suzuki <i>et al.</i> (1997a)
	Muta TM Mouse	+	3.7 (3 / 3.2)	34.2 (2 / 0.4)	9.24	30.5	ip	1	200	7	Suzuki <i>et al.</i> (1997a)
	Muta TM Mouse	+	3.7 (3 / 3.2)	22.3 (2 / 0.5)	6.03	18.6	ip	1	100	7	Suzuki <i>et al.</i> (1997a)
	Muta TM Mouse	+	3.7 (3 / 3.2)	13.3 (2 / 1)	3.59	9.6	ip	1	50	7	Suzuki <i>et al.</i> (1997a)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.8 (2 / 0.3)	58 (2 / 0.2)	15.26	54.2	ip	5	250	9	Takahashi, Kubota and Sato (1998)
	Muta TM Mouse	+	3.6 (2 / 0.3)	12.6 (2 / 0.2)	3.5	9	ip	5	250	9	Takahashi, Kubota and Sato (1998)
	Muta TM Mouse	+	3.8 (2 / 0.2)	67.2 (2 / 0.2)	17.68	63.4	ip	5	250	9	Takahashi, Kubota and Sato (1998)
	Muta TM Mouse	-	5.6 (5 / 0.5)	10.1 (5 / 0.5)	1.8	4.5	ip	1	50	100	Piegorsch <i>et al.</i> (1997)
	Big Blue [®] mouse	+	0.71 (8 / 0.3)	24.4 (5 / 0.1)	34.37	23.69	ip	1	150	93	Katoh, Horiya and Valdivia (1997)
	Muta TM Mouse	+	5.6 (5 / 0.5)	35.9 (5 / 0.5)	6.41	30.3	ip	1	150	100	Piegorsch <i>et al.</i> (1997)
	Big Blue [®] mouse	+	0.71 (8 / 0.3)	8.8 (6 / 0.2)	12.39	8.09	ip	1	150	14	Katoh, Horiya and Valdivia (1997)
	Big Blue [®] mouse	+	0.71 (8 / 0.3)	4.3 (6 / 0.1)	6.06	3.59	ip	1	150	3	Katoh, Horiya and Valdivia (1997)
	Muta TM Mouse	+	2.7 (3 / 1.2)	10.7 (4 / 1.3)	3.96	8	ip	1	160	100	Krebs and Favor (1997)
	Muta TM Mouse	+	1.6 (3 / 0.9)	10.8 (3 / 1)	6.75	9.2	ip	1	160	10	Krebs and Favor (1997)
	Muta TM Mouse	+	3.1 (2 / 0.6)	6.6 (4 / 1.3)	2.13	3.5	ip	1	160	3	Krebs and Favor (1997)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	2.7 (3 / 1.2)	9.5 (4 / 1.4)	3.52	6.8	ip	1	80	100	Krebs and Favor (1997)
	Muta TM Mouse	+	1.6 (3 / 0.9)	7.8 (4 / 1.2)	4.88	6.2	ip	1	80	10	Krebs and Favor (1997)
	Muta TM Mouse	-	3.1 (2 / 0.6)	4.8 (4 / 1.4)	1.55	1.7	ip	1	80	3	Krebs and Favor (1997)
	Muta TM Mouse	+	5 (5 / 0.5)	30.6 (9 / 0.9)	6.12	25.6	ip	1	150	91	Piegorsch <i>et al.</i> (1997)
	Muta TM Mouse	+	1.2 (5 / 0.5)	16.7 (5 / 0.5)	13.92	15.5	ip	1	150	50	Piegorsch <i>et al.</i> (1997)
	Big Blue [®] mouse	+	2 (10 / 2.5)	15.5 (10 / 1.2)	7.75	13.5	ip	1	40	21	Skopek, Kort and Marino (1995)
	Big Blue [®] mouse	-	2 (9 / 0.7)	2.7 (7 / 0.7)	1.35	0.7	ip	1	150	3	Katoh, Horiya and Valdivia (1997)
	Muta TM Mouse	+	0.8 (2 / 0.1)	9.8 (2 / 0.1)	12.25	9	ip	1	100	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.52 (3 / 0.4)	5.8 (2 / 0.3)	11.15	5.28	ip	1	150	3	Katoh <i>et al.</i> (1994)
	Muta TM Mouse	+	2.5 (3 / 0.2)	6 (2 / 0.3)	2.4	3.5	ip	1	100	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.5 (3 / 0.2)	101.6 (2 / 0)	40.64	99.1	ip	5	250	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.5 (3 / 0.2)	62.4 (2 / 0.1)	24.96	59.9	ip	5	250	7	Hoorn <i>et al.</i> (1993)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	2.5 (3 / 0.2)	37.9 (2 / 0)	15.16	35.4	ip	5	250	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.5 (3 / 0.2)	52.3 (1 / 0)	20.92	49.8	ip	5	100	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.5 (3 / 0.2)	13 (2 / 0)	5.2	10.5	ip	5	100	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.5 (3 / 0.2)	10.8 (2 / 0)	4.32	8.3	ip	5	100	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.8 (2 / 0.1)	24.4 (2 / 0.1)	30.5	23.6	ip	1	250	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.8 (2 / 0.1)	6.1 (2 / 0.1)	7.63	5.3	ip	1	250	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.8 (2 / 0.1)	5.8 (2 / 0.3)	7.25	5	ip	1	250	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.5 (3 / 0.2)	8.7 (2 / 0.1)	3.48	6.2	ip	1	100	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.8 (2 / 0.1)	12.6 (2 / 0.1)	15.75	11.8	ip	1	100	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.5 (3 / 0.2)	8.6 (2 / 0.1)	3.44	6.1	ip	1	250	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.8 (2 / 0.1)	20.3 (2 / 0.1)	25.38	19.5	ip	5	250	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.8 (2 / 0.1)	22.8 (2 / 0.1)	28.5	22	ip	5	250	7	Hoorn <i>et al.</i> (1993)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	14 (2 / 0.7)	123.7 (3 / 0.3)	8.84	109.7	ip	1	150	50	van Delft and Baan (1995)
	Muta TM Mouse	+	0.8 (2 / 0.1)	8.8 (1 / 0)	11	8	ip	5	100	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	-	4.8 (6 / 1.7)	4.8 (6 / 0.8)	1	0	ip	1	150	14	Mientjes <i>et al.</i> (1996)
	Muta TM Mouse	-	3.2 (3 / 2.2)	3.2 (2 / 2)	1	0	ip	1	100	7	Suzuki <i>et al.</i> (1993)
	Big Blue [®] mouse	+	2.8 (4 / 0.5)	10.2 (2 / 0.2)	3.64	7.4	ip	1	250	3	Monroe and Mitchell (1993)
	Muta TM Mouse	+	3.7 (2 / 0.5)	25.6 (2 / 0.5)	6.92	21.9	ip	1	100	7	Suzuki, Hayashi and Sofuni (1994)
	Muta TM Mouse	-	3.7 (2 / 0.5)	3.7 (2 / 0.5)	1	0	ip	1	100	7	Suzuki, Hayashi and Sofuni (1994)
	Muta TM Mouse	+	0.52 (3 / 0.4)	5.8 (4 / 0.6)	11.15	5.28	ip	1	150	61	Katoh <i>et al.</i> (1994)
	Muta TM Mouse	-	0.52 (3 / 0.4)	1.1 (2 / 0.4)	2.12	0.58	ip	1	150	10	Katoh <i>et al.</i> (1994)
	Muta TM Mouse	+	0.8 (2 / 0.1)	3.3 (2 / 0.1)	4.13	2.5	ip	1	100	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.6 (2 / 0.5)	4.1 (2 / 0.1)	6.83	3.5	ip	1	250	3	Hoorn <i>et al.</i> (1993)
	Big Blue [®] mouse	+	1.7 (6 / 2.6)	9.6 (3 / 0.7)	5.65	7.9	ip	1	250	3	Kohler <i>et al.</i> (1991b)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	1.7 (6 / 2.6)	4 (3 / 0.6)	2.35	2.3	ip	1	125	3	Kohler <i>et al.</i> (1991b)
	Big Blue [®] mouse	+	0.57 (5 / 3.5)	2.7 (3 / 0.6)	4.74	2.13	ip	1	250	3	Kohler <i>et al.</i> (1991b)
	Big Blue [®] mouse	-	0.57 (5 / 3.5)	1 (3 / 1.2)	1.75	0.43	ip	1	125	3	Kohler <i>et al.</i> (1991b)
	Muta TM Mouse	+	2.4 (5 / 0.5)	13 (5 / 0.5)	5.42	10.6	ip	1	250	14	Recio <i>et al.</i> (1992)
	Muta TM Mouse	+	4.4 (5 / 0.6)	16 (5 / 0.5)	3.64	11.6	ip	1	250	14	Recio <i>et al.</i> (1992)
	Muta TM Mouse	+	3 (5 / 0.1)	73 (5 / 0.1)	24.33	70	ip	1	250	14	Recio <i>et al.</i> (1992)
	Big Blue [®] mouse	+	3.8 (3 / 1.6)	76.5 (5 / -)	20.13	72.7	ip	1	250	14	Recio <i>et al.</i> (1993)
	Muta TM Mouse	+	2.5 (3 / 0.2)	61.5 (2 / 0)	24.6	59	ip	1	100	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.6 (2 / 0.5)	17.5 (2 / 0)	29.17	16.9	ip	1	250	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.8 (2 / 0.1)	12.2 (2 / 0.1)	15.25	11.4	ip	5	100	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.6 (2 / 0.5)	4.1 (2 / 0.1)	6.83	3.5	ip	1	100	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.6 (2 / 0.5)	1.7 (3 / 0.2)	2.83	1.1	ip	1	100	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	-	0.6 (2 / 0.5)	0.9 (2 / 0.3)	1.5	0.3	ip	1	100	3	Hoorn <i>et al.</i> (1993)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	0.6 (2 / 0.5)	2.2 (2 / 0.1)	3.67	1.6	ip	5	250	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.6 (2 / 0.5)	5.6 (2 / 0.1)	9.33	5	ip	5	250	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.6 (2 / 0.5)	5.4 (2 / 0.1)	9	4.8	ip	5	250	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.6 (2 / 0.5)	1.3 (1 / 0.2)	2.17	0.7	ip	5	100	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.6 (2 / 0.5)	3.7 (2 / 0.3)	6.17	3.1	ip	5	100	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.6 (2 / 0.5)	1.7 (2 / 0.1)	2.83	1.1	ip	5	100	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.5 (3 / 0.2)	29.3 (2 / 0.2)	11.72	26.8	ip	1	250	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	2.5 (3 / 0.2)	16.4 (3 / 0.1)	6.56	13.9	ip	1	250	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	0.6 (2 / 0.5)	1.6 (2 / 0.2)	2.67	1	ip	1	250	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	7.8 (4 / 2.6)	15.6 (5 / 3.7)	2	7.8	ip	1	150	14	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	Muta TM Mouse	+	7.3 (9 / 3.7)	264 (5 / 3.4)	36.16	256.7	ip	5	250	25	Douglas <i>et al.</i> (1996)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	7.3 (9 / 3.7)	267.9 (5 / 1.1)	36.7	260.6	ip	5	250	15	Douglas <i>et al.</i> (1996)
	Muta TM Mouse	-	4.4 (4 / 0.3)	3.4 (- / 0.3)	0.77	-1	ip	5	250	15	Douglas <i>et al.</i> (1995)
	Muta TM Mouse	+	7.2 (4 / 1.9)	233.4 (5 / 0.8)	32.42	226.2	ip	5	250	5	Douglas <i>et al.</i> (1996)
	Muta TM Mouse	+	0.8 (2 / 0.1)	6.6 (2 / 0.1)	8.25	5.8	ip	5	250	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	3.6 (1 / 0.1)	40.8 (4 / 1.2)	11.33	37.2	ip	1	150	14	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	Muta TM Mouse	+	4.1 (3 / 4)	9.6 (3 / 3.7)	2.34	5.5	ip	1	150	14	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	Muta TM Mouse	+	8.2 (3 / 0.6)	18 (3 / 0.6)	2.2	9.8	ip	1	150	14	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	3.9 (3 / 3.3)	4.8 (3 / 1.8)	1.23	0.9	ip	1	150	14	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	Muta TM Mouse	+	7.3 (9 / 3.7)	285.6 (5 / 3.3)	39.12	278.3	ip	5	250	35	Douglas <i>et al.</i> (1996)
	Muta TM Mouse	+	4 (2 / 1.1)	73 (4 / 2.3)	18.25	69	ip	1	150	14	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	Muta TM Mouse	+	7.3 (9 / 3.7)	254.4 (5 / 0.4)	34.85	247.1	ip	5	250	10	Douglas <i>et al.</i> (1996)
	Muta TM Mouse	-	5.8 (2 / 0.5)	9.9 (3 / 0.6)	1.71	4.1	ip	1	150	3	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	Muta TM Mouse	-	6.7 (2 / 1.5)	4.3 (3 / 2)	0.64	-2.4	ip	1	150	3	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	6.3 (3 / 0.5)	12.2 (4 / 1.2)	1.94	5.9	ip	1	150	3	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	Muta TM Mouse	-	6.6 (4 / 2.4)	7.4 (4 / 3.5)	1.12	0.8	ip	1	150	3	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	Muta TM Mouse	-	4.6 (3 / 1.2)	6.7 (4 / 2.1)	1.46	2.1	ip	1	150	3	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	Muta TM Mouse	+	9.6 (3 / 3.2)	61.5 (4 / 4.2)	6.41	51.9	ip	1	150	3	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	Muta TM Mouse	+	4.7 (5 / 3.5)	20.8 (4 / 3.5)	4.43	16.1	ip	1	150	3	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	4.9 (5 / 4)	6.9 (5 / 4.1)	1.41	2	ip	1	150	3	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	<i>gpt</i> delta (<i>gpt</i>)	+	5.7 (2 / 1.9)	22.2 (3 / 3.9)	3.89	16.5	ip	1	150	7	Nohmi <i>et al.</i> (1996)
	Muta TM Mouse	+	4.1 (3 / 1)	78 (4 / 1.6)	19.02	73.9	ip	1	150	14	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	<i>lacZ</i> plasmid mouse	+	5.8 (6 / –)	97 (3 / –)	16.72	91.2	ip	1	250	14	Boerrigter <i>et al.</i> (1995)
	Muta TM Mouse	–	4.4 (4 / 0.3)	2.4 (– / 0.6)	0.55	–2	ip	5	250	10	Douglas <i>et al.</i> (1995)
	Muta TM Mouse	+	1.1 (5 / 0.3)	45 (– / 0.4)	40.91	43.9	ip	5	250	55	Douglas <i>et al.</i> (1995)
	Muta TM Mouse	+	2.6 (4 / 0.3)	45.6 (– / 0.5)	17.54	43	ip	5	250	45	Douglas <i>et al.</i> (1995)
	Muta TM Mouse	+	2.6 (4 / 0.3)	40.4 (– / 0.4)	15.54	37.8	ip	5	250	35	Douglas <i>et al.</i> (1995)
	Muta TM Mouse	+	2.6 (4 / 0.3)	14.1 (– / 0.4)	5.42	11.5	ip	5	250	15	Douglas <i>et al.</i> (1995)
	Muta TM Mouse	+	2.6 (4 / 0.3)	7.4 (– / 0.3)	2.85	4.8	ip	5	250	10	Douglas <i>et al.</i> (1995)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	5.3 (2 / 1)	9.8 (3 / 2.8)	1.85	4.5	ip	1	150	14	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	Muta TM Mouse	+	2.6 (4 / 0.3)	5.8 (– / 0.5)	2.23	3.2	ip	5	250	5	Douglas <i>et al.</i> (1995)
	Muta TM Mouse	+	7.3 (9 / 3.7)	279.8 (4 / 1.9)	38.33	272.5	ip	5	250	45	Douglas <i>et al.</i> (1996)
	Big Blue [®] mouse	+	11.5 (3 / 0.4)	97.6 (4 / 0.3)	8.49	86.1	ip	57	199.8	7	Zhang <i>et al.</i> (1996b)
	Big Blue [®] mouse	+	8.8 (5 / 0.5)	49.8 (4 / 0.4)	5.66	41	ip	29	111	7	Zhang <i>et al.</i> (1996b)
	Muta TM Mouse	+	9 (5 / 1.2)	132 (6 / 1)	14.67	123	ip	1	250	70	Cosentino and Heddle (1996)
	Muta TM Mouse	+	10 (4 / 0.7)	172 (6 / 1)	17.2	162	ip	1	250	35	Cosentino and Heddle (1996)
	Muta TM Mouse	+	5 (3 / 0.4)	141 (6 / 0.6)	28.2	136	ip	1	250	10	Cosentino and Heddle (1996)
	Muta TM Mouse	+	6.4 (4 / 1.4)	25.6 (5 / 1.4)	4	19.2	ip	5	250	5	Douglas <i>et al.</i> (1996)
	Muta TM Mouse	+	7.4 (5 / 1.8)	224.1 (5 / 2.2)	30.28	216.7	ip	5	250	55	Douglas <i>et al.</i> (1996)
	Muta TM Mouse	+	5.2 (5 / 1.6)	63.4 (5 / 1.6)	12.19	58.2	ip	5	250	55	Douglas <i>et al.</i> (1996)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	5.8 (9 / 3)	26.8 (5 / 1.4)	4.62	21	ip	5	250	10	Douglas <i>et al.</i> (1996)
	Muta TM Mouse	+	5.8 (9 / 3)	31.9 (5 / 0.9)	5.5	26.1	ip	5	250	20	Douglas <i>et al.</i> (1996)
	Muta TM Mouse	+	5.8 (9 / 3)	69.5 (5 / 4.2)	11.98	63.7	ip	5	250	45	Douglas <i>et al.</i> (1996)
	Muta TM Mouse	+	5.8 (9 / 3)	70.7 (5 / 4.5)	12.19	64.9	ip	5	250	35	Douglas <i>et al.</i> (1996)
ENU + 8-methoxy-psoralen	<i>gpt</i> delta (<i>gpt</i>)	+	0.64 (- / -)	7.1 (- / -)	11.09	6.46	ip	1	100	18	Miyazaki <i>et al.</i> (2005)
<i>N</i> -Hydroxy-2-acetylaminofluorene	Big Blue [®] rat	+	2.6 (5 / 1.1)	9.8 (5 / 0.9)	3.77	7.2	ip	1	25	42	Chen <i>et al.</i> (2001a)
	Big Blue [®] rat	+	2.6 (5 / 1.1)	15.6 (5 / 1)	6	13	ip	5	50	37	Chen <i>et al.</i> (2001a)
	Big Blue [®] rat	+	2.6 (5 / 1.1)	40.7 (5 / 0.6)	15.65	38.1	ip	13	100	29	Chen <i>et al.</i> (2001a)
	Big Blue [®] rat	+	2 (5 / 1.6)	5.6 (5 / 1.6)	2.8	3.6	ip	13	100	29	Chen <i>et al.</i> (2001a)
Nickel subsulphide	Big Blue [®] rat	-	7.4 (4 / 1.4)	8.2 (4 / 1.4)	1.11	0.8	inhalation	2	6	14	Mayer <i>et al.</i> (1998)
	Muta TM Mouse	-	6.3 (7 / 1.3)	9.8 (6 / 0.8)	1.56	3.5	inhalation	1	10	14	Mayer <i>et al.</i> (1998)
	Big Blue [®] rat	-	8 (5 / 1.6)	8.4 (4 / 1.1)	1.05	0.4	inhalation	2	6	14	Mayer <i>et al.</i> (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	3.7 (7 / 2.6)	4.8 (6 / 2.5)	1.3	1.1	inhalation	1	10	14	Mayer <i>et al.</i> (1998)
Nifuroxazide	Big Blue [®] mouse <i>cII</i>	–	4.82 (5 / 0.979)	6.09 (4 / 1.2)	1.26	1.27	gavage	5	1 565	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	–	7 (5 / 1.272)	5.99 (5 / 1.246)	0.86	–1.01	gavage	5	1 565	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	–	6.48 (5 / 2.048)	2.72 (5 / 1.821)	0.42	–3.76	gavage	5	1 565	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	–	5.12 (5 / 1.441)	7.15 (5 / 1.216)	1.4	2.03	gavage	5	1 565	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	–	5.92 (5 / 0.732)	4.03 (4 / 0.798)	0.68	–1.89	gavage	5	1 565	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	–	3.15 (5 / 1.371)	6.96 (5 / 0.875)	2.21	3.81	gavage	5	1 565	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	–	5.55 (3 / 0.786)	3.76 (5 / 1.266)	0.68	–1.79	gavage	5	1 565	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	–	7.17 (3 / 0.837)	7.07 (5 / 0.569)	0.99	–1.00 E–01	gavage	5	1 565	20	Quillardet <i>et al.</i> (2006)
Nitrofurantoin	Big Blue [®] mouse <i>cII</i>	–	4.82 (5 / 0.979)	5.61 (4 / 0.466)	1.16	0.79	gavage	5	835	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	–	5.92 (5 / 0.732)	2.39 (4 / 0.478)	0.4	–3.53	gavage	5	835	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	–	5.55 (3 / 0.786)	5.18 (5 / 0.853)	0.93	–0.37	gavage	5	835	20	Quillardet <i>et al.</i> (2006)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse <i>cII</i>	+	5.12 (5 / 1.441)	10.54 (5 / 0.902)	2.06	5.42	gavage	5	835	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	-	7 (5 / 1.272)	5.22 (5 / 1.93)	0.75	-1.78	gavage	5	835	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	-	6.48 (5 / 2.048)	7.46 (5 / 1.258)	1.15	0.98	gavage	5	835	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	-	7.17 (3 / 0.837)	4.62 (5 / 0.768)	0.64	-2.55	gavage	5	835	20	Quillardet <i>et al.</i> (2006)
	Big Blue [®] mouse <i>cII</i>	-	3.15 (5 / 1.371)	3.08 (5 / 1.006)	0.98	-7.00 E-02	gavage	5	835	20	Quillardet <i>et al.</i> (2006)
<i>N</i> -Methyl- <i>N'</i> -nitro- <i>N</i> -nitrosoguanidine (MNNG)	Muta TM Mouse	+	3.9 (5 / 1.3)	31.1 (5 / 1.6)	7.97	27.2	gavage	1	100	3	Brault <i>et al.</i> (1999)
	Muta TM Mouse	-	1.7 (6 / 2.3)	3.5 (4 / 1.8)	2.06	1.8	gavage	1	100	7	Brault <i>et al.</i> (1996)
	Muta TM Mouse	+	3.7 (5 / 1.4)	13.2 (5 / 1.2)	3.57	9.5	gavage	1	20	14	Brault <i>et al.</i> (1999)
	Muta TM Mouse	+	3.9 (5 / 1.3)	9.4 (5 / 1.3)	2.41	5.5	gavage	1	20	3	Brault <i>et al.</i> (1999)
	Muta TM Mouse	+	3.9 (5 / 1.4)	51.9 (5 / 1.4)	13.31	48	gavage	1	100	14	Brault <i>et al.</i> (1999)
	Muta TM Mouse	+	3.9 (5 / 1.4)	70.8 (5 / 1.7)	18.15	66.9	gavage	1	100	28	Brault <i>et al.</i> (1999)
	Muta TM Mouse	-	3.2 (6 / 2.1)	3.2 (4 / 1.3)	1	0	gavage	1	100	7	Brault <i>et al.</i> (1996)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.6 (6 / 2.1)	33.4 (4 / 1.3)	9.28	29.8	gavage	1	100	7	Brault <i>et al.</i> (1996)
	Muta TM Mouse	+	2.6 (2 / 0.1)	6.85 (2 / 0.2)	2.63	4.25	topical	1	500 µg	21	Brooks and Dean (1996)
	Muta TM Mouse	+	2.5 (1 / 0.1)	5.4 (2 / 0.1)	2.16	2.9	topical	1	500 µg	14	Brooks and Dean (1996)
	Muta TM Mouse	-	2.5 (1 / 0.1)	3.8 (2 / 0.2)	1.52	1.3	topical	1	500 µg	7	Brooks and Dean (1996)
	Muta TM Mouse	+	3.1 (2 / 0.1)	243.1 (1 / 0)	78.42	240	topical	1	500 µg	21	Brooks and Dean (1996)
	Muta TM Mouse	+	1.7 (1 / 0.1)	91.8 (2 / 0.1)	54	90.1	topical	1	500 µg	14	Brooks and Dean (1996)
	Muta TM Mouse	+	1.7 (1 / 0.1)	110.4 (2 / 0.1)	64.94	108.7	topical	1	500 µg	7	Brooks and Dean (1996)
	Muta TM Mouse	+	3.1 (2 / 0.1)	138.1 (2 / 0.2)	44.55	135	topical	1	250 µg	21	Brooks and Dean (1996)
	Muta TM Mouse	+	1.7 (1 / 0.1)	21 (1 / 0)	12.35	19.3	topical	1	250 µg	14	Brooks and Dean (1996)
	Muta TM Mouse	+	10 (2 / 0.3)	75.2 (1 / 0.1)	7.52	65.2	gavage	1	50	7	Brooks and Dean (1996)
	Muta TM Mouse	+	6.7 (5 / 1.3)	52 (5 / 1.4)	7.76	45.3	gavage	1	100	50	Brault <i>et al.</i> (1999)
	Muta TM Mouse	-	2.8 (2 / 2.3)	2.3 (1 / 1)	0.82	-0.5	topical	1	100 µg	7	Myhr (1991)
	Muta TM Mouse	+	2.8 (2 / 2.3)	14.6 (2 / 1)	5.21	11.8	topical	1	300 µg	7	Myhr (1991)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	1.7 (1 / 0.1)	74.9 (2 / 0.1)	44.06	73.2	topical	1	250 µg	7	Brooks and Dean (1996)
	Muta TM Mouse	+	10 (2 / 0.3)	27 (2 / 0.3)	2.7	17	gavage	1	50	3	Brooks and Dean (1996)
	Muta TM Mouse	+	2.8 (2 / 2.3)	15 (2 / 2.4)	5.36	12.2	topical	1	600 µg	7	Myhr (1991)
	Muta TM Mouse	+	7.1 (2 / 0.4)	44.1 (2 / 0.4)	6.21	37	gavage	1	50	10	Brooks and Dean (1996)
	Muta TM Mouse	+	10 (2 / 0.3)	37.7 (2 / 0.2)	3.77	27.7	gavage	1	100	3	Brooks and Dean (1996)
	Muta TM Mouse	+	10 (2 / 0.3)	41.8 (2 / 0.7)	4.18	31.8	gavage	1	100	7	Brooks and Dean (1996)
	Muta TM Mouse	+	7.1 (2 / 0.4)	92.3 (2 / 0.2)	13	85.2	gavage	1	100	10	Brooks and Dean (1996)
	Muta TM Mouse	-	9.4 (2 / 0.1)	5.6 (2 / 0.1)	0.6	-3.8	gavage	1	100	3	Brooks and Dean (1996)
	Muta TM Mouse	+	3.9 (5 / 1.3)	50.6 (5 / 1.2)	12.97	46.7	gavage	1	100	7	Brault <i>et al.</i> (1999)
	Muta TM Mouse	-	9.4 (2 / 0.1)	10.2 (2 / 0.1)	1.09	0.8	gavage	1	100	7	Brooks and Dean (1996)
	Muta TM Mouse	-	6.8 (2 / 0.2)	8.9 (2 / 0.1)	1.31	2.1	gavage	1	100	10	Brooks and Dean (1996)
N-Methyl-N-nitrosourea (MNU)	Big Blue [®] mouse	+	0.23 (3 / 0.5)	3.6 (3 / 0.3)	15.65	3.37	ip	5	500	1	Provost <i>et al.</i> (1993)
	Big Blue [®] mouse	+	0.3 (3 / 0.5)	0.9 (3 / 0.3)	3	0.6	ip	5	500	12	Provost <i>et al.</i> (1993)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	–	0.3 (3 / 0.5)	0.4 (3 / 0.3)	1.33	0.1	ip	5	500	6	Provost <i>et al.</i> (1993)
	Big Blue [®] mouse	+	0.3 (3 / 0.5)	0.6 (2 / 0.3)	2	0.3	ip	5	500	3	Provost <i>et al.</i> (1993)
	Big Blue [®] mouse	+	0.23 (3 / 0.5)	7.2 (3 / 0.3)	31.3	6.97	ip	5	500	3	Provost <i>et al.</i> (1993)
	Big Blue [®] mouse	–	0.3 (3 / 0.5)	0.2 (2 / 0.3)	0.67	–0.1	ip	5	500	1	Provost <i>et al.</i> (1993)
	Muta [™] Mouse <i>cII</i>	+	4.3 (7 / 0.8)	39.8 (5 / 1)	9.26	35.5	ip	1	50	35	Shima, Swiger and Heddle (2000)
	Big Blue [®] mouse	+	0.23 (3 / 0.5)	11 (3 / 0.3)	47.83	10.77	ip	5	500	6	Provost <i>et al.</i> (1993)
	Muta [™] Mouse	+	1.3 (9 / 4.5)	6.5 (6 / 2.2)	5	5.2	ip	1	50	35	Shima, Swiger and Heddle (2000)
	Big Blue [®] mouse	+	0.14 (3 / 0.5)	3.2 (3 / 0.3)	22.86	3.06	ip	5	500	12	Provost <i>et al.</i> (1993)
	Muta [™] Mouse	+	5 (8 / 0.9)	58.3 (6 / 3)	11.66	53.3	ip	1	50	35	Shima, Swiger and Heddle (2000)
	Muta [™] Mouse	+	3.5 (8 / 1.4)	67.2 (5 / 0.5)	19.2	63.7	ip	1	50	35	Shima, Swiger and Heddle (2000)
	Big Blue [®] mouse	+	0.23 (3 / 0.5)	17.1 (3 / 0.3)	74.35	16.87	ip	5	500	12	Provost <i>et al.</i> (1993)
	Big Blue [®] mouse	+	0.2 (3 / 0.5)	0.5 (3 / 0.3)	2.5	0.3	ip	5	500	1	Provost <i>et al.</i> (1993)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	0.2 (3 / 0.5)	0.5 (3 / 0.3)	2.5	0.3	ip	5	500	3	Provost <i>et al.</i> (1993)
	Big Blue [®] mouse	+	0.2 (3 / 0.5)	0.8 (3 / 0.3)	4	0.6	ip	5	500	6	Provost <i>et al.</i> (1993)
	Big Blue [®] mouse	+	0.2 (3 / 0.5)	1.9 (3 / 0.3)	9.5	1.7	ip	5	500	12	Provost <i>et al.</i> (1993)
	Big Blue [®] mouse	+	0.14 (3 / 0.5)	2.5 (3 / 0.3)	17.86	2.36	ip	5	500	1	Provost <i>et al.</i> (1993)
	Big Blue [®] mouse	+	0.06 (3 / 0.5)	0.3 (3 / 0.3)	5	0.24	ip	5	500	6	Provost <i>et al.</i> (1993)
	Big Blue [®] mouse	+	0.14 (3 / 0.5)	3.2 (3 / 0.3)	22.86	3.06	ip	5	500	6	Provost <i>et al.</i> (1993)
	Big Blue [®] mouse	+	0.06 (3 / 0.5)	0.3 (3 / 0.3)	5	0.24	ip	5	500	1	Provost <i>et al.</i> (1993)
	Big Blue [®] mouse	+	0.06 (3 / 0.5)	0.2 (3 / 0.3)	3.33	0.14	ip	5	500	3	Provost <i>et al.</i> (1993)
	Muta [™] Mouse	+	0.5 (7 / 0.7)	21.9 (6 / 0.5)	43.8	21.4	ip	1	50	35	Shima, Swiger and Heddle (2000)
	Big Blue [®] mouse	-	2.7 (8 / 1.3)	3.5 (6 / 0.7)	1.3	0.8	ip	1	15	21	Monroe <i>et al.</i> (1998)
	Big Blue [®] mouse	+	0.14 (3 / 0.5)	1.7 (2 / 0.3)	12.14	1.56	ip	5	500	3	Provost <i>et al.</i> (1993)
	Muta [™] Mouse	+	5.6 (5 / 0.5)	15.6 (6 / 0.6)	2.79	10	ip	1	70	100	Piegorsch <i>et al.</i> (1997)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	3.8 (4 / 0.6)	45.7 (2 / 0.1)	12.03	41.9	ip	4	400	5	Quillardet <i>et al.</i> (2000)
	Muta [™] Mouse	+	3.2 (6 / -)	7.8 (2 / -)	2.44	4.6	drinking water	28	250	14	von Pressentin, Kosinska and Guttenplan (1999)
	Muta [™] Mouse	+	3.8 (5 / -)	9.7 (2 / -)	2.55	5.9	drinking water	28	250	14	von Pressentin, Kosinska and Guttenplan (1999)
	Big Blue [®] mouse	+	1.4 (2 / 0.2)	43.9 (7 / 0.3)	32.36	43.9	ip	1	80	6	Allay, Veigl and Gerson (1999)
	Big Blue [®] mouse	+	6.4 (2 / 0.3)	85.5 (7 / 0.3)	13.36	79.1	ip	1	80	6	Allay, Veigl and Gerson (1999)
	Big Blue [®] mouse	+	3 (2 / 0.2)	8.6 (7 / 0.3)	2.87	5.6	ip	1	80	6	Allay, Veigl and Gerson (1999)
	Big Blue [®] mouse	+	1.4 (2 / 0.2)	15.8 (6 / 0.3)	12.29	15.8	ip	1	80	6	Allay, Veigl and Gerson (1999)
	Big Blue [®] mouse <i>cII</i>	-	5.7 (6 / 2.1)	2.7 (6 / 2.2)	0.47	-3	ip	1	20	21	Monroe <i>et al.</i> (1998)
	Big Blue [®] mouse	+	3 (2 / 0.2)	8.9 (6 / 0.2)	2.97	5.9	ip	1	80	6	Allay, Veigl and Gerson (1999)
	Muta [™] Mouse <i>cII</i>	+	4.1 (9 / 2.8)	61.8 (7 / 1.8)	15.07	57.7	ip	1	50	35	Shima, Swiger and Heddle (2000)
	Big Blue [®] mouse	-	8 (2 / 0.7)	10 (2 / 0.5)	1.25	2	diet	105	241.5	0	Shephard, Gunz and Schlatter (1995)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	8 (2 / 0.8)	16 (2 / 0.5)	2	8	diet	105	241.5	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	-	7 (2 / 1.1)	9 (2 / 0.7)	1.29	2	diet	105	241.5	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	-	5 (2 / 0.5)	5 (2 / 0.2)	1	0	diet	105	241.5	0	Shephard, Gunz and Schlatter (1995)
	Muta TM Mouse	+	5.2 (7 / 1.6)	67 (6 / 4)	12.88	61.8	ip	1	50	35	Shima, Swiger and Heddle (2000)
	Big Blue [®] mouse	+	6.4 (2 / 0.3)	32 (6 / 0.3)	5	25.6	ip	1	80	6	Allay, Veigl and Gerson (1999)
	Muta TM Mouse	+	6.1 (8 / 2.6)	20.1 (7 / 2.4)	3.3	14	ip	1	50	35	Shima, Swiger and Heddle (2000)
	Big Blue [®] mouse	-	10 (2 / 0.7)	13 (2 / 1.2)	1.3	3	diet	105	241.5	0	Shephard, Gunz and Schlatter (1995)
	Muta TM Mouse	+	3.4 (5 / 0.2)	22.4 (7 / 0.7)	6.59	19	ip	1	50	35	Shima, Swiger and Heddle (2000)
	Big Blue [®] mouse <i>cI</i>	-	0.5 (6 / 2.1)	0.7 (6 / 2.2)	1.4	0.2	ip	1	20	21	Monroe <i>et al.</i> (1998)
	Big Blue [®] mouse	+	2.7 (8 / 1.3)	7.8 (7 / 1.1)	2.89	5.1	ip	1	20	21	Monroe <i>et al.</i> (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	-	2.7 (8 / 1.3)	2.8 (6 / 1.4)	1.04	0.1	ip	1	10	21	Monroe <i>et al.</i> (1998)
	Big Blue [®] mouse	-	2.7 (8 / 1.3)	3.5 (6 / 2.5)	1.3	0.8	ip	1	5	21	Monroe <i>et al.</i> (1998)
	Muta TM Mouse	+	3.1 (8 / 2.4)	431 (4 / 0.7)	139.03	427.9	gavage	1	100	14	Cosentino and Heddle (1999a)
	Muta TM Mouse	+	3.1 (8 / 2.4)	278 (4 / 0.7)	89.68	274.9	gavage	1	75	14	Cosentino and Heddle (1999a)
	Muta TM Mouse	+	3.1 (8 / 2.4)	225 (4 / 0.3)	72.58	221.9	gavage	1	50	14	Cosentino and Heddle (1999a)
	Big Blue [®] mouse	+	0.06 (3 / 0.5)	0.38 (3 / 0.3)	6.33	0.32	ip	5	500	12	Provost <i>et al.</i> (1993)
	Muta TM Mouse	+	4.4 (9 / 2.2)	106 (7 / 0.9)	24.09	101.6	ip	1	50	35	Shima, Swiger and Heddle (2000)
N-Nitrosodibenzylamine (NDBzA)	Muta TM Mouse	-	4 (5 / 4)	7 (5 / 2.9)	1.75	3	gavage	1	100	30	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	7.3 (5 / 3.5)	10.3 (5 / 2.8)	1.41	3	gavage	1	425	30	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	7.3 (5 / 3.5)	8.2 (5 / 2.7)	1.12	0.9	gavage	1	100	30	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	7.3 (5 / 3.5)	8.1 (5 / 3.1)	1.11	0.8	gavage	1	30	30	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	5.8 (5 / 1.6)	9 (5 / 1.7)	1.55	3.2	gavage	1	750	90	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	5.8 (5 / 1.6)	8.6 (5 / 1.7)	1.48	2.8	gavage	1	425	90	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	5.8 (5 / 1.6)	9.3 (5 / 2.1)	1.6	3.5	gavage	1	100	90	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	5.8 (5 / 1.6)	8.5 (4 / 1.6)	1.47	2.7	gavage	1	30	90	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	4 (5 / 4)	4.8 (5 / 3.5)	1.2	0.8	gavage	1	425	30	Jiao <i>et al.</i> (1997)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	6.3 (5 / 3.8)	5.7 (5 / 4.3)	0.9	-0.6	gavage	1	30	90	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	+	7.3 (5 / 3.5)	17.9 (5 / 3.2)	2.45	10.6	gavage	1	750	30	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	4 (5 / 4)	5.8 (5 / 4.9)	1.45	1.8	gavage	1	750	30	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	7.3 (5 / 3)	11.5 (5 / 4.5)	1.58	4.2	gavage	1	425	90	Fung, Douglas and Krewski (1998)
	Muta TM Mouse	-	4 (5 / 4)	4.8 (5 / 3.4)	1.2	0.8	gavage	1	30	30	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	7.3 (5 / 3)	15.4 (5 / 3.5)	2.11	8.1	gavage	1	750	90	Fung, Douglas and Krewski (1998)
	Muta TM Mouse	-	7.3 (5 / 3)	7.7 (5 / 2.7)	1.05	0.4	gavage	1	100	90	Fung, Douglas and Krewski (1998)
	Muta TM Mouse	-	4.2 (5 / 3.6)	6.3 (5 / 3.7)	1.5	2.1	gavage	1	750	90	Fung, Douglas and Krewski (1998)
	MutaMouse	-	4.2 (5 / 3.6)	6.6 (5 / 3.8)	1.57	2.4	gavage	1	425	90	Fung, Douglas and Krewski (1998)
	Muta TM Mouse	-	4.2 (5 / 3.6)	6 (5 / 4.1)	1.43	1.8	gavage	1	100	90	Fung, Douglas and Krewski (1998)
	Muta TM Mouse	+	6.3 (5 / 3.8)	15.4 (5 / 4.6)	2.44	9.1	gavage	1	750	90	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	6.3 (5 / 3.8)	9.7 (5 / 3.8)	1.54	3.4	gavage	1	425	90	Jiao <i>et al.</i> (1997)
	Muta TM Mouse	-	6.3 (5 / 3.8)	6.4 (5 / 3.9)	1.02	0.1	gavage	1	100	90	Jiao <i>et al.</i> (1997)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
<i>N</i> -Nitrosomethylbenzylamine	Big Blue [®] rat	+	5.1 (4 / -)	24.3 (4 / -)	4.76	19.2	sc	6	4	14	de Boer <i>et al.</i> (2004)
	Big Blue [®] rat	+	7 (5 / -)	43.2 (6 / -)	6.17	36.2	sc	6	4	14	de Boer <i>et al.</i> (2004)
	Big Blue [®] rat	+	6.5 (5 / -)	25.8 (5 / -)	3.97	19.3	sc	6	4	14	de Boer <i>et al.</i> (2004)
<i>N</i> -Nitrosomethylbenzylamine + diallyl sulphide	Big Blue [®] rat	-	6.5 (5 / -)	8.3 (5 / -)	1.28	1.8	sc	6	4	14	de Boer <i>et al.</i> (2004)
<i>N</i> -Nitrosomethylbenzylamine + ellagic acid	Big Blue [®] rat	+	7 (5 / -)	23.5 (5 / -)	3.36	16.5	sc	6	4	14	de Boer <i>et al.</i> (2004)
<i>N</i> -Nitrosomethylbenzylamine + ethanol	Big Blue [®] rat	+	5.1 (4 / -)	38.5 (4 / -)	7.55	33.4	sc	6	4	14	de Boer <i>et al.</i> (2004)
<i>N</i> -Nitrosomethylbenzylamine + green tea	Big Blue [®] rat	+	7 (5 / -)	25.2 (3 / -)	3.6	18.2	sc	6	4	14	de Boer <i>et al.</i> (2004)
<i>N</i> -Nitrosornicotine (NNN)	Muta TM Mouse	+	3.8 (5 / -)	7.5 (5 / -)	1.97	3.7	drinking water	28	588	14	von Pressentin, Kosinska and Guttenplan (1999)
	Muta TM Mouse	+	3.3 (6 / -)	4.4 (5 / -)	1.33	1.1	drinking water	5	615	14	von Pressentin, Chen and Guttenplan (2001)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	3.6 (6 / -)	9.4 (5 / -)	2.61	5.8	drinking water	5	615	14	von Pressentin, Chen and Guttenplan (2001)
	Muta TM Mouse	+	3.6 (6 / -)	10.3 (5 / -)	2.86	6.7	drinking water	5	615	14	von Pressentin, Chen and Guttenplan (2001)
	Muta TM Mouse	+	3.3 (6 / -)	10 (5 / -)	3.03	6.7	drinking water	5	615	14	von Pressentin, Chen and Guttenplan (2001)
	Muta TM Mouse	+	3.9 (6 / -)	15 (5 / -)	3.85	11.1	drinking water	5	615	14	von Pressentin, Chen and Guttenplan (2001)
	Muta TM Mouse	+	3.7 (5 / -)	9.8 (5 / -)	2.65	6.1	drinking water	28	588	14	von Pressentin, Kosinska and Guttenplan (1999)
	Muta TM Mouse	+	3.2 (6 / -)	9.2 (5 / -)	2.88	6	drinking water	28	588	14	von Pressentin, Kosinska and Guttenplan (1999)
	Muta TM Mouse	+	3.3 (6 / -)	8.9 (5 / -)	2.7	5.6	drinking water	5	615	14	von Pressentin, Chen and Guttenplan (2001)
<i>N</i> -Nitrosopyrrolidine	<i>gpt</i> delta (<i>gpt</i>)	+	0.55 (5 / 2.976)	5.65 (5 / 1.022)	10.27	5.1	drinking water	91	1 201.2	0	Kanki <i>et al.</i> (2005)
<i>N</i> -Propyl- <i>N</i> -nitrosourea (PNU)	Muta TM Mouse	+	6.9 (5 / 2.1)	18.2 (3 / 1.3)	2.64	11.3	ip	1	250	28	Hara <i>et al.</i> (1999a)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.67 (5 / 9.3)	2.63 (5 / 8.9)	3.93	1.96	ip	1	250	28	unpublished

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>gpt</i> delta (<i>gpt</i>)	+	0.73 (5 / 4)	4.96 (4 / 3.9)	6.79	4.23	ip	1	250	14	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	+	0.35 (5 / 6.3)	3.76 (4 / 5.2)	10.74	3.41	ip	1	250	7	unpublished
	Muta TM Mouse	-	7.3 (8 / 2.3)	11 (6 / 1.7)	1.51	3.7	ip	1	250	28	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	+	7.3 (8 / 2.3)	18.3 (3 / 1.2)	2.51	11	ip	1	250	14	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	-	7.3 (8 / 2.3)	9.6 (6 / 1.5)	1.32	2.3	ip	1	250	7	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	+	3.5 (8 / 2.2)	12.7 (6 / 2)	3.63	9.2	ip	1	250	28	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	+	3.5 (8 / 2.2)	8.7 (6 / 1.5)	2.49	5.2	ip	1	250	14	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	-	3.5 (8 / 2.2)	6 (6 / 1.1)	1.71	2.5	ip	1	250	7	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	-	6.1 (4 / 1.2)	6.5 (6 / 1.8)	1.07	0.4	ip	1	250	28	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	+	8.4 (8 / 5.3)	31.2 (6 / 4.3)	3.71	22.8	ip	1	250	28	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	+	8.4 (8 / 5.3)	25 (6 / 3.2)	2.98	16.6	ip	1	250	7	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	-	6.9 (5 / 2.1)	7.6 (3 / 2.2)	1.1	0.7	ip	1	250	14	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	-	6.9 (5 / 2.1)	6.6 (3 / 2.7)	0.96	-0.3	ip	1	250	7	Hara <i>et al.</i> (1999a)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	9 (8 / 1.9)	18.6 (6 / 1.4)	2.07	9.6	ip	1	250	28	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	-	9 (8 / 1.9)	13.7 (6 / 3)	1.52	4.7	ip	1	250	14	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	-	9 (8 / 1.9)	15 (6 / 1.1)	1.67	6	ip	1	250	7	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	+	7.8 (8 / 4.7)	19.3 (6 / 3.4)	2.47	11.5	ip	1	250	28	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	equiv.	7.8 (8 / 4.7)	14.5 (6 / 3.1)	1.86	6.7	ip	1	250	14	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	-	7.8 (8 / 4.7)	8.6 (6 / 2.7)	1.1	0.8	ip	1	250	7	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	+	3.9 (8 / 3)	19 (6 / 3.4)	4.87	15.1	ip	1	250	28	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	+	3.9 (8 / 3)	31.4 (6 / 5)	8.05	27.5	ip	1	250	14	Hara <i>et al.</i> (1999a)
	Muta TM Mouse	+	3.9 (8 / 3)	45.4 (6 / 3.3)	11.64	41.5	ip	1	250	7	Hara <i>et al.</i> (1999a)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.55 (4 / 6.2)	1.95 (5 / 9.2)	3.55	1.4	ip	1	250	28	unpublished
	<i>gpt</i> delta (Spi)	+	0.11 (5 / 16)	0.43 (5 / 17.8)	3.91	0.32	ip	1	250	7	unpublished
	Muta TM Mouse	+	8.4 (8 / 5.3)	22.1 (6 / 3.3)	2.63	13.7	ip	1	250	14	Hara <i>et al.</i> (1999a)
	<i>gpt</i> delta (Spi)	-	0.22 (4 / 6.7)	0.28 (5 / 14.6)	1.27	0.06	ip	1	250	28	unpublished
	<i>gpt</i> delta (Spi)	+	0.11 (5 / 16)	0.52 (5 / 14.8)	4.73	0.41	ip	1	250	14	unpublished

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
<i>o</i> -Aminoazotoluene	<i>gpt</i> delta (Spi)	–	0.14 (5 / 19.9)	0.2 (5 / 16.74)	1.43	0.06	ip	1	250	28	unpublished
	<i>gpt</i> delta (Spi)	–	0.14 (4 / 14.6)	0.08 (5 / 20.31)	0.57	–0.06	ip	1	250	28	unpublished
	<i>gpt</i> delta (<i>gpt</i>)	+	0.43 (5 / 3.8)	4.03 (5 / 5.1)	9.37	3.6	ip	1	250	28	unpublished
	Muta TM Mouse	+	9.9 (5 / 0.7)	33.5 (5 / 0.7)	3.38	23.6	ip	1	600	28	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse <i>cII</i>	+	5.5 (3 / 1.3)	51.1 (3 / 0.6)	9.29	45.6	ip	1	300	28	Kohara <i>et al.</i> (2001)
	Muta TM Mouse <i>cII</i>	+	4.1 (3 / 1.1)	22.3 (3 / 1.1)	5.44	18.2	ip	1	300	28	Kohara <i>et al.</i> (2001)
	Muta TM Mouse	inc.	0.3 (5 / 4.7)	0.9 (5 / 1)	3	0.6	ip	1	600	28	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	+	6.7 (5 / 1.5)	13.6 (5 / 1.6)	2.03	6.9	ip	1	600	28	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	+	2.2 (5 / 1.8)	7.1 (5 / 1.8)	3.23	4.9	ip	1	600	28	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	–	8.2 (5 / 1)	10.1 (5 / 0.2)	1.23	1.9	ip	1	600	28	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	+	11.7 (3 / 1.5)	76.1 (5 / 2.1)	6.5	64.4	ip	1	600	28	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	inc.	0.3 (5 / 4.7)	1.1 (5 / 1.9)	3.67	0.8	ip	1	300	28	Ohsawa <i>et al.</i> (2000)
Muta TM Mouse	–	6.7 (5 / 1.5)	5.3 (3 / 0.4)	0.79	–1.4	ip	1	300	28	Ohsawa <i>et al.</i> (2000)	

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
<i>o</i> -Anisidine	Muta TM Mouse	-	2.2 (5 / 1.8)	2.6 (5 / 2.1)	1.18	0.4	ip	1	300	28	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	-	8.2 (5 / 1)	4.7 (5 / 1.1)	0.57	-3.5	ip	1	300	28	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	-	4.5 (5 / 3.2)	2.6 (5 / 3.5)	0.58	-1.9	ip	1	300	28	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	+	11.7 (3 / 1.5)	52.9 (5 / 3)	4.52	41.2	ip	1	300	28	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	+	9.9 (5 / 0.7)	14.3 (5 / 1)	1.44	4.4	ip	1	300	28	Ohsawa <i>et al.</i> (2000)
	Muta TM Mouse	-	4.5 (5 / 3.2)	4.8 (4 / 2.2)	1.07	0.3	ip	1	600	28	Ohsawa <i>et al.</i> (2000)
	Big Blue [®] mouse	-	2.4 (3 / 1.1)	3.6 (5 / 2)	1.5	1.2	gavage	3	2 250	7	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	+	2.3 (3 / 2.2)	5 (5 / 3.6)	2.17	2.7	gavage	3	2 250	14	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	-	3.6 (5 / 1.9)	3.5 (5 / 2)	0.97	-0.1	gavage	10	7 500	14	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	-	3.8 (5 / 1.8)	4.8 (6 / 2.2)	1.26	1	gavage	3	2 250	14	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	-	4.5 (5 / 2.1)	6.8 (6 / 2.2)	1.51	2.3	gavage	3	2 250	14	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	+	2.8 (4 / 1.3)	5.8 (5 / 2)	2.07	3	gavage	10	7 500	14	Ashby <i>et al.</i> (1994)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Oxazepam	Big Blue [®] mouse	–	3.7 (3 / 1.3)	2 (4 / 2.1)	0.54	–1.7	gavage	1	750	14	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	–	2.7 (3 / 1.8)	4.4 (5 / 2)	1.63	1.7	gavage	3	2 250	7	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	–	3.7 (3 / 1.3)	3.5 (5 / 1.8)	0.95	–0.2	gavage	3	2 250	14	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	–	2.7 (3 / 1.8)	4.5 (3 / 1.5)	1.67	1.8	gavage	1	750	7	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	–	2.4 (3 / 1.1)	3.1 (4 / 1.9)	1.29	0.7	gavage	1	750	7	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	–	2.3 (3 / 2.2)	3.3 (3 / 1.5)	1.43	1	gavage	1	750	14	Ashby <i>et al.</i> (1994)
	Big Blue [®] mouse	+	5 (9 / 1.8)	8.2 (– / 2)	1.64	3.2	diet	180	54 000	0	Shane <i>et al.</i> (1999)
	Big Blue [®] mouse <i>cII</i>	–	14.4 (3 / 0.9542)	15.1 (8 / 1.829)	1.05	0.7	diet	516	193 500	0	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] mouse <i>cII</i>	–	14.2 (4 / 0.717)	12 (9 / 2.48)	0.85	–2.2	diet	516	193 500	0	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] mouse <i>cII</i>	–	14.2 (4 / 0.717)	12.8 (10 / 2.973)	0.9	–1.4	diet	546	204 750	0	Mirsalis <i>et al.</i> (2005)
Big Blue [®] mouse <i>cII</i>	+	7.1 (10 / 4.5)	14.5 (4 / 1.3)	2.04	7.4	diet	180	54 000	0	Singh <i>et al.</i> (2001)	
Big Blue [®] mouse <i>cII</i>	–	14.4 (3 / 0.9542)	14.6 (8 / 2.023)	1.01	0.2	diet	546	207 750	0	Mirsalis <i>et al.</i> (2005)	

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
<i>p</i> -Cresidine	Big Blue [®] mouse <i>cII</i>	+	14.2 (- / -)	327 (3 / -)	23.03	312.8	diet	180	54 000	0	Jakubczak <i>et al.</i> (1996)
	Big Blue [®] mouse <i>cII</i>	+	14.2 (- / -)	490 (3 / -)	34.51	475.8	diet	180	108 000	0	Jakubczak <i>et al.</i> (1996)
	Big Blue [®] mouse	+	19.8 (- / -)	436 (3 / -)	22.02	416.2	diet	180	54 000	0	Jakubczak <i>et al.</i> (1996)
	Big Blue [®] mouse	+	19.8 (- / -)	74.5 (3 / -)	3.76	54.7	diet	180	108 000	0	Jakubczak <i>et al.</i> (1996)
Peroxyacetyl nitrate (PAN)	Big Blue [®] mouse	+	6.2 (4 / 3.5)	8.2 (4 / 2.7)	1.32	2	inhalation	60	4 680	24	DeMarini <i>et al.</i> (2000)
Phenobarbital	Big Blue [®] mouse <i>cII</i>	-	11 (4 / 1.337)	9.8 (5 / 1.2322)	0.89	-1.2	diet	303	48 480	0	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] mouse <i>cII</i>	-	14.4 (3 / 0.9542)	13.4 (5 / 1.407)	0.93	-1	diet	516	77 400	0	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] mouse <i>cII</i>	+	4.9 (3 / 0.8588)	9.7 (2 / 0.7418)	1.98	4.8	diet	190	31 920	0	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] mouse <i>cII</i>	-	14.8 (5 / 2.067)	7.4 (5 / 1.682)	0.5	-7.4	diet	670	97 150	0	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] rat	-	5.5 (4 / 1.2)	5.5 (4 / 1.2)	1	0	drinking water	14	3 100	0	Styles <i>et al.</i> (2001)
	Big Blue [®] mouse <i>cII</i>	-	11.4 (3 / 0.962)	13.1 (5 / 1.405)	1.15	1.7	diet	303	48 480	0	Mirsalis <i>et al.</i> (2005)
Big Blue [®] mouse <i>cII</i>	-	14.2 (4 / 0.717)	10.9 (4 / 1.023)	0.77	-3.3	diet	516	77 400	0	Mirsalis <i>et al.</i> (2005)	

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse <i>cII</i>	–	17 (5 / 1.535)	12 (5 / 1.338)	0.71	–5	diet	670	97 150	0	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] rat	–	6 (4 / 1.2)	8.5 (4 / 1.2)	1.42	2.5	drinking water	168	40 000	0	Styles <i>et al.</i> (2001)
	Big Blue [®] mouse	–	5 (9 / 1.8)	6.9 (7 / 2.1)	1.38	1.9	diet	180	54 000	0	Shane <i>et al.</i> (2000c)
	Big Blue [®] rat	–	7.5 (4 / 1.2)	10 (4 / 1.2)	1.33	2.5	drinking water	84	18 500	0	Styles <i>et al.</i> (2001)
	Big Blue [®] mouse <i>cII</i>	–	7.1 (10 / 4.5)	12.2 (4 / 0.9)	1.72	5.1	diet	180	54 000	0	Singh <i>et al.</i> (2001)
	Big Blue [®] mouse	–	10 (3 / 0.5)	10 (3 / 0.3)	1	0	diet	120	7 200	0	Gunz, Shephard and Lutz (1993)
	Big Blue [®] mouse	–	10 (3 / 0.5)	12 (3 / 0.3)	1.2	2	diet	120	3 600	0	Gunz, Shephard and Lutz (1993)
	Muta [™] Mouse	–	4 (5 / –)	4.4 (5 / –)	1.1	0.4	diet	5	900	14	Tombolan <i>et al.</i> (1999a)
Phorbol-12-myristate-13-acetate (TPA)	Big Blue [®] mouse	–	4.2 (– / –)	3.9 (4 / 0.3)	0.93	–0.3	topical	1	5 µg	2	Miller <i>et al.</i> (2000)
Polyphenon E	Big Blue [®] mouse	–	7.5 (7 / 1.8)	7 (7 / 2.2)	0.93	–0.5	gavage	28	14 000	28	Chang <i>et al.</i> (2003)
	Big Blue [®] mouse	–	5.7 (7 / 1.7)	5.4 (7 / 1.8)	0.95	–0.3	gavage	28	14 000	28	Chang <i>et al.</i> (2003)
	Big Blue [®] mouse	–	4.8 (7 / 2)	6 (6 / 1.3)	1.25	1.2	gavage	28	14 000	28	Chang <i>et al.</i> (2003)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	–	6 (7 / 1.6)	7.8 (7 / 2)	1.3	1.8	gavage	28	14 000	28	Chang <i>et al.</i> (2003)
	Big Blue [®] mouse	–	5.5 (7 / 1.3)	5.4 (7 / 1.9)	0.98	–0.1	gavage	28	14 000	28	Chang <i>et al.</i> (2003)
	Big Blue [®] mouse	–	4.1 (5 / 1.5)	4.9 (7 / 2)	1.2	0.8	gavage	28	14 000	28	Chang <i>et al.</i> (2003)
	Big Blue [®] mouse	–	5.5 (7 / 1.3)	3.6 (6 / 1.7)	0.65	–1.9	gavage	28	28 000	28	Chang <i>et al.</i> (2003)
	Big Blue [®] mouse	–	7.5 (7 / 1.8)	6.6 (7 / 1.9)	0.88	–0.9	gavage	28	14 000	28	Chang <i>et al.</i> (2003)
	Big Blue [®] mouse	–	4.8 (7 / 2)	8.4 (7 / 1.5)	1.75	3.6	gavage	28	28 000	28	Chang <i>et al.</i> (2003)
	Big Blue [®] mouse	–	5.7 (7 / 1.7)	6.2 (7 / 1.6)	1.09	0.5	gavage	28	28 000	28	Chang <i>et al.</i> (2003)
	Big Blue [®] mouse	–	4.1 (6 / 1.5)	4.8 (7 / 1.7)	1.17	0.7	gavage	28	28 000	28	Chang <i>et al.</i> (2003)
	Big Blue [®] mouse	–	6 (7 / 1.6)	7.3 (7 / 2.3)	1.22	1.3	gavage	28	28 000	28	Chang <i>et al.</i> (2003)
Potassium bromate	<i>gpt</i> delta (<i>gpt</i>)	–	0.93 (5 / –)	0.77 (5 / –)	0.83	–0.16	drinking water	91	1 056	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	–	0.93 (5 / –)	0.79 (5 / –)	0.85	–0.14	drinking water	91	510	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	–	0.27 (5 / –)	0.31 (5 / –)	1.15	0.04	drinking water	91	2 120	0	Umemura <i>et al.</i> (2006)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>gpt</i> delta (Spi)	+	0.28 (5 / -)	0.61 (5 / -)	2.18	0.33	drinking water	91	4 232	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	+	0.28 (5 / -)	0.99 (5 / -)	3.54	0.71	drinking water	63	3 339	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	-	0.28 (5 / -)	0.38 (5 / -)	1.36	0.1	drinking water	35	2 258	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.93 (5 / -)	1.3 (5 / -)	1.4	0.37	drinking water	91	2 120	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	+	0.27 (5 / -)	0.62 (5 / -)	2.3	0.35	drinking water	91	4 232	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.93 (5 / -)	1.6 (5 / -)	1.72	0.67	drinking water	91	4 232	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	-	0.27 (5 / -)	0.31 (5 / -)	1.15	0.04	drinking water	91	1 056	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (Spi)	-	0.27 (5 / -)	0.17 (5 / -)	0.63	-0.1	drinking water	91	510	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.83 (5 / -)	0.79 (5 / -)	0.95	-0.04	drinking water	91	4 232	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.83 (5 / -)	0.76 (5 / -)	0.92	-0.07	drinking water	63	3 339	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.83 (5 / -)	0.73 (5 / -)	0.88	-0.1	drinking water	35	2 258	0	Umemura <i>et al.</i> (2006)
	<i>gpt</i> delta (<i>gpt</i>)	-	0.83 (5 / -)	0.54 (5 / -)	0.65	-0.29	drinking water	7	585	0	Umemura <i>et al.</i> (2006)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Procarbazine hydrochloride	<i>gpt</i> delta (Spi)	–	0.28 (5 / –)	0.35 (5 / –)	1.25	0.07	drinking water	7	585	0	Umemura <i>et al.</i> (2006)
	Muta TM Mouse	–	4.6 (3 / 2.4)	10.3 (2 / 0.4)	2.24	5.7	ip	5	1 000	10	Pletsa <i>et al.</i> (1997)
	Muta TM Mouse	+	2.8 (2 / 2)	11.3 (2 / 2.3)	4.04	8.5	ip	5	750	14	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.1 (3 / 2.3)	65 (3 / 1.1)	15.85	60.9	ip	5	1 000	10	Pletsa <i>et al.</i> (1997)
	Muta TM Mouse	–	11.6 (1 / 0.2)	11.1 (2 / 0.2)	0.96	–0.5	ip	5	750	14	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.5 (2 / 1.7)	26.9 (2 / 1)	5.98	22.4	ip	5	750	28	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.1 (3 / 2.3)	20.3 (2 / 0.6)	4.95	16.2	ip	10	200	10	Pletsa <i>et al.</i> (1997)
	Muta TM Mouse	+	2.6 (2 / 0.7)	77.2 (2 / 0.1)	29.69	74.6	ip	5	1 000	7	Myhr (1991)
	Muta TM Mouse	+	1.5 (2 / 0.2)	51.5 (2 / 0.1)	34.33	50	ip	5	1 000	10	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	+	1.5 (2 / 0.2)	77.2 (2 / 0.1)	51.47	75.7	ip	5	1 000	7	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	–	11.6 (1 / 0.2)	6 (2 / 0.3)	0.52	–5.6	ip	5	750	28	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.7 (2 / 0.7)	10.3 (2 / 0.3)	2.19	5.6	ip	5	750	28	Suzuki <i>et al.</i> (1999b)
Muta TM Mouse	–	4.7 (2 / 0.7)	5.8 (3 / 1.6)	1.23	1.1	ip	5	750	14	Suzuki <i>et al.</i> (1999b)	

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	1.6 (4 / 2.1)	1.4 (4 / 2.1)	0.88	–0.2	ip	1	50	28	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	+	3.8 (4 / 1.5)	29.3 (2 / 1)	7.71	25.5	ip	5	750	28	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.3 (2 / 1.3)	25 (2 / 0.5)	5.81	20.7	ip	5	750	28	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.3 (2 / 1.3)	35 (3 / 2.1)	8.14	30.7	ip	5	750	14	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	–	3.1 (5 / 1.9)	3.6 (5 / 1.6)	1.16	0.5	ip	1	50	28	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	–	4.6 (3 / 2.4)	8.3 (3 / 1.2)	1.8	3.7	ip	10	200	10	Pletsa <i>et al.</i> (1997)
	Muta TM Mouse	+	1.5 (2 / 0.2)	136.7 (2 / 0.1)	91.13	135.2	ip	5	1 000	3	Hoorn <i>et al.</i> (1993)
	Muta TM Mouse	–	2.1 (3 / 1.4)	2.7 (4 / 1.5)	1.29	0.6	ip	1	50	28	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	–	3.8 (4 / 1.5)	4.2 (5 / 1.8)	1.11	0.4	ip	1	50	28	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	–	2.5 (3 / 2.2)	4.3 (5 / 2.2)	1.72	1.8	ip	1	50	7	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	–	5.2 (3 / 2.5)	8.7 (4 / 2.8)	1.67	3.5	ip	5	750	14	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	–	5.2 (3 / 2.5)	5.2 (2 / 0.7)	1	0	ip	5	750	28	Suzuki <i>et al.</i> (1999b)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	3.7 (4 / 2.5)	3.5 (4 / 2)	0.95	-0.2	ip	1	50	28	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	+	4.5 (2 / 1.7)	34.9 (3 / 2.4)	7.76	30.4	ip	5	750	14	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	-	3.9 (4 / 2)	4.4 (4 / 1.9)	1.13	0.5	ip	1	50	28	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	+	2.8 (2 / 2)	9.2 (2 / 0.4)	3.29	6.4	ip	5	750	28	Suzuki <i>et al.</i> (1999b)
	Muta TM Mouse	-	3.1 (7 / 3.7)	3.7 (4 / 2.1)	1.19	0.6	ip	1	50	14	Suzuki <i>et al.</i> (1999b)
Proton radiation	<i>lacZ</i> plasmid mouse	-	4.1 (4-6 / >0.3)	6.4 (4-6 / >0.3)	1.56	2.3	irradiation	1	2 Gy	112	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	-	4.1 (4-6 / >0.3)	6.3 (4-6 / >0.3)	1.54	2.2	irradiation	1	1 Gy	112	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	+	3.1 (4-6 / >0.3)	6.8 (4-6 / >0.3)	2.19	3.7	irradiation	1	1 Gy	56	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	-	4 (4-6 / >0.3)	5 (4-6 / >0.3)	1.25	1	irradiation	1	0.1 Gy	7	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	-	4.1 (4-6 / >0.3)	4.8 (4-6 / >0.3)	1.17	0.7	irradiation	1	0.1 Gy	112	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	+	3.1 (4-6 / >0.3)	6.6 (4-6 / >0.3)	2.13	3.5	irradiation	1	4 Gy	56	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	+	3.1 (4-6 / >0.3)	6.3 (4-6 / >0.3)	2.03	3.2	irradiation	1	2 Gy	56	Chang <i>et al.</i> (2005)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	3.1 (4–6 / >0.3)	6.4 (4–6 / >0.3)	2.06	3.3	irradiation	1	0.5 Gy	56	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	+	3.1 (4–6 / >0.3)	5.5 (4–6 / >0.3)	1.77	2.4	irradiation	1	0.1 Gy	56	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	+	4 (4–6 / >0.3)	7.4 (4–6 / >0.3)	1.85	3.4	irradiation	1	4 Gy	7	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	–	4 (4–6 / >0.3)	5 (4–6 / >0.3)	1.25	1	irradiation	1	1 Gy	7	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	–	4 (4–6 / >0.3)	4.8 (4–6 / >0.3)	1.2	0.8	irradiation	1	0.5 Gy	7	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	–	4.1 (4–6 / >0.3)	7 (4–6 / >0.3)	1.71	2.9	irradiation	1	4 Gy	112	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	–	5.4 (4–6 / >0.3)	6.6 (4–6 / >0.3)	1.22	1.2	irradiation	1	4 Gy	112	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	–	4 (4–6 / >0.3)	5.3 (4–6 / >0.3)	1.33	1.3	irradiation	1	2 Gy	7	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	+	5.8 (4–6 / >0.3)	12.6 (4–6 / >0.3)	2.17	6.8	irradiation	1	1 Gy	56	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	+	5.7 (4 / –)	9.8 (4 / –)	1.72	4.1	irradiation	1	2 Gy	56	Chang <i>et al.</i> (2007)
	<i>lacZ</i> plasmid mouse	+	3.1 (4 / –)	6.3 (4 / –)	2.03	3.2	irradiation	1	2 Gy	56	Chang <i>et al.</i> (2007)
	<i>lacZ</i> plasmid mouse	–	5.4 (4–6 / >0.3)	7.4 (4–6 / >0.3)	1.37	2	irradiation	1	2 Gy	112	Chang <i>et al.</i> (2005)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	-	5.4 (4-6 / >0.3)	7.1 (4-6 / >0.3)	1.31	1.7	irradiation	1	0.5 Gy	112	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	-	5.4 (4-6 / >0.3)	7.8 (4-6 / >0.3)	1.44	2.4	irradiation	1	0.1 Gy	112	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	-	5.4 (4-6 / >0.3)	8.6 (4-6 / >0.3)	1.59	3.2	irradiation	1	1 Gy	112	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	+	5.8 (4-6 / >0.3)	9.8 (4-6 / >0.3)	1.69	4	irradiation	1	2 Gy	56	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	-	4.2 (4-6 / >0.3)	4.8 (4-6 / >0.3)	1.14	0.6	irradiation	1	0.1 Gy	7	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	+	5.8 (4-6 / >0.3)	11.3 (4-6 / >0.3)	1.95	5.5	irradiation	1	0.5 Gy	56	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	-	5.8 (4-6 / >0.3)	5.9 (4-6 / >0.3)	1.02	0.1	irradiation	1	0.1 Gy	56	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	+	4.2 (4-6 / >0.3)	7.7 (4-6 / >0.3)	1.83	3.5	irradiation	1	4 Gy	7	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	-	4.2 (4-6 / >0.3)	6.3 (4-6 / >0.3)	1.5	2.1	irradiation	1	2 Gy	7	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	-	4.2 (4-6 / >0.3)	4.8 (4-6 / >0.3)	1.14	0.6	irradiation	1	1 Gy	7	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	-	4.2 (4-6 / >0.3)	5.4 (4-6 / >0.3)	1.29	1.2	irradiation	1	0.5 Gy	7	Chang <i>et al.</i> (2005)
	<i>lacZ</i> plasmid mouse	+	5.8 (4-6 / >0.3)	10.6 (4-6 / >0.3)	1.83	4.8	irradiation	1	4 Gy	56	Chang <i>et al.</i> (2005)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Quinoline	<i>lacZ</i> plasmid mouse	-	4.1 (4-6 / >0.3)	5.5 (4-6 / >0.3)	1.34	1.4	irradiation	1	0.5 Gy	112	Chang <i>et al.</i> (2005)
	Muta TM Mouse	+	5.1 (5 / 0.5)	22.5 (5 / 0.8)	4.41	17.4	ip	4	200	14	Miyata <i>et al.</i> (1998)
	Muta TM Mouse	-	3.6 (3 / -)	5.5 (3 / -)	1.53	1.9	ip	4	200	14	Miyata <i>et al.</i> (1998)
	Muta TM Mouse	-	2.8 (3 / -)	3.9 (3 / -)	1.39	1.1	ip	4	200	14	Miyata <i>et al.</i> (1998)
	Muta TM Mouse	+	4.6 (3 / 0.3)	17.3 (4 / 0.2)	3.76	12.7	ip	4	200	14	Suzuki <i>et al.</i> (1998)
	Muta TM Mouse	-	6.5 (2 / -)	6 (2 / -)	0.92	-0.5	ip	4	200	14	Suzuki <i>et al.</i> (1998)
	Muta TM Mouse	-	6.5 (2 / -)	8 (2 / -)	1.23	1.5	ip	4	200	14	Suzuki <i>et al.</i> (1998)
	Muta TM Mouse	-	6.5 (2 / -)	6 (2 / -)	0.92	-0.5	ip	4	200	14	Suzuki <i>et al.</i> (1998)
	Muta TM Mouse	+	6.7 (3 / 0.2)	34.3 (4 / 0.2)	5.12	27.6	ip	4	200	14	Suzuki <i>et al.</i> (1998)
	Muta TM Mouse <i>cII</i>	+	5.6 (3 / 1.5)	41.4 (4 / 1.2)	7.39	35.8	ip	4	200	14	Suzuki <i>et al.</i> (2000)
Riddelline	Big Blue [®] rat <i>cII</i>	-	3.52 (3 / 1.019)	3.75 (3 / 1.374)	1.07	0.23	gavage	84	18	1	Mei <i>et al.</i> (2004a)
	Big Blue [®] rat <i>cII</i>	+	3 (6 / 2.484)	4.7 (6 / 2.111)	1.57	1.7	gavage	84	6	1	Mei <i>et al.</i> (2004b)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat <i>cII</i>	+	3 (6 / 2.484)	5.5 (6 / 2.294)	1.83	2.5	gavage	84	18	1	Mei <i>et al.</i> (2004b)
	Big Blue [®] rat <i>cII</i>	+	3 (6 / 2.484)	10.3 (6 / 2.232)	3.43	7.3	gavage	84	60	1	Mei <i>et al.</i> (2004b)
	Big Blue [®] rat <i>cII</i>	+	3.95 (3 / 1.054)	6.7 (3 / 0.788)	1.7	2.75	gavage	84	18	1	Mei <i>et al.</i> (2004a)
Rock wool fibres	Big Blue [®] rat	-	3.11 (5 / 1.644)	4.23 (5 / 1.547)	1.36	1.12	intratracheal	1	8	28	Topinka <i>et al.</i> (2006a)
	Big Blue [®] rat	-	3.77 (5 / 1.925)	5.25 (5 / 1.566)	1.39	1.48	intratracheal	28	32	28	Topinka <i>et al.</i> (2006b)
	Big Blue [®] rat	-	3.11 (5 / 1.644)	2.91 (5 / 1.568)	0.94	-0.2	intratracheal	1	4	28	Topinka <i>et al.</i> (2006a)
	Big Blue [®] rat	-	3.77 (5 / 1.925)	5.25 (4 / 1.205)	1.39	1.48	intratracheal	28	30	28	Topinka <i>et al.</i> (2006a)
	Big Blue [®] rat	+	3.51 (5 / 1.292)	7.48 (5 / 1.28)	2.13	3.97	intratracheal	28	30	112	Topinka <i>et al.</i> (2006a)
	Big Blue [®] rat	-	3.11 (5 / 1.644)	4.23 (5 / 1.547)	1.36	1.12	intratracheal	1	8	28	Topinka <i>et al.</i> (2006b)
	Big Blue [®] rat	+	3.36 (5 / 1.654)	6.33 (5 / 1.374)	1.88	2.97	intratracheal	1	8	112	Topinka <i>et al.</i> (2006a)
	Big Blue [®] rat	-	3.11 (5 / 1.644)	2.91 (5 / 1.568)	0.94	-0.2	intratracheal	1	4	28	Topinka <i>et al.</i> (2006b)
	Big Blue [®] rat	+	3.36 (5 / 1.654)	5.18 (5 / 1.26)	1.54	1.82	intratracheal	1	4	112	Topinka <i>et al.</i> (2006a)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Rock wool fibres + B(a)P	Big Blue [®] rat	+	3.11 (5 / 1.644)	12.68 (3 / 1.029)	4.08	9.57	intratracheal	1	4	28	Topinka <i>et al.</i> (2006b)
	Big Blue [®] rat	+	3.11 (5 / 1.644)	17.23 (3 / 0.803)	5.54	14.12	intratracheal	1	8	28	Topinka <i>et al.</i> (2006b)
	Big Blue [®] rat	+	3.77 (5 / 1.925)	11.85 (3 / 0.905)	3.14	8.08	intratracheal	28	32	28	Topinka <i>et al.</i> (2006b)
Sodium saccharin	Big Blue [®] rat	-	1.76 (- / 0.05)	0 (- / 0.05)	0	-1.76	diet	10		14	Turner <i>et al.</i> (2001)
	Big Blue [®] rat	-	1.44 (6 / 1.2)	1.72 (7 / 1.4)	1.19	0.28	diet	10		14	Turner <i>et al.</i> (2001)
Solanidine	Muta TM Mouse	+	3 (- / -)	10.4 (1 / 0.1)	3.47	7.4	ip	3	3 000	8	Crawford and Myhr (1995)
	Muta TM Mouse	+	3 (- / -)	10.5 (1 / 0.5)	3.5	7.5	ip	3	3 000	8	Crawford and Myhr (1995)
	Muta TM Mouse	-	3 (- / -)	5.2 (2 / 0.7)	1.73	2.2	ip	3	900	8	Crawford and Myhr (1995)
	Muta TM Mouse	+	3 (- / -)	6.1 (2 / 0.2)	2.03	3.1	ip	3	900	8	Crawford and Myhr (1995)
Streptozotocin	Big Blue [®] mouse	+	8.3 (3 / 1.5)	16.4 (3 / 1.5)	1.98	8.1	ip	1	100	14	Schmezer, Eckert and Liegibel (1994)
	Big Blue [®] mouse	+	1.5 (3 / 1.6)	8.8 (3 / 1.5)	5.87	7.3	ip	1	100	14	Schmezer, Eckert and Liegibel (1994)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	–	8.3 (3 / 1.5)	7.3 (3 / 1.6)	0.88	–1	ip	1	75	14	Schmezer, Eckert and Liegibel (1994)
	Big Blue [®] mouse	–	1.5 (3 / 1.6)	3.1 (3 / 2.1)	2.07	1.6	ip	1	75	14	Schmezer, Eckert and Liegibel (1994)
Sucrose	Big Blue [®] rat	–	2.59 (8 / –)	3.05 (6 / –)	1.18	0.46	diet	21	119 406	0	Moller <i>et al.</i> (2003)
	Big Blue [®] rat	–	2.59 (8 / –)	3.07 (6 / –)	1.19	0.48	diet	21	119 406	0	Risom <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	3.8 (9 / –)	2.8 (8 / –)	0.74	–1	diet	21	236 000	0	Hansen <i>et al.</i> (2004)
	Big Blue [®] rat	–	3.63 (8 / –)	3.31 (6 / –)	0.91	–0.32	diet	21	119 406	0	Risom <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	–	3.8 (9 / –)	3.4 (8 / –)	0.89	–0.4	diet	21	60 000	0	Hansen <i>et al.</i> (2004)
	Big Blue [®] rat <i>cII</i>	–	22 (13 / –)	29 (11 / –)	1.32	7	diet	35	700 g/kg	0	Hansen <i>et al.</i> (2008)
	Big Blue [®] rat <i>cII</i>	–	22 (13 / –)	29 (11 / –)	1.32	7	diet	35	700 g/kg	0	Hansen <i>et al.</i> (2008)
	Big Blue [®] rat	–	3.63 (8 / –)	3.34 (6 / –)	0.92	–0.29	diet	21	119 406	0	Moller <i>et al.</i> (2003)
	Big Blue [®] rat <i>cII</i>	+	3.3 (9 / 1.4)	5.9 (8 / –)	1.79	2.6	diet	21	60 000	0	Hansen <i>et al.</i> (2004)
	Big Blue [®] rat	+	2.69 (6 / 2.5)	3.33 (6 / 2.3)	1.24	0.64	diet	21	383 040	0	Dragsted, 2002)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Tamoxifen	Big Blue [®] rat	+	2.46 (6 / 2.7)	5.64 (5 / 0.9)	2.29	3.18	diet	21	383 040	0	Dragsted (2002)
	Big Blue [®] rat	-	2.69 (6 / 2.5)	3.32 (6 / 1.8)	1.23	0.63	diet	21	177 240	0	Dragsted (2002)
	Big Blue [®] rat	+	2.46 (6 / 2.7)	4.43 (6 / 3)	1.8	1.97	diet	21	177 240	0	Dragsted (2002)
	Big Blue [®] rat	-	2.69 (6 / 2.5)	3.35 (6 / 3.1)	1.25	0.66	diet	21	76 650	0	Dragsted (2002)
	Big Blue [®] rat	-	2.46 (6 / 2.7)	3.62 (6 / 2.2)	1.47	1.16	diet	21	76 650	0	Dragsted (2002)
	Big Blue [®] rat <i>cII</i>	+	3.3 (9 / 1.4)	6.5 (8 / 0.77)	1.97	3.2	diet	21	236 000	0	Hansen <i>et al.</i> (2004)
	Big Blue [®] rat	-	1.9 (6 / 0.4)	0.8 (6 / 0.5)	0.42	-1.1	ip	21	420	28	da Costa <i>et al.</i> (2002)
	Big Blue [®] rat	+	1 (6 / 1.5)	3.2 (6 / 1.3)	3.2	2.2	ip	21	420	28	da Costa <i>et al.</i> (2002)
	Big Blue [®] rat	+	4 (4 / 1.2)	15 (4 / 1.2)	3.75	11	gavage	42	840	0	Styles <i>et al.</i> (2001)
	Big Blue [®] rat	+	5.5 (4 / 1.2)	19 (4 / 1.2)	3.45	13.5	gavage	42	840	14	Styles <i>et al.</i> (2001)
Big Blue [®] rat	+	7.5 (4 / 1.2)	35 (4 / 1.2)	4.67	27.5	gavage	42	840	84	Styles <i>et al.</i> (2001)	
Big Blue [®] rat	+	6 (4 / 1.2)	30.5 (4 / 1.2)	5.08	24.5	gavage	42	840	168	Styles <i>et al.</i> (2001)	
Big Blue [®] rat <i>cII</i>	+	5 (5 / -)	15 (5 / -)	3	10	gavage	42	840	14	Davies <i>et al.</i> (1999)	
Big Blue [®] rat <i>cII</i>	-	6 (5 / -)	10 (5 / -)	1.67	4	gavage	42	420	14	Davies <i>et al.</i> (1999)	

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	+	3 (3 / 0.1)	11 (4 / 0.1)	3.67	8	gavage	42	840	14	Davies <i>et al.</i> (1997)
	Big Blue [®] rat	+	1 (6 / -)	2 (6 / -)	2	1	ip	21	420	30	Chen <i>et al.</i> (2002)
	Big Blue [®] rat	+	2 (5 / 0.3)	7 (5 / 0.3)	3.5	5	gavage	42	420	14	Davies <i>et al.</i> (1997)
	Big Blue [®] rat <i>cII</i>	+	8 (6 / 2.2)	11.2 (6 / 2.2)	1.4	3.2	ip	21	420	0	Chen <i>et al.</i> (2002)
	Big Blue [®] rat	+	4.5 (5 / 0.3)	12 (4 / 0.3)	2.67	7.5	gavage	42	840	14	Davies <i>et al.</i> (1997)
Tamoxifen + phenobarbital	Big Blue [®] rat	+	5.5 (4 / 1.2)	19 (4 / 1.2)	3.45	13.5	gavage + drinking water	42	840	14	Styles <i>et al.</i> (2001)
	Big Blue [®] rat	+	7.5 (4 / 1.2)	34.5 (4 / 1.2)	4.6	27	gavage + drinking water	42	840	84	Styles <i>et al.</i> (2001)
	Big Blue [®] rat	+	6 (4 / 1.2)	33 (4 / 1.2)	5.5	27	gavage + drinking water	42	840	168	Styles <i>et al.</i> (2001)
Thiotepa	Big Blue [®] rat	+	3.5 (8 / 1.6)	14.1 (8 / 1.7)	4.03	10.6	ip	12	16.8	7	Chen <i>et al.</i> (1998)
Toremifene citrate	Big Blue [®] rat	-	2.5 (5 / 0.2)	4 (5 / 0.3)	1.6	1.5	gavage	42	840	14	Davies <i>et al.</i> (1997)
<i>trans</i> -4-Hydroxy-2-nonenal	Big Blue [®] mouse	-	1.4 (5 / 1.4)	1.5 (5 / 1.6)	1.07	0.1	ip	1	50	14	Nishikawa <i>et al.</i> (2000)
	Big Blue [®] mouse	-	2.4 (5 / 1.4)	1.4 (5 / 0.4)	0.58	-1	ip	1	5	14	Nishikawa <i>et al.</i> (2000)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Trichloroethylene (TCE)	Big Blue [®] mouse	–	2.4 (5 / 1.4)	2.6 (5 / 1.3)	1.08	0.2	ip	1	50	14	Nishikawa <i>et al.</i> (2000)
	Big Blue [®] mouse	–	1.1 (5 / 0.9)	2.3 (5 / 1.3)	2.09	1.2	ip	1	50	14	Nishikawa <i>et al.</i> (2000)
	Muta [™] Mouse	–	8.4 (10 / 3.2)	3.5 (5 / 1.8)	0.42	–4.9	inhalation	12	71 250	60	Douglas <i>et al.</i> (1999)
	Muta [™] Mouse	–	3.6 (8 / 2)	3.4 (8 / 2.5)	0.94	–0.2	inhalation	12	71 250	60	Douglas <i>et al.</i> (1999)
	Muta [™] Mouse	–	3.6 (8 / 2)	3.1 (9 / 2.7)	0.86	–0.5	inhalation	12	26 150	60	Douglas <i>et al.</i> (1999)
	Muta [™] Mouse	–	3.6 (8 / 2)	3.8 (9 / 2.4)	1.06	0.2	inhalation	12	4 600	60	Douglas <i>et al.</i> (1999)
	Muta [™] Mouse	–	7.8 (10 / 3.2)	7.4 (10 / 3.1)	0.95	–0.4	inhalation	12	4 600	60	Douglas <i>et al.</i> (1999)
	Muta [™] Mouse	–	7.7 (10 / 3.3)	5.6 (9 / 2.7)	0.73	–2.1	inhalation	12	26 150	60	Douglas <i>et al.</i> (1999)
	Muta [™] Mouse	–	7.7 (10 / 3.3)	5.8 (10 / 3.4)	0.75	–1.9	inhalation	12	4 600	60	Douglas <i>et al.</i> (1999)
	Muta [™] Mouse	–	7.3 (8 / 2.7)	4.7 (9 / 3.6)	0.64	–2.6	inhalation	12	26 150	60	Douglas <i>et al.</i> (1999)
	Muta [™] Mouse	–	7.3 (8 / 2.7)	4.6 (8 / 3)	0.63	–2.7	inhalation	12	71 250	60	Douglas <i>et al.</i> (1999)
Muta [™] Mouse	–	6.8 (8 / 2.9)	7.2 (8 / 3.5)	1.06	0.4	inhalation	12	71 250	60	Douglas <i>et al.</i> (1999)	

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	7.3 (8 / 2.7)	5.6 (9 / 3.5)	0.77	–1.7	inhalation	12	4 600	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	7.2 (8 / 2.4)	6.5 (9 / 1.7)	0.9	–0.7	inhalation	12	4 600	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	8.4 (10 / 3.2)	6.7 (9 / 2.7)	0.8	–1.7	inhalation	12	26 150	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	8.4 (10 / 3.2)	5.8 (10 / 4.4)	0.69	–2.6	inhalation	12	4 600	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	6.6 (8 / 2.3)	7.1 (8 / 1.7)	1.08	0.5	inhalation	12	71 250	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	6.6 (8 / 2.3)	8.6 (9 / 2.1)	1.3	2	inhalation	12	26 150	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	6.6 (8 / 2.3)	7.1 (9 / 2.2)	1.08	0.5	inhalation	12	4 600	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	7.7 (10 / 3.3)	3.6 (5 / 1.5)	0.47	–4.1	inhalation	12	71 250	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	7.8 (10 / 3.2)	10.9 (9 / 2.3)	1.4	3.1	inhalation	12	26 150	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	7.2 (8 / 2.4)	5.1 (9 / 2.8)	0.71	–2.1	inhalation	12	26 150	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	6.8 (8 / 2.9)	6.3 (9 / 2.8)	0.93	–0.5	inhalation	12	26 150	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	6.8 (8 / 2.9)	7.2 (9 / 3.4)	1.06	0.4	inhalation	12	4 600	60	Douglas <i>et al.</i> (1999)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	5.5 (10 / 3.8)	6.7 (5 / 1.8)	1.22	1.2	inhalation	12	71 250	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	5.5 (10 / 3.8)	5.1 (9 / 3.7)	0.93	–0.4	inhalation	12	26 150	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	5.5 (10 / 3.8)	4.6 (10 / 3.6)	0.84	–0.9	inhalation	12	4 600	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	7.8 (10 / 3.2)	9.9 (5 / 1.4)	1.27	2.1	inhalation	12	71 250	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	7.2 (8 / 2.4)	7.2 (8 / 2.6)	1	0	inhalation	12	71 250	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	9.1 (10 / 2.8)	6.3 (10 / 3.1)	0.69	–2.8	inhalation	12	4 600	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	9.1 (10 / 2.8)	7.1 (9 / 2.5)	0.78	–2	inhalation	12	26 150	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	9.1 (10 / 2.8)	6 (5 / 1.6)	0.66	–3.1	inhalation	12	71 250	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	10.7 (8 / 2.2)	10.4 (9 / 2.5)	0.97	–0.3	inhalation	12	4 600	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	10.7 (8 / 2.2)	8.8 (9 / 2.4)	0.82	–1.9	inhalation	12	26 150	60	Douglas <i>et al.</i> (1999)
	Muta TM Mouse	–	10.7 (8 / 2.2)	7.1 (8 / 1.9)	0.66	–3.6	inhalation	12	7 1250	60	Douglas <i>et al.</i> (1999)
Tris-(2,3-dibromopropyl)phosphate	Big Blue [®] mouse	–	3.9 (6 / 1.3)	4.1 (5 / 1.2)	1.05	0.2	gavage	2	300	14	Provost <i>et al.</i> (1996)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	-	3.9 (6 / 1.4)	4.1 (5 / 1.3)	1.05	0.2	gavage	4	2 400	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	-	3.2 (6 / -)	4.2 (5 / -)	1.31	1	gavage	4	1 200	14	de Boer <i>et al.</i> (1996)
	Big Blue [®] rat	+	2.4 (6 / 0.5)	5.9 (5 / 1.7)	2.46	3.5	diet	45	540	0	de Boer <i>et al.</i> (2000)
	Big Blue [®] rat	+	2.4 (6 / 0.5)	15.2 (4 / 1.8)	6.33	12.8	diet	45	10 800	0	de Boer <i>et al.</i> (2000)
	Big Blue [®] rat	-	2.6 (6 / 0.3)	4.3 (5 / 1.8)	1.65	1.7	diet	45	540	0	de Boer <i>et al.</i> (2000)
	Big Blue [®] rat	+	2.6 (6 / 0.3)	9.5 (4 / 1.7)	3.65	6.9	diet	45	10 800	0	de Boer <i>et al.</i> (2000)
	Big Blue [®] rat	-	1.8 (6 / 0.3)	2.1 (5 / 1.7)	1.17	0.3	diet	45	540	0	de Boer <i>et al.</i> (2000)
	Big Blue [®] rat	+	1.8 (6 / 0.3)	3.9 (4 / 1.8)	2.17	2.1	diet	45	10 800	0	de Boer <i>et al.</i> (2000)
	Big Blue [®] mouse	-	3.4 (6 / -)	3.6 (5 / -)	1.06	0.2	gavage	2	300	14	de Boer <i>et al.</i> (1996)
	Big Blue [®] mouse	-	3.4 (6 / -)	3.7 (5 / -)	1.09	0.3	gavage	4	1 200	14	de Boer <i>et al.</i> (1996)
	Big Blue [®] mouse	-	3.9 (6 / 1.3)	5.1 (5 / 1)	1.31	1.2	gavage	4	2 400	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	-	3.2 (6 / -)	3.7 (5 / -)	1.16	0.5	gavage	2	300	14	de Boer <i>et al.</i> (1996)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	3.7 (6 / 2.2)	5.3 (5 / 1.8)	1.43	1.6	gavage	4	2 400	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	-	3.2 (6 / -)	4.9 (5 / -)	1.53	1.7	gavage	4	2 400	14	de Boer <i>et al.</i> (1996)
	Big Blue [®] mouse	-	2.8 (6 / -)	3.4 (5 / -)	1.21	0.6	gavage	2	300	14	de Boer <i>et al.</i> (1996)
	Big Blue [®] mouse	+	2.8 (6 / -)	5.5 (5 / -)	1.96	2.7	gavage	4	1 200	14	de Boer <i>et al.</i> (1996)
	Big Blue [®] mouse	-	2.8 (6 / -)	4.9 (5 / -)	1.75	2.1	gavage	4	2 400	14	de Boer <i>et al.</i> (1996)
	Big Blue [®] mouse	-	3.9 (6 / 1.4)	4.4 (5 / 1.2)	1.13	0.5	gavage	4	1 200	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	-	3.9 (6 / 1.3)	4.9 (5 / 1.1)	1.26	1	gavage	4	1 200	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	-	3.7 (6 / 2.2)	3.7 (5 / 1.6)	1	0	gavage	2	300	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	+	3.7 (6 / 2.2)	6 (5 / 1.7)	1.62	2.3	gavage	4	1 200	14	Provost <i>et al.</i> (1996)
	Big Blue [®] mouse	-	3.4 (6 / -)	3.5 (5 / -)	1.03	0.1	gavage	4	2 400	14	de Boer <i>et al.</i> (1996)
	Big Blue [®] mouse	-	3.9 (6 / 1.4)	4.5 (5 / 1.2)	1.15	0.6	gavage	2	300	14	Provost <i>et al.</i> (1996)
Uracil	Big Blue [®] rat	+	0.3 (3 / 0.7)	1.3 (3 / 0.8)	4.33	1	diet	350	1 260 000	1	Takahashi <i>et al.</i> (2000)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] rat	-	0.5 (3 / 0.7)	1.4 (3 / 0.4)	2.8	0.9	diet	140	504 000	0	Takahashi <i>et al.</i> (2000)
	Big Blue [®] rat	-	0.3 (3 / 0.4)	1.4 (3 / 0.4)	4.67	1.1	diet	70	252 000	0	Takahashi <i>et al.</i> (2000)
	Big Blue [®] rat	-	0.3 (3 / 0.6)	0.4 (3 / 0.4)	1.33	0.1	diet	14	50 400	0	Takahashi <i>et al.</i> (2000)
Urethane	Muta TM Mouse	+	5.65 (6 / 1.38)	15.7 (7 / 1.69)	2.78	10.05	gavage	56	5 600	3	Singer (2006)
	Muta TM Mouse	-	6.23 (5 / 1.72)	5.81 (5 / 1.59)	0.93	-0.42	gavage	7	175	28	Singer (2006)
	Muta TM Mouse	+	4.37 (5 / 2.06)	7.82 (5 / 1.69)	1.79	3.45	gavage	7	700	28	Singer (2006)
	Muta TM Mouse	-	4.54 (5 / 0.805)	3.88 (5 / 1.03)	0.85	-0.66	gavage	7	175	3	Singer (2006)
	Muta TM Mouse	+	4.26 (6 / 1.61)	10.1 (5 / 1.52)	2.37	5.84	gavage	28	2 800	3	Singer (2006)
	Muta TM Mouse	+	5.65 (6 / 1.38)	11 (7 / 1.98)	1.95	5.35	gavage	56	2 800	3	Singer (2006)
	Muta TM Mouse	-	5.65 (6 / 1.38)	6.3 (6 / 2.04)	1.12	0.65	gavage	56	700	3	Singer (2006)
	Muta TM Mouse	+	4.74 (6 / 2.11)	10.5 (6 / 2.02)	2.22	5.76	gavage	28	2 800	28	Singer (2006)
	Muta TM Mouse	-	4.74 (6 / 2.11)	5.98 (7 / 1.97)	1.26	1.24	gavage	28	700	28	Singer (2006)
	Muta TM Mouse	+	5.41 (6 / 2.38)	8.95 (5 / 1.87)	1.65	3.54	gavage	28	2 800	3	Singer (2006)
	Muta TM Mouse	-	5.41 (6 / 2.38)	6.09 (5 / 1.83)	1.13	0.68	gavage	28	700	3	Singer (2006)
	Muta TM Mouse	-	4.54 (5 / 0.805)	4.94 (6 / 1.67)	1.09	0.4	gavage	7	700	3	Singer (2006)
	Muta TM Mouse	-	10.5 (5 / 0.34)	6.6 (5 / 0.122)	0.63	-3.9	gavage	7	175	3	Singer (2006)
	Big Blue [®] mouse <i>cII</i>	-	2.9 (12 / -)	3 (11 / -)	1.03	0.1	ip	1	60	28	Hernandez and Forkert (2007a)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	9.34 (6 / 1.06)	11.9 (7 / 1.76)	1.27	2.56	gavage	28	700	28	Singer (2006)
	Muta TM Mouse	-	9.33 (6 / 0.374)	16.8 (5 / 1.8)	1.8	7.47	gavage	28	2 800	3	Singer (2006)
	Muta TM Mouse	-	9.33 (6 / 0.374)	9.11 (5 / 0.28)	0.98	-0.22	gavage	28	700	3	Singer (2006)
	Muta TM Mouse	-	15.9 (5 / 0.325)	23.6 (5 / 0.0832)	1.48	7.7	gavage	7	700	28	Singer (2006)
	Muta TM Mouse	-	6.23 (5 / 1.72)	7.23 (5 / 1.41)	1.16	1	gavage	7	700	28	Singer (2006)
	Muta TM Mouse	-	10.5 (5 / 0.34)	10.4 (6 / 0.501)	0.99	-1.00 E-01	gavage	7	700	3	Singer (2006)
	Muta TM Mouse	-	4.26 (6 / 1.61)	6.61 (5 / 1.38)	1.55	2.35	gavage	28	700	3	Singer (2006)
	Muta TM Mouse	+	7.88 (6 / 0.979)	18.5 (7 / 1.12)	2.35	10.62	gavage	56	5 600	3	Singer (2006)
	Muta TM Mouse	-	7.88 (6 / 0.979)	13.1 (7 / 1.43)	1.66	5.22	gavage	56	2 800	3	Singer (2006)
	Muta TM Mouse	-	7.88 (6 / 0.979)	11.3 (6 / 0.75)	1.43	3.42	gavage	56	700	3	Singer (2006)
	Muta TM Mouse	+	6.21 (6 / 1.85)	14.1 (6 / 1.24)	2.27	7.89	gavage	28	2 800	28	Singer (2006)
	Muta TM Mouse	-	6.21 (6 / 1.85)	9.91 (7 / 2.09)	1.6	3.7	gavage	28	700	28	Singer (2006)
	Muta TM Mouse	-	3.53 (5 / 1.17)	3.44 (5 / 1.98)	0.97	-9.00 E-02	gavage	7	175	3	Singer (2006)
	Muta TM Mouse	-	15.9 (5 / 0.325)	12.3 (5 / 0.24)	0.77	-3.6	gavage	7	175	28	Singer (2006)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse <i>cII</i>	+	11 (4 / 1.337)	110.9 (4 / 1.312)	10.08	99.9	drinking water	237	69 678	0	Mirsalis <i>et al.</i> (2005)
	Muta [™] Mouse	+	6.2 (5 / 1.5)	10.2 (3 / 1.1)	1.65	4	ip	1	900	16	Williams <i>et al.</i> (1998)
	Muta [™] Mouse	+	13.5 (6 / 1.17)	26.7 (7 / 1.12)	1.98	13.2	gavage	56	5 600	3	Singer (2006)
	Muta [™] Mouse	+	13.5 (6 / 1.17)	22 (7 / 1.91)	1.63	8.5	gavage	56	2 800	3	Singer (2006)
	Big Blue [®] mouse	+	8 (2 / 0.7)	12 (2 / 0.5)	1.5	4	diet	105	13 650	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	+	8 (2 / 0.8)	40 (2 / 0.4)	5	32	diet	105	13 650	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse <i>cII</i>	+	11.4 (3 / 0.962)	144.3 (2 / 0.52)	12.66	132.9	drinking water	190	59 660	0	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] mouse	+	7 (2 / 1.1)	52 (2 / 0.6)	7.43	45	diet	105	13 650	0	Shephard, Gunz and Schlatter (1995)
	Big Blue [®] mouse	-	7.5 (7 / 1.8)	7.9 (7 / 2)	1.05	0.4	gavage	28	1 400	28	Chang <i>et al.</i> (2003)
	Muta [™] Mouse	+	4.6 (6 / 2.7)	8.1 (7 / 2.8)	1.76	3.5	ip	1	900	14	Williams <i>et al.</i> (1998)
	Muta [™] Mouse	+	5.5 (6 / 3.3)	8.6 (7 / 3.3)	1.56	3.1	ip	1	900	14	Williams <i>et al.</i> (1998)
	Muta [™] Mouse	+	4.3 (6 / 2.9)	8.4 (7 / 2.6)	1.95	4.1	ip	1	900	14	Williams <i>et al.</i> (1998)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse	+	5.7 (7 / 1.7)	12 (7 / 1.4)	2.1	6.3	gavage	28	1 400	28	Chang <i>et al.</i> (2003)
	Muta TM Mouse	-	4.37 (5 / 2.06)	5.09 (5 / 1.81)	1.16	0.72	gavage	7	175	28	Singer (2006)
	Big Blue [®] mouse	-	6 (7 / 1.6)	8.1 (7 / 1.8)	1.35	2.1	gavage	28	1 400	28	Chang <i>et al.</i> (2003)
	Muta TM Mouse	+	9.34 (6 / 1.06)	19.7 (6 / 0.862)	2.11	10.36	gavage	28	2 800	28	Singer (2006)
	Big Blue [®] mouse <i>cII</i>	+	11 (4 / 1.337)	93 (7 / 1.926)	8.45	82	drinking water	210	64 260	0	Mirsalis <i>et al.</i> (2005)
	Big Blue [®] mouse <i>cII</i>	+	4.9 (3 / 0.8588)	92.2 (6 / 0.896)	18.82	87.3	drinking water	190	59 660	0	Mirsalis <i>et al.</i> (2005)
	Muta TM Mouse	+	5.1 (6 / 2.5)	10.6 (7 / 3.3)	2.08	5.5	ip	1	900	14	Williams <i>et al.</i> (1998)
	Big Blue [®] mouse	-	5.5 (7 / 1.3)	9.2 (7 / 1.5)	1.67	3.7	gavage	28	1 400	28	Chang <i>et al.</i> (2003)
	Big Blue [®] mouse	-	4.8 (7 / 1.5)	6.7 (7 / 2)	1.4	1.9	gavage	28	1 400	28	Chang <i>et al.</i> (2003)
	Muta TM Mouse	+	6.8 (5 / 2.7)	14.8 (3 / 1.3)	2.18	8	ip	1	900	16	Williams <i>et al.</i> (1998)
	Big Blue [®] mouse <i>cII</i>	+	2.9 (12 / -)	9.2 (7 / -)	3.17	6.3	ip	1	1 000	28	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	+	2.9 (12 / -)	4.3 (6 / -)	1.48	1.4	ip	1	500	28	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	-	2.9 (12 / -)	2.3 (5 / -)	0.79	-0.6	ip	1	250	28	Hernandez and Forkert (2007a)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	–	13.5 (6 / 1.17)	9.13 (6 / 1.18)	0.68	–4.37	gavage	56	700	3	Singer (2006)
	Muta TM Mouse	–	3.53 (5 / 1.17)	4.54 (6 / 1.74)	1.29	1.01	gavage	7	700	3	Singer (2006)
	Big Blue [®] mouse	+	4.8 (7 / 2)	11.4 (7 / 1.8)	2.4	6.6	gavage	28	1400	28	Chang <i>et al.</i> (2003)
UVB	<i>gpt</i> delta (Spi)	+	0.11 (2 / 10.4)	0.25 (2 / 10.7)	2.27	0.14	irradiation	1	0.3 kJ/m ²	28	Horiguchi <i>et al.</i> (2001)
	Muta TM Mouse	+	9.8 (1 / 0.1)	73.2 (2 / 0.2)	7.47	63.4	whole-body irradiation	6	1 kJ/m ²	23	Frijhoff <i>et al.</i> (1997)
	<i>gpt</i> delta (Spi)	+	0.11 (2 / 10.4)	0.37 (2 / 8.9)	3.36	0.26	irradiation	1	1 kJ/m ²	28	Horiguchi <i>et al.</i> (2001)
	<i>gpt</i> delta (<i>gpt</i>)	+	1.3 (2 / 0.8)	10.7 (2 / 1.2)	8.23	9.4	irradiation	1	2 kJ/m ²	28	Horiguchi <i>et al.</i> (1999)
	<i>gpt</i> delta (<i>gpt</i>)	+	1.3 (2 / 0.8)	7.2 (2 / 0.8)	5.54	5.9	irradiation	1	1.5 kJ/m ²	28	Horiguchi <i>et al.</i> (1999)
	<i>gpt</i> delta (<i>gpt</i>)	+	1.3 (2 / 0.8)	9.2 (2 / 1.1)	7.08	7.9	irradiation	1	1 kJ/m ²	28	Horiguchi <i>et al.</i> (1999)
	<i>gpt</i> delta (<i>gpt</i>)	+	1.3 (2 / 0.8)	12.7 (2 / 1.5)	9.77	11.4	irradiation	1	0.5 kJ/m ²	28	Horiguchi <i>et al.</i> (1999)
	<i>gpt</i> delta (<i>gpt</i>)	+	1.3 (2 / 0.8)	12.1 (2 / 1.1)	9.31	10.8	irradiation	1	0.3 kJ/m ²	28	Horiguchi <i>et al.</i> (1999)
	<i>gpt</i> delta (<i>gpt</i>)	+	1.2 (2 / 3.5)	3.8 (2 / 2.5)	3.17	2.6	irradiation	1	0.5 kJ/m ²	28	Horiguchi <i>et al.</i> (1999)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	3.5 (4 / 0.6)	38.4 (4 / 0.5)	10.97	34.9	whole-body irradiation	1	1 kJ/m ²	23	Frijhoff <i>et al.</i> (1997)
	<i>gpt</i> delta (<i>gpt</i>)	+	1.2 (2 / 3.5)	11.3 (2 / 1.2)	9.42	10.1	irradiation	1	1 kJ/m ²	28	Horiguchi <i>et al.</i> (1999)
	Muta TM Mouse	+	9.8 (1 / 0.1)	63 (3 / 0.3)	6.43	53.2	whole-body irradiation	6	1 kJ/m ²	23	Frijhoff <i>et al.</i> (1997)
	Muta TM Mouse	+	9.8 (1 / 0.1)	92.9 (3 / 0.3)	9.48	83.1	whole-body irradiation	4	1 kJ/m ²	23	Frijhoff <i>et al.</i> (1997)
	Muta TM Mouse	+	9.8 (1 / 0.1)	73.9 (3 / 0.3)	7.54	64.1	whole-body irradiation	2	1 kJ/m ²	23	Frijhoff <i>et al.</i> (1997)
	Muta TM Mouse	+	9.8 (1 / 0.1)	81.4 (3 / 0.1)	8.31	71.6	whole-body irradiation	1	0.8 kJ/m ²	23	Frijhoff <i>et al.</i> (1997)
	Muta TM Mouse	+	9.8 (1 / 0.1)	45.5 (3 / 0.2)	4.64	35.7	whole-body irradiation	1	0.5 kJ/m ²	23	Frijhoff <i>et al.</i> (1997)
	Muta TM Mouse	+	9.8 (1 / 0.1)	23.1 (3 / 0.3)	2.36	13.3	whole-body irradiation	1	0.2 kJ/m ²	23	Frijhoff <i>et al.</i> (1997)
	Big Blue [®] mouse	+	8.7 (10 / 0.9)	88.6 (8 / 0.8)	10.18	79.9	topical	5		14	Stuart <i>et al.</i> (1996)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>gpt</i> delta (Spi)	-	0.11 (2 / 10.4)	0.14 (2 / 8.5)	1.27	0.03	irradiation	1	2 kJ/m ²	28	Horiguchi <i>et al.</i> (2001)
	Muta TM Mouse	+	5.99 (5 / 1.3)	69.92 (5 / 0.9)	11.67	63.93	irradiation	1	0.5 kJ/m ²	7	Ikehata <i>et al.</i> (2001)
	Muta TM Mouse	+	4.52 (5 / 1.1)	66.45 (5 / 0.7)	14.7	61.93	irradiation	1	0.5 kJ/m ²	7	Ikehata <i>et al.</i> (2001)
	<i>gpt</i> delta (<i>gpt</i>)	+	1.2 (2 / 3.5)	2.9 (2 / 2.6)	2.42	1.7	irradiation	1	0.3 kJ/m ²	28	Horiguchi <i>et al.</i> (1999)
	Muta TM Mouse	+	18.4 (5 / 1.1)	195.8 (5 / 0.9)	10.64	177.4	irradiation	1	0.5 kJ/m ²	7	Ikehata <i>et al.</i> (2001)
	<i>gpt</i> delta (Spi)	+	0.11 (2 / 10.4)	0.22 (2 / 8.1)	2	0.11	irradiation	1	1.5 kJ/m ²	28	Horiguchi <i>et al.</i> (2001)
	<i>gpt</i> delta (Spi)	+	0.11 (2 / 10.4)	0.35 (2 / 10.4)	3.18	0.24	irradiation	1	0.5 kJ/m ²	28	Horiguchi <i>et al.</i> (2001)
	Muta TM Mouse	+	6.9 (5 / 9.3)	53.7 (2 / 2.2)	7.78	46.8	whole-body irradiation	1	20 kJ/m ²	7	Ono <i>et al.</i> (1997)
	Muta TM Mouse	+	6.9 (5 / 9.3)	41.6 (2 / 3.3)	6.03	34.7	whole-body irradiation	1	10 kJ/m ²	7	Ono <i>et al.</i> (1997)
	<i>gpt</i> delta (<i>gpt</i>)	+	1.2 (2 / 3.5)	10.4 (2 / 1)	8.67	9.2	irradiation	1	2 kJ/m ²	28	Horiguchi <i>et al.</i> (1999)
	<i>gpt</i> delta (<i>gpt</i>)	+	1.2 (2 / 3.5)	9.3 (2 / 1.7)	7.75	8.1	irradiation	1	1.5 kJ/m ²	28	Horiguchi <i>et al.</i> (1999)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	+	12.8 (5 / 1.3)	159.9 (5 / 0.9)	12.49	147.1	irradiation	1	0.5 kJ/m ²	7	Ikehata <i>et al.</i> (2001)
Vinyl carbamate	Big Blue [®] mouse <i>cII</i>	-	1.9 (4 / -)	9.4 (4 / -)	4.95	7.5	ip	1	60	14	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	+	2 (5 / -)	9.4 (3 / -)	4.7	7.4	ip	1	75	28	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	-	2 (5 / -)	4.5 (6 / -)	2.25	2.5	ip	1	30	28	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	+	2 (5 / -)	7.1 (6 / -)	3.55	5.1	ip	1	45	28	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	+	2.6 (6 / -)	8.7 (6 / -)	3.35	6.1	ip	1	60	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	+	2 (5 / -)	9.1 (9 / -)	4.55	7.1	ip	1	60	28	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	+	2.6 (6 / -)	8.6 (6 / -)	3.31	6	ip	1	45	28	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	+	5.3 (8 / -)	15.6 (9 / -)	2.94	10.3	ip	1	60	21	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	-	2 (5 / -)	3.2 (6 / -)	1.6	1.2	ip	1	15	28	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	+	4.1 (7 / -)	16 (8 / -)	3.9	11.9	ip	1	60	28	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	-	1 (4 / -)	3.5 (6 / -)	3.5	2.5	ip	1	60	7	Hernandez and Forkert (2007a)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Big Blue [®] mouse <i>cII</i>	+	2.6 (6 / -)	9.1 (3 / -)	3.5	6.5	ip	1	75	28	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	+	2.3 (6 / -)	11.4 (6 / -)	4.96	9.1	ip	1	60	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	+	2.6 (6 / -)	8.7 (6 / -)	3.35	6.1	ip	1	60	28	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	-	2.6 (6 / -)	0.6 (6 / -)	0.23	-2	ip	1	15	28	Hernandez and Forkert (2007a)
	Big Blue [®] mouse <i>cII</i>	-	2.6 (6 / -)	2.3 (6 / -)	0.88	-0.3	ip	1	30	28	Hernandez and Forkert (2007a)
Vinyl carbamate + diallyl sulphone	Big Blue [®] mouse <i>cII</i>	+	2.8 (8 / -)	8 (8 / -)	2.86	5.2	ip	1	60	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	-	2 (6 / -)	3.8 (7 / -)	1.9	1.8	ip + gavage	1	60	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	+	1.6 (8 / -)	5.6 (8 / -)	3.5	4	ip + gavage	1	60	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	+	1.5 (5 / -)	5.3 (8 / -)	3.53	3.8	ip + gavage	1	60	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	-	3.2 (7 / -)	5.7 (9 / -)	1.78	2.5	ip + gavage	1	60	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	+	5.2 (8 / -)	11.6 (9 / -)	2.23	6.4	ip + gavage	1	60	28	Hernandez and Forkert (2007b)
	Big Blue [®] mouse <i>cII</i>	+	3.8 (6 / -)	5.1 (7 / -)	1.34	1.3	ip	1	60	28	Hernandez and Forkert (2007b)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
Vitamin E	Big Blue [®] mouse	–	3.3 (3 / 1.1)	2.3 (3 / 2.1)	0.7	–1	diet	90	11 880 IU/kg	0	Moore <i>et al.</i> (1999)
	Big Blue [®] mouse	–	3.3 (3 / 1.5)	2.6 (3 / 1.8)	0.79	–0.7	diet	90	11 880 IU/kg	0	Moore <i>et al.</i> (1999)
	Big Blue [®] mouse	–	3.2 (3 / 1.4)	3.8 (3 / 1)	1.19	0.6	diet	90	11 880 IU/kg	0	Moore <i>et al.</i> (1999)
	Big Blue [®] mouse	–	4.6 (3 / 0.9)	4.3 (3 / 1.1)	0.93	–0.3	diet	90	11 880 IU/kg	0	Moore <i>et al.</i> (1999)
	Big Blue [®] mouse	–	1.7 (3 / 2.3)	1.8 (3 / 2.3)	1.06	0.1	diet	90	11 880 IU/kg	0	Moore <i>et al.</i> (1999)
Wyeth 14,643	<i>lacZ</i> plasmid mouse	+	6.37 (4 / –)	10.7 (4 / –)	1.68	4.33	nd	14	1 200	21	Boerrigter (2004)
	<i>lacZ</i> plasmid mouse	+	6.69 (4 / –)	10.6 (4 / –)	1.58	3.91	nd	14	1 200	21	Boerrigter (2004)
	Big Blue [®] mouse <i>cII</i>	+	7.1 (10 / 4.5)	18.2 (6 / 3.6)	2.56	11.1	diet	180	10 800	0	Singh <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	–	4.59 (4 / –)	6.4 (4 / –)	1.39	1.81	nd	14	1 200	21	Boerrigter (2004)
	<i>lacZ</i> plasmid mouse	–	5.6 (4 / –)	3.5 (4 / –)	0.63	–2.1	nd	14	1 200	21	Boerrigter (2004)
	Big Blue [®] mouse	–	3.7 (2 / 0.3)	5.2 (2 / 0.3)	1.41	1.5	diet	21	651 g/kg	0	Trapp, Schwarz and Epe (2007)
X-rays	Big Blue [®] mouse	+	5 (3 / 0.2)	10 (3 / 0.2)	2	5	whole-body irradiation	1	6 Gy	21	Tao, Urlando and Heddle (1993a)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	6.2 (4 / 6.4)	21.3 (3 / 2.5)	3.44	15.1	whole-body irradiation	5	2.5 Gy	10	Gossen <i>et al.</i> (1995)
	<i>lacZ</i> plasmid mouse	+	6.2 (4 / 6.4)	24.3 (3 / 1.6)	3.92	18.1	whole-body irradiation	5	2.5 Gy	21	Gossen <i>et al.</i> (1995)
	Muta TM Mouse	-	1.3 (4 / 0.7)	1.8 (4 / 0.7)	1.38	0.5	whole-body irradiation	1	5 Gy	3	Katoh <i>et al.</i> (1994)
	Muta TM Mouse	+	1.4 (4 / 0.7)	4.4 (4 / 0.4)	3.14	3	whole-body irradiation	1	5 Gy	10	Katoh <i>et al.</i> (1994)
	Muta TM Mouse	+	1.5 (4 / 0.7)	3.5 (4 / 0.4)	2.33	2	whole-body irradiation	1	5 Gy	15	Katoh <i>et al.</i> (1994)
	Muta TM Mouse	-	1.6 (4 / 0.7)	2.8 (5 / 0.9)	1.75	1.2	whole-body irradiation	1	5 Gy	75	Katoh <i>et al.</i> (1994)
	<i>lacZ</i> plasmid mouse	+	6.2 (4 / 6.4)	21.2 (2 / 0.4)	3.42	15	whole-body irradiation	5	2.5 Gy	3	Gossen <i>et al.</i> (1995)
	Big Blue [®] mouse	-	5 (3 / 0.2)	5 (3 / 0.2)	1	0	whole-body irradiation	1	6 Gy	14	Tao, Urlando and Heddle (1993a)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	9.8 (4 / 0.8)	43.2 (3 / 1.2)	4.41	33.4	whole-body irradiation	5	2.5 Gy	3	Gossen <i>et al.</i> (1995)
	Big Blue [®] mouse	-	5 (3 / 0.2)	5 (3 / 0.2)	1	0	whole-body irradiation	1	6 Gy	28	Tao, Urlando and Heddle (1993a)
	Big Blue [®] mouse	+	5 (3 / 0.2)	10 (3 / 0.2)	2	5	whole-body irradiation	1	6 Gy	56	Tao, Urlando and Heddle (1993a)
	Big Blue [®] mouse	+	5 (3 / 0.2)	10 (3 / 0.2)	2	5	whole-body irradiation	1	6 Gy	7	Tao, Urlando and Heddle (1993a)
	Muta TM Mouse	+	6.7 (4 / -)	71.6 (3 / -)	10.69	64.9	whole-body irradiation	1	200 Gy	4	Ono <i>et al.</i> (1999)
	Muta TM Mouse	+	8.81 (4 / 0.658)	14 (3 / 0.414)	1.59	5.19	irradiation	182	11.7 Gy	112	Ono <i>et al.</i> (2003)
	Muta TM Mouse	+	8.6 (4 / 0.686)	18.1 (3 / 0.326)	2.1	9.5	irradiation	182	11.7 Gy	112	Ono <i>et al.</i> (2003)
	Big Blue [®] mouse	+	5 (3 / 0.2)	20 (3 / 0.2)	4	15	whole-body irradiation	1	6 Gy	42	Tao, Urlando and Heddle (1993a)
	<i>lacZ</i> plasmid mouse	equiv.	6.7 (3 / -)	13.3 (4 / -)	1.99	6.6	whole-body irradiation	1	4 Gy	60	Martus <i>et al.</i> (1999)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	6.6 (3 / -)	15.1 (3 / -)	2.29	8.5	whole-body irradiation	1	4 Gy	60	Martus <i>et al.</i> (1999)
	<i>lacZ</i> plasmid mouse	?	-(3 / -)	8.4 (4 / -)			whole-body irradiation	1	4 Gy	60	Martus <i>et al.</i> (1999)
	<i>lacZ</i> plasmid mouse	+	9.8 (4 / 0.8)	21.9 (3 / 1)	2.23	12.1	whole-body irradiation	5	2.5 Gy	21	Gossen <i>et al.</i> (1995)
	Muta TM Mouse	+	6.5 (4 / -)	31.2 (4 / -)	4.8	24.7	whole-body irradiation	1	200 Gy	4	Ono <i>et al.</i> (1999)
	<i>lacZ</i> plasmid mouse	+	3.9 (5 / 0.1)	10.6 (9 / 0.1)	2.72	6.7	whole-body irradiation	1	4 Gy	1	Tutt <i>et al.</i> (2002)
	Muta TM Mouse	+	7.1 (3 / -)	34 (3 / -)	4.79	26.9	whole-body irradiation	1	200 Gy	4	Ono <i>et al.</i> (1999)
	<i>lacZ</i> plasmid mouse	+	5.8 (6 / -)	21.3 (3 / -)	3.67	15.5	whole-body irradiation	5	2.5 Gy	10	Boerrigter <i>et al.</i> (1995)
	<i>lacZ</i> plasmid mouse	+	8.5 (4 / 2.3)	17.1 (3 / 0.8)	2.01	8.6	whole-body irradiation	5	2.5 Gy	3	Gossen <i>et al.</i> (1995)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	8.5 (4 / 2.3)	19.1 (3 / 1)	2.25	10.6	whole-body irradiation	5	2.5 Gy	10	Gossen <i>et al.</i> (1995)
	<i>lacZ</i> plasmid mouse	equiv.	8.5 (4 / 2.3)	15 (3 / 1.4)	1.76	6.5	whole-body irradiation	5	2.5 Gy	21	Gossen <i>et al.</i> (1995)
	Big Blue [®] mouse	+	5 (5 / 0.3)	18 (5 / 0.3)	3.6	13	whole-body irradiation	1	6 Gy		Tao, Urlando and Heddle (1993a)
	<i>lacZ</i> plasmid mouse	+	9.8 (4 / 0.8)	38.7 (3 / 1.5)	3.95	28.9	whole-body irradiation	5	2.5 Gy	10	Gossen <i>et al.</i> (1995)
	<i>lacZ</i> plasmid mouse	-	8.9 (3 / -)	5.4 (4 / -)	0.61	-3.5	whole-body irradiation	1	4 Gy	60	Martus <i>et al.</i> (1999)
	<i>lacZ</i> plasmid mouse	+	3.51 (5 / 2.1)	9.08 (4 / 1.1)	2.59	5.57	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	Big Blue [®] mouse	+	5 (5 / 0.3)	10 (5 / 0.3)	2	5	whole-body irradiation	1	2 Gy	nd	Tao, Urlando and Heddle (1993a)
	<i>lacZ</i> plasmid mouse	+	3.9 (4 / 0.1)	10.6 (8 / 0.1)	2.72	6.7	whole-body irradiation	1	4 Gy	1	Tutt <i>et al.</i> (2002)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	6.62 (4 / 2.2)	14.07 (4 / 0.8)	2.13	7.45	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	6.62 (4 / 2.2)	10.33 (4 / 1.3)	1.56	3.71	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	6.62 (4 / 2.2)	11.85 (4 / 0.7)	1.79	5.23	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	6.62 (4 / 2.2)	11.89 (4 / 0.6)	1.8	5.27	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	Muta TM Mouse	+	8.81 (4 / 0.658)	38.1 (3 / -)	4.32	29.3	irradiation	1	200 Gy	3.5	Ono <i>et al.</i> (2003)
	<i>lacZ</i> plasmid mouse	+	6.62 (4 / 2.2)	13.38 (4 / 1.2)	2.02	6.76	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>gpt</i> delta (Spi)	-	0.22 (3 / -)	0.48 (3 / -)	2.2	0.26	whole-body irradiation	1	10 Gy	2	Masumura <i>et al.</i> (2002)
	<i>lacZ</i> plasmid mouse	+	3.51 (5 / 2.1)	7.27 (4 / 1.9)	2.07	3.76	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	3.51 (5 / 2.1)	8.03 (4 / 1.5)	2.29	4.52	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	3.51 (5 / 2.1)	6.41 (3 / 1.5)	1.83	2.9	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	3.51 (5 / 2.1)	8.57 (6 / 2.1)	2.44	5.06	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	3.51 (5 / 2.1)	7.63 (7 / 2.3)	2.17	4.12	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	6.62 (4 / 2.2)	13.57 (4 / 1.3)	2.05	6.95	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	6.62 (4 / 2.2)	17.09 (4 / 1.3)	2.58	10.47	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	6.62 (4 / 2.2)	9.81 (4 / 2.2)	1.48	3.19	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	3.51 (5 / 2.1)	7.63 (7 / 2.3)	2.17	4.12	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	6.62 (4 / 2.2)	12.63 (4 / 0.9)	1.91	6.01	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	Muta TM Mouse	-	10.7 (3 / 3.7)	17.4 (- / 2.9)	1.63	6.7	whole-body irradiation	182	11.7 Gy	112	Ono <i>et al.</i> (1997)
	Muta TM Mouse	+	6.9 (4 / 10)	21.3 (4 / 6.2)	3.09	14.4	whole-body irradiation	1	8 Gy	7	Ono <i>et al.</i> (1997)
	Muta TM Mouse	+	6.7 (4 / 12.1)	17 (4 / 7.4)	2.54	10.3	whole-body irradiation	1	8 Gy	7	Ono <i>et al.</i> (1997)
	Muta TM Mouse	+	6.9 (5 / 9.3)	18.4 (4 / 4.5)	2.67	11.5	whole-body irradiation	1	8 Gy	7	Ono <i>et al.</i> (1997)
	Muta TM Mouse	+	6.5 (4 / 8)	12.1 (- / 6.4)	1.86	5.6	whole-body irradiation	1	4 Gy	112	Ono <i>et al.</i> (1997)
	<i>lacZ</i> plasmid mouse	+	8.9 (3 / 0.1)	31.6 (8 / 0.1)	3.55	22.7	whole-body irradiation	1	4 Gy	1	Tutt <i>et al.</i> (2002)
	Muta TM Mouse	+	8.2 (6 / 10.9)	15 (- / 8.9)	1.83	6.8	whole-body irradiation	182	11.7 Gy	112	Ono <i>et al.</i> (1997)
	Big Blue [®] mouse	+	5 (5 / 0.3)	12 (5 / 0.3)	2.4	7	whole-body irradiation	1	4 Gy	nd	Tao, Urlando and Heddle (1993a)

Appendix A (continued)

Chemical	Transgenic rodent system	Result	MF control ^a	MF treatment ^a	Fold increase	IMF ^a	Route of administration	Application time (days)	Total dose (mg/kg bw) ^b	Sampling time (days)	Reference ^c
	<i>lacZ</i> plasmid mouse	+	3.51 (5 / 2.1)	7.27 (4 / 1.9)	2.07	3.76	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	3.51 (5 / 2.1)	4.87 (4 / 2.7)	1.39	1.36	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	3.51 (5 / 2.1)	4.36 (4 / 2.4)	1.24	0.85	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	-	3.51 (5 / 2.1)	4.74 (3 / 0.8)	1.35	1.23	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	6.62 (4 / 2.2)	13.38 (4 / 1.2)	2.02	6.76	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>lacZ</i> plasmid mouse	+	6.62 (4 / 2.2)	10.33 (4 / 1.3)	1.56	3.71	whole-body irradiation	1	2.5 Gy	21	Kind <i>et al.</i> (2001)
	<i>gpt</i> delta (<i>gpt</i>)	+	0.23 (3 / -)	0.49 (3 / -)	2.1	0.26	whole-body irradiation	1	10 Gy	2	Masumura <i>et al.</i> (2002)
	Muta TM Mouse	+	7.6 (4 / 7.2)	12.8 (- / 7.8)	1.68	5.2	whole-body irradiation	1	4 Gy	112	Ono <i>et al.</i> (1997)

+, positive; -, negative; ?, inconclusive/equivocal; ?pos, positive but not definitive; equiv., equivocal; i.g., intragastric; inc., inconclusive; ip, intraperitoneal; iv, intravenous; nd, no data; sc, subcutaneous; tp, transplacental

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^a Mutant frequencies (MF) and induced mutant frequencies (IMF) are expressed $\times 10^{-5}$. Numbers in parentheses indicate number of animals per group and number of plaques or plasmids $\times 10^6$ per group, respectively.

^b Unless otherwise noted.

^c “Unpublished” refers to data provided by members of the IWGT working group.

**APPENDIX B: GENOTOXICITY AND CARCINOGENICITY DATA SORTED BY
CHEMICAL**

Genotoxicity/carcinogenicity tests	Result ^a
1,10-Diazachrysene (CAS No. 218-21-3)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse, Muta TM Mouse <i>cII</i>
Positive transgenic tissues	bone marrow, colon, kidney, liver, lung, spleen
Negative transgenic systems	Muta TM Mouse <i>cII</i>
Negative transgenic tissues	liver
1,2:3,4-Diepoxybutane (CAS No. 1464-53-5)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nasal mucosa
Mouse target sites male	lung, skin
Mouse target sites female	Harderian gland
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, ovarian granulosa

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
1,2-Dibromo-3-chloropropane (CAS No. 96-12-8)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	2.72m
TD ₅₀ (mg/kg bw per day) rat	0.259m
Rat target sites male	nasal cavity, oral cavity, stomach
Rat target sites female	adrenal gland, mammary gland, nasal cavity, oral cavity, stomach
Mouse target sites male	lung, nasal cavity, stomach
Mouse target sites female	lung, nasal cavity, stomach
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	testes
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	liver

1,2-Dibromoethane (CAS No. 106-93-

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
4)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	7.45m,v
TD ₅₀ (mg/kg bw per day) rat	1.52m
Rat target sites male	nasal cavity, peritoneal cavity, pituitary gland, stomach
Rat target sites female	liver, lung, mammary gland, nasal cavity
Mouse target sites male	lung, stomach, vascular system
Mouse target sites female	lung, mammary gland, nasal cavity, oesophagus
Positive transgenic systems	Muta™Mouse
Positive transgenic tissues	nasal mucosa, testes
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	liver, lung, nasal mucosa, testes
1,2-Dichloroethane (CAS No. 107-06-2)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	101
TD ₅₀ (mg/kg bw per day) rat	8.04
Rat target sites male	stomach, subcutaneous tissue, vascular system
Rat target sites female	mammary gland
Mouse target sites male	lung

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites female	lung, mammary gland, uterus
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	liver, testes
1,2-Epoxy-3-butene (CAS No. 930-22-3)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue® mouse
Positive transgenic tissues	bone marrow, lung
Negative transgenic systems	Big Blue® mouse
Negative transgenic tissues	bone marrow, spleen

1,3-Butadiene (CAS No. 106-99-0)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	–
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	13.9m,v
TD ₅₀ (mg/kg bw per day) rat	261m,v
Rat target sites male	testes
Rat target sites female	mammary gland
Mouse target sites male	haematopoietic system, Harderian gland, kidney, liver
Mouse target sites female	haematopoietic system, Harderian gland, liver, lung
Positive transgenic systems	Big Blue [®] mouse, Muta TM Mouse
Positive transgenic tissues	bone marrow, lung, spleen
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, liver

1,4-Phenylenebis(methylene)selenocyanate (p-XSC) (CAS No. 85539-83-9)

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat <i>cII</i>
Negative transgenic tissues	tongue

1,6-Dinitropyrene (CAS No. 42397-64-8)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	lung
Rat target sites female	haematopoietic system, pituitary gland
Mouse target sites male	liver
Mouse target sites female	nd
Positive transgenic systems	<i>gpt</i> delta (<i>gpt</i>)
Positive transgenic tissues	lung
Negative transgenic systems	<i>gpt</i> delta (<i>gpt</i>)
Negative transgenic tissues	lung
1,7-Phenanthroline (CAS No. 230-46-6)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse, Muta TM Mouse <i>cII</i>

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Positive transgenic tissues	liver, lung
Negative transgenic systems	Muta TM Mouse, Muta TM Mouse <i>cII</i>
Negative transgenic tissues	bone marrow, kidney, lung, spleen

1,8-Dinitropyrene (CAS No. 42397-65-9)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	adrenal, haematopoietic system, mammary gland, pituitary gland, skin
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	bone marrow, omentum
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, brain, liver, lung, omentum

1.5 GHz electromagnetic near field

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	brain

10-Azabenz(a)pyrene (CAS No. 189-92-4)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse, Muta TM Mouse <i>cII</i>
Positive transgenic tissues	colon, liver
Negative transgenic systems	Muta TM Mouse, Muta TM Mouse <i>cII</i>
Negative transgenic tissues	bone marrow, forestomach, kidney, lung, spleen, stomach

^{114m}In internal radiation

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver, spleen, testes

17β-Oestradiol (CAS No. 50-28-2)

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	–
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	–
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	mammary gland, pituitary gland
Mouse target sites male	cervix, mammary gland, pituitary gland, thymus, uterus, vagina
Mouse target sites female	testis
Positive transgenic systems	none
Positive transgenic tissues	none

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	heart, mammary gland
1-Chloromethylpyrene (CAS No. 1086-00-6)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	skin
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	stomach

1-Methylphenanthrene (CAS No. 832-69-9)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, epididymis, liver, spleen
1-Nitronaphthalene (CAS No. 86-57-7)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	no positive
TD ₅₀ (mg/kg bw per day) rat	no positive
Rat target sites male	none
Rat target sites female	none
Mouse target sites male	none
Mouse target sites female	none
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	liver, skin, urinary bladder

2,3,7,8-Tetrachlorodibenzo-*p*-dioxin (TCDD) (CAS No. 1746-01-6)

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	0.000 156m
TD ₅₀ (mg/kg bw per day) rat	0.000 045 7m,v
Rat target sites male	oral cavity, thyroid
Rat target sites female	liver, lung
Mouse target sites male	liver
Mouse target sites female	liver, thyroid gland
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	liver
2,4-Diaminotoluene (CAS No. 95-80-7)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	26.7
TD ₅₀ (mg/kg bw per day) rat	2.47m
Rat target sites male	liver
Rat target sites female	liver, mammary gland
Mouse target sites male	–
Mouse target sites female	haematopoietic system, liver
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
2,6-Diaminotoluene (CAS No. 823-40-5)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	–
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver
2.45 GHz radiofrequency	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	–
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	none

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Rat target sites female	none
Mouse target sites male	none
Mouse target sites female	none
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	brain, liver, spleen, testis

2-Acetylaminofluorene (2-AAF) (CAS No. 53-96-3)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	7.59m,v
TD ₅₀ (mg/kg bw per day) rat	1.22m
Rat target sites male	liver, mammary gland, skin
Rat target sites female	liver, mammary gland, skin
Mouse target sites male	liver, urinary bladder
Mouse target sites female	liver, urinary bladder
Positive transgenic systems	Big Blue [®] mouse, <i>lacZ</i> plasmid mouse, Muta TM Mouse
Positive transgenic tissues	bladder, liver, spleen
Negative transgenic systems	Big Blue [®] mouse, Muta TM Mouse
Negative transgenic tissues	liver

2-Amino-1-methyl-6-phenylimidazo(4,5-b)pyridine (PhIP) (CAS No. 105650-23-5)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	-
<i>In vivo</i> unscheduled DNA synthesis	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	33.2m
TD ₅₀ (mg/kg bw per day) rat	1.78m
Rat target sites male	haematopoietic system, large intestine, prostate, small intestine
Rat target sites female	large intestine, mammary gland
Mouse target sites male	haematopoietic system, liver
Mouse target sites female	haematopoietic system
Positive transgenic systems	BC-1 <i>lacI</i> , Big Blue [®] mouse, Big Blue [®] rat, Big Blue [®] rat <i>cII</i> , <i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi)
Positive transgenic tissues	caecum, colon, distal colon, mammary gland, prostate, proximal colon
Negative transgenic systems	Big Blue [®] mouse, <i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi), <i>lacZ</i> plasmid mouse, Muta TM Mouse
Negative transgenic tissues	bone marrow, brain, colon, liver, small intestine, testes, testicular germ cells
PhIP + 1,2-dithiole-3-thione (D3T)	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	caecum, distal colon, proximal colon

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Negative transgenic systems	nd
Negative transgenic tissues	nd
PhIP + conjugated linoleic acid (CLA)	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	caecum, distal colon, proximal colon
Negative transgenic systems	nd
Negative transgenic tissues	nd
PhIP + high-fat diet	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	mammary gland
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	liver
PhIP + low-fat diet	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	mammary gland
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	liver
2-Amino-3,4-dimethylimidazo(4,5-f)quinoline (MeIQ) (CAS No. 77094-11-2)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	15.5m
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	colon, oral cavity, skin, Zymbal's gland
Rat target sites female	mammary gland, oral cavity, Zymbal's gland
Mouse target sites male	stomach
Mouse target sites female	large intestine, liver, stomach
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	bone marrow, colon, forestomach, liver
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	forestomach, heart, liver
2-Amino-3,8-dimethylimidazo(4,5-f)quinoxaline (MeIQx) (CAS No. 77500-04-0)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	-
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	-
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	24.3m
TD ₅₀ (mg/kg bw per day) rat	1.66m
Rat target sites male	ear/Zymbal's gland, liver, skin
Rat target sites female	clitoral gland, ear/Zymbal's gland, liver
Mouse target sites male	haematopoietic system, liver
Mouse target sites female	liver, lung
Positive transgenic systems	Big Blue [®] mouse, <i>gpt</i> delta (<i>gpt</i>)
Positive transgenic tissues	colon, liver
Negative transgenic systems	Big Blue [®] mouse, <i>gpt</i> delta (<i>gpt</i>)
Negative transgenic tissues	colon, liver

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
2-Amino-3-methylimidazo(4,5-f)quinoline (IQ) (CAS No. 76180-96-6)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	19.6m
TD ₅₀ (mg/kg bw per day) rat	0.812m,v
Rat target sites male	ear/Zymbal's gland, large intestine, liver, oral cavity
Rat target sites female	clitoral gland, ear/Zymbal's gland, large intestine, liver, mammary gland
Mouse target sites male	liver, lung, stomach
Mouse target sites female	liver, lung, stomach
Positive transgenic systems	Big Blue [®] rat, Muta [™] Mouse
Positive transgenic tissues	colon, kidney, liver
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	colon, kidney, liver
IQ + sucrose	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat <i>cII</i>
Positive transgenic tissues	colon, liver
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	colon, liver

2-Nitronaphthalene (CAS No. 581-89-5)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver, urinary bladder
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	skin

2-Nitro-*p*-phenylenediamine (CAS No. 5307-14-2)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	inconclusive
<i>In vivo</i> micronucleus	–

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	614
TD ₅₀ (mg/kg bw per day) rat	–
Rat target sites male	–
Rat target sites female	–
Mouse target sites male	–
Mouse target sites female	liver
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver

3-Amino-1-methyl-5H-pyrido(4,3-b)indole (Trp-P-2) (CAS No. 62450-07-1)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	12.6m,v
TD ₅₀ (mg/kg bw per day) rat	6.66m
Rat target sites male	liver, mammary gland, urinary bladder
Rat target sites female	clitoral gland, haematopoietic system, liver, mammary gland, small intestine
Mouse target sites male	liver
Mouse target sites female	liver
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	caecum, colon, small intestine

3-Chloro-4-(dichloromethyl)-5-hydroxy-2(5H)-furanone (MX) (CAS No. 77439-76-0)

<i>Salmonella</i>	+
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Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	0.583
Rat target sites male	adrenal gland, haematopoietic system, liver, lung, pancreas, thyroid
Rat target sites female	adrenal gland, haematopoietic system, liver, mammary gland, thyroid
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	<i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi)
Negative transgenic tissues	liver, lung
3-Fluoroquinoline (CAS No. 396-31-6)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	bone marrow, liver, testicular germ cells
3-Methylcholanthrene (CAS No. 56-49-5)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	inconclusive
<i>In vivo</i> micronucleus	inconclusive
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	0.491m
Rat target sites male	–
Rat target sites female	mammary gland
Mouse target sites male	lung, skin
Mouse target sites female	lung
Positive transgenic systems	Big Blue® mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd

3-Nitrobenzanthrone (CAS No. 17117-34-9)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	lung
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse <i>cII</i>
Positive transgenic tissues	colon, liver
Negative transgenic systems	Muta TM Mouse <i>cII</i>
Negative transgenic tissues	kidney, lung, spleen, testis
4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK) (CAS No. 64091-91-4)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	0.099 9m
Rat target sites male	liver, lung, nasal cavity, pancreas
Rat target sites female	liver, lung, nasal mucosa
Mouse target sites male	liver
Mouse target sites female	liver, lung
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	kidney, liver, lung, oesophagus, oral tissue, tongue
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	tongue
4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK) + 8-methoxypsoralen	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	none
Mouse target sites female	none
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	<i>gpt</i> delta (<i>gpt</i>)
Negative transgenic tissues	lung
NNK + green tea	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Positive transgenic tissues	liver, lung, oesophagus
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	oral tissue, tongue

4,10-Diazachrysene (CAS No. 218-34-8)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta™Mouse, Muta™Mouse <i>cII</i>
Positive transgenic tissues	bone marrow, colon, kidney, liver, lung, spleen
Negative transgenic systems	none
Negative transgenic tissues	none

4-Acetylaminofluorene (4-AAF) (CAS No. 28322-02-3)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	inconclusive
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	–
Rat target sites male	nd
Rat target sites female	–
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd

4-Aminobiphenyl (CAS No. 92-67-1)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	2.1m
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	intestine, mammary gland
Mouse target sites male	liver, urinary bladder
Mouse target sites female	liver, urinary bladder
Positive transgenic systems	Big Blue [®] rat, Muta TM Mouse
Positive transgenic tissues	bladder, bone marrow, kidney, liver
Negative transgenic systems	Big Blue [®] rat, Muta TM Mouse
Negative transgenic tissues	bladder, liver

4-Chloro-*o*-phenylenediamine (CAS No. 95-83-0)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	1340m
TD ₅₀ (mg/kg bw per day) rat	214m
Rat target sites male	stomach, urinary bladder
Rat target sites female	stomach, urinary bladder
Mouse target sites male	liver
Mouse target sites female	liver
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver

4-Hydroxybiphenyl (CAS No. 92-69-3)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	no positive
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	none
Mouse target sites female	none
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Negative transgenic tissues	liver
4-Monochlorobiphenyl (CAS No. 2051-62-9)	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd
4-Nitroquinoline-1-oxide (4-NQO) (CAS No. 56-57-5)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Rat target sites male	lung, tongue
Rat target sites female	lung, tongue
Mouse target sites male	nd
Mouse target sites female	lung, skin
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	bone marrow, liver, lung, oesophagus, oral tissue, stomach, testes
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	colon, kidney, liver, lung, spleen, stomach, testes
4-NQO + alpha-tocopherol	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	oesophagus, oral tissue, tongue
Negative transgenic systems	nd
Negative transgenic tissues	nd
4-NQO + p-XSC	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	oesophagus, oral tissue, tongue
Negative transgenic systems	nd
Negative transgenic tissues	nd
4-NQO + p-XSC + alpha-tocopherol	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	oesophagus, oral tissue, tongue
Negative transgenic systems	nd
Negative transgenic tissues	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
5-(2-Chloroethyl)-2'-deoxyuridine (CEDU) (CAS No. 90301-59-0)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta™Mouse
Positive transgenic tissues	bone marrow, lung, spleen
Negative transgenic systems	none
Negative transgenic tissues	none
5-(<i>p</i>-Dimethylaminophenylazo)benzothiazole (CAS No. 18463-90-6)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd

5,9-Dimethyldibenzo(c,g)carbazole (DMDBC) (CAS No. 88193-04-8)

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	liver
Mouse target sites female	liver
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver, skin
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	liver, skin

DMDBC + carbon tetrachloride

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd

DMDBC + phenobarbital

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd

5-Bromo-2'-deoxyuridine (BrdU) (CAS No. 59-14-3)

<i>Salmonella</i>	–
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Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	testes
Rat target sites female	nd
Mouse target sites male	kidney, thyroid
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	small intestine

5-Fluoroquinoline (CAS No. 394-69-4)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	liver
Mouse target sites female	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Positive transgenic systems	Muta™Mouse
Positive transgenic tissues	liver
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	bone marrow, testicular germ cells

6-(*p*-Dimethylaminophenylazo)benzothiazole (CAS No. 18463-85-9)

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	liver
Rat target sites female	liver
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue® rat
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd

6,11-Dimethylbenzo(b)naphtho(2,3-d)thiophene (CAS No. 32362-68-8)

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	inconclusive

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	skin
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	skin
6-Nitrochrysene (CAS No. 7496-02-8)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	colon
Rat target sites female	colon, mammary gland
Mouse target sites male	liver, lung
Mouse target sites female	liver, lung
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	mammary gland
Negative transgenic systems	none
Negative transgenic tissues	none
7,12-Dimethylbenzanthracene (7,12-DMBA) (CAS No. 57-97-6)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	salivary gland
Rat target sites female	haematopoetic system, mammary gland, salivary gland, skin
Mouse target sites male	liver, lung, skin
Mouse target sites female	lung, mammary gland, ovaries, skin
Positive transgenic systems	Big Blue [®] mouse, Big Blue [®] rat, Muta TM Mouse, Muta TM Mouse <i>cII</i>
Positive transgenic tissues	bladder, bone marrow, mammary gland, skin, splenic lymphocytes
Negative transgenic systems	Big Blue [®] rat, Muta TM Mouse
Negative transgenic tissues	colon, lung, mammary gland, skin, splenic lymphocytes, testes, tongue
7,12-DMBA + 17β-oestradiol	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	heart, mammary gland, uterus
Negative transgenic systems	none
Negative transgenic tissues	none
7,12-DMBA + daidzein	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	mammary gland, uterus
Negative transgenic systems	none
Negative transgenic tissues	none
7,12-DMBA + daidzein + genistein	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	mammary gland, uterus
Negative transgenic systems	none
Negative transgenic tissues	none
7,12-DMBA + genistein	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse <i>cII</i> , Big Blue [®] rat
Positive transgenic tissues	heart, liver, mammary gland, uterus
Negative transgenic systems	none
Negative transgenic tissues	none
7,12-DMBA + high-fat diet	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	liver, mammary gland
Negative transgenic systems	nd
Negative transgenic tissues	nd
7,12-DMBA + low-fat diet	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	liver, mammary gland

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Negative transgenic systems	nd
Negative transgenic tissues	nd
7H-Dibenzo(c,g)carbazole (DBC) (CAS No. 194-59-2)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	liver, lung, skin, stomach
Mouse target sites female	liver, skin
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	liver, skin

7-Methoxy-2-nitronaphtho(2,1-b)furan (R7000) (CAS No. 75965-74-1)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	caecum, colon, intestine, small intestine, stomach
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	bladder, caecum, liver, oesophagus, spleen, stomach, testes
87-966	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	bone marrow, spleen
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	liver
⁸⁹Sr internal radiation	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta™Mouse
Positive transgenic tissues	liver
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	bone marrow, liver, spleen
A-alpha-C (CAS No. 26148-68-5)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	49.8m
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	–
Mouse target sites male	liver, vascular system
Mouse target sites female	liver, vascular system
Positive transgenic systems	Big Blue® mouse, Muta™Mouse
Positive transgenic tissues	colon, liver
Negative transgenic systems	Big Blue® mouse
Negative transgenic tissues	small intestine

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Acetaminophen (CAS No. 103-90-2)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	1 620
TD ₅₀ (mg/kg bw per day) rat	495
Rat target sites male	liver, urinary bladder
Rat target sites female	liver, urinary bladder
Mouse target sites male	liver
Mouse target sites female	liver
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	<i>gpt</i> delta (<i>gpt</i>)
Negative transgenic tissues	liver
Acetic acid (CAS No. 64-19-7)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta™Mouse
Positive transgenic tissues	skin
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	skin
Acetone (CAS No. 67-64-1)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue® mouse, Muta™Mouse
Negative transgenic tissues	skin
Acrylamide (CAS No. 79-06-1)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	+

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	3.75m
Rat target sites male	nervous system, peritoneal cavity, thyroid
Rat target sites female	clitoral gland, mammary gland, nervous system, oral cavity, thyroid
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	bone marrow
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, liver, testicular germ cell
Acrylonitrile (CAS No. 107-13-1)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	16.9m,v
Rat target sites male	ear/Zymbal's gland, nervous system, oral cavity, small intestine
Rat target sites female	ear/Zymbal's gland, mammary gland, nasal cavity, nervous system
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, brain, lung, splenic lymphocytes,

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
	testicular germ cells
Adozelesin (CAS No. 110314-48-2)	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver
Aflatoxin B1 (CAS No. 1162-65-8)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	–
TD ₅₀ (mg/kg bw per day) rat	0.003 2m,v
Rat target sites male	kidney, large intestine, liver

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Rat target sites female	large intestine, liver
Mouse target sites male	–
Mouse target sites female	–
Positive transgenic systems	Big Blue [®] mouse, Big Blue [®] rat, Big Blue [®] rat <i>cII</i>
Positive transgenic tissues	kidney, liver
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	large intestine, liver
Aflatoxin B1 + phorone	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	kidney, liver
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	large intestine
Aflatoxin B1 + TCDD	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	liver
Agaritine (CAS No. 2757-90-6)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	–
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	–
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	–
Mouse target sites female	–
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	forestomach, kidney
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	forestomach, kidney, liver, lung

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
all-trans-Retinol (CAS No. 68-26-8)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	liver
alpha-Chaconine (CAS No. 20562-03-2)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd

alpha-Hydroxytamoxifen (CAS No. 97151-02-5)

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	liver

alpha-Solanine (CAS No. 20562-02-1)

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd

Aminophenylnorharman (CAS No. 219959-86-1)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	colon, haematopoietic system, liver, thyroid
Rat target sites female	clitoral gland, colon, haematopoietic system, liver, thyroid
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	<i>gpt</i> delta (<i>gpt</i>)
Positive transgenic tissues	colon, liver
Negative transgenic systems	none
Negative transgenic tissues	none

Amosite asbestos (CAS No. 12172-73-5)

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	lung
Rat target sites female	lung
Mouse target sites male	lung
Mouse target sites female	lung
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	lung
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	lung

Amosite asbestos + benzo(a)pyrene

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	lung
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	lung
AMP397 (CAS No. 188696-80-2)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	–
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	colon, liver

Aristolochic acid (CAS No. 10190-99-5)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	ear, small intestine, stomach
Rat target sites female	nd
Mouse target sites male	haematopoetic system, kidney, lung, stomach
Mouse target sites female	uterus
Positive transgenic systems	Muta TM Mouse, Muta TM Mouse <i>cII</i>
Positive transgenic tissues	bladder, bone marrow, colon, kidney, lung, spleen, stomach
Negative transgenic systems	Muta TM Mouse, Muta TM Mouse <i>cII</i>
Negative transgenic tissues	bone marrow, liver, lung, spleen, stomach, testes
Arsenite trioxide (CAS No. 1327-53-3)	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	stomach
Rat target sites female	nd
Mouse target sites male	lung
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	lung

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Azathioprine (CAS No. 446-86-6)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	8.92
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	ear, thymus
Mouse target sites male	–
Mouse target sites female	haematopoietic system, uterus, vascular system
Positive transgenic systems	Muta™Mouse
Positive transgenic tissues	bone marrow, liver
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	bone marrow, liver
Benzene (CAS No. 71-43-2)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	77.5m,v
TD ₅₀ (mg/kg bw per day) rat	169m
Rat target sites male	ear/Zymbal's gland, nasal cavity, oral cavity, skin
Rat target sites female	ear/Zymbal's gland, nasal cavity, oral cavity, stomach

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites male	ear/Zymbal's gland, haematopoietic system, Harderian gland, lung
Mouse target sites female	ear/Zymbal's gland, haematopoietic system, lung, mammary gland
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	bone marrow, lung, spleen
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	bone marrow, liver, lung, spleen
Benzo(a)pyrene (B(a)P) (CAS No. 50-32-8)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	11
TD ₅₀ (mg/kg bw per day) rat	0.956
Rat target sites male	stomach
Rat target sites female	stomach
Mouse target sites male	oesophagus
Mouse target sites female	–
Positive transgenic systems	Big Blue [®] mouse, Big Blue [®] rat, Muta TM Mouse, Muta TM Mouse <i>cII</i>
Positive transgenic tissues	bone marrow, breast, colon, forestomach, glandular stomach, heart
Negative transgenic systems	Big Blue [®] mouse, Big Blue [®] mouse <i>cI</i> , Big Blue [®] mouse <i>cII</i> , Muta TM Mouse, Muta TM Mouse <i>cII</i>
Negative transgenic tissues	brain, kidney, liver, lung, skin, small intestine, spleen, splenic lymphocytes
B(a)P + D3T	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta™Mouse
Positive transgenic tissues	oesophagus, oral tissue, tongue
Negative transgenic systems	nd
Negative transgenic tissues	nd
B(a)P + D3T + p-XSC	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta™Mouse
Positive transgenic tissues	oesophagus, oral tissue, tongue
Negative transgenic systems	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Negative transgenic tissues	nd
B(a)P + eugenol	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd
B(a)P + green tea	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd
B(a)P + lycopene	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	colon, lung, prostate
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	prostate
B(a)P + p-XSC	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	oesophagus, oral tissue, tongue
Negative transgenic systems	nd
Negative transgenic tissues	nd
B(a)P + selenium-enriched yeast	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	oesophagus, oral tissue, tongue
Negative transgenic systems	nd
Negative transgenic tissues	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
B(a)P + selenium-enriched yeast + D3T	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	oesophagus, oral tissue, tongue
Negative transgenic systems	nd
Negative transgenic tissues	nd
Benzo(a)pyrene diolepoxide (BPDE) (CAS No. 58917-67-2)	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	skin

BPDE + phorbol-12-myristate-13-acetate (TPA)

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	skin
Negative transgenic systems	nd
Negative transgenic tissues	nd

Benzo(f)quinoline (CAS No. 85-02-9)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	none
Rat target sites female	none
Mouse target sites male	none
Mouse target sites female	none
Positive transgenic systems	Muta TM Mouse <i>cII</i>
Positive transgenic tissues	liver
Negative transgenic systems	Muta TM Mouse, Muta TM Mouse <i>cII</i>
Negative transgenic tissues	bone marrow, liver, lung, kidney, spleen

Benzo(h)quinoline (CAS No. 230-27-3)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	none
Rat target sites female	none
Mouse target sites male	none
Mouse target sites female	none
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	lung
Negative transgenic systems	Muta TM Mouse, Muta TM Mouse <i>cII</i>
Negative transgenic tissues	bone marrow, kidney, liver, lung, spleen

beta-Propiolactone (CAS No. 57-57-8)

<i>Salmonella</i>	+
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Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	1.24m
TD ₅₀ (mg/kg bw per day) rat	1.46m
Rat target sites male	nd
Rat target sites female	stomach
Mouse target sites male	stomach
Mouse target sites female	stomach
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver, stomach
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow

Bitumen fumes (CAS No. 8052-42-4)

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse, Big Blue [®] mouse <i>cII</i>
Negative transgenic tissues	lung
Bleomycin (CAS No. 11056-06-7)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	kidney
Rat target sites female	kidney
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	kidney
Negative transgenic systems	nd
Negative transgenic tissues	nd
Carbon tetrachloride (CAS No. 56-23-5)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	–
Carcinogenicity	+

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	150m
TD ₅₀ (mg/kg bw per day) rat	2.29m
Rat target sites male	liver
Rat target sites female	liver, mammary gland
Mouse target sites male	adrenal gland, liver
Mouse target sites female	adrenal gland, liver
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	liver
CC-1065 (CAS No. 69866-21-3)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	lung
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd
Chlorambucil (CAS No. 305-03-3)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	0.133m
TD ₅₀ (mg/kg bw per day) rat	0.896m
Rat target sites male	haematopoietic system
Rat target sites female	ear/Zymbal's gland, mammary gland, nervous system
Mouse target sites male	haematopoietic system, lung
Mouse target sites female	lung
Positive transgenic systems	<i>gpt</i> delta (<i>gpt</i>), Muta TM Mouse
Positive transgenic tissues	bone marrow, liver, lung, testes
Negative transgenic systems	<i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi), Muta TM Mouse
Negative transgenic tissues	bone marrow, liver, lung, testes
Chloroform (CAS No. 67-66-3)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	-
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	-
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	-
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	-
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	90.3m
TD ₅₀ (mg/kg bw per day) rat	262m
Rat target sites male	kidney
Rat target sites female	liver
Mouse target sites male	kidney, liver
Mouse target sites female	liver
Positive transgenic systems	nd
Positive transgenic tissues	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver
Chrysene (CAS No. 218-01-9)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	lung
Mouse target sites male	skin
Mouse target sites female	skin
Positive transgenic systems	Muta TM Mouse, Muta TM Mouse <i>cII</i>
Positive transgenic tissues	bone marrow, colon, kidney, liver, lung, spleen
Negative transgenic systems	Muta TM Mouse <i>cII</i>
Negative transgenic tissues	bone marrow, colon, lung, spleen
Cisplatin (CAS No. 15663-27-1)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	liver
Mouse target sites male	nd
Mouse target sites female	lung
Positive transgenic systems	<i>lacZ</i> plasmid mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd
Clofibrate (CAS No. 637-07-0)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	no positive
TD ₅₀ (mg/kg bw per day) rat	169
Rat target sites male	liver, pancreas
Rat target sites female	liver
Mouse target sites male	none
Mouse target sites female	none
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	<i>lacZ</i> plasmid mouse
Negative transgenic tissues	liver
CM 44 glass fibres	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	Big Blue [®] rat, Big Blue [®] rat <i>cII</i>
Negative transgenic tissues	lung
Coal tar (CAS No. 8007-45-2)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	liver, lung, small intestine, stomach
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	skin
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	liver

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Comfrey (CAS No. 72698-57-8)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	liver, urinary bladder
Rat target sites female	liver, urinary bladder
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat <i>cII</i>
Positive transgenic tissues	liver
Negative transgenic systems	none
Negative transgenic tissues	none
Conjugated linoleic acid (CLA) (CAS No. 1839-11-8)	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	caecum, distal colon, prostate
CLA + PhIP	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	distal colon, prostate
Negative transgenic systems	nd
Negative transgenic tissues	nd
Crocidolite asbestos (CAS No. 12001-28-4)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	lung, peritoneal cavity
Rat target sites female	peritoneal cavity
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse, Big Blue [®] rat
Positive transgenic tissues	lung, omentum
Negative transgenic systems	Big Blue [®] mouse, Big Blue [®] rat
Negative transgenic tissues	lung, omentum
Cyclophosphamide (CAS No. 50-18-0)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	5.96i,m
TD ₅₀ (mg/kg bw per day) rat	2.21m,v
Rat target sites male	haematopoietic system, nervous system
Rat target sites female	haematopoietic system, nervous system
Mouse target sites male	lung
Mouse target sites female	haematopoietic system, lung
Positive transgenic systems	Big Blue [®] mouse, <i>lacZ</i> plasmid mouse, Muta TM Mouse
Positive transgenic tissues	bone marrow, bladder, liver, lung, spleen
Negative transgenic systems	Big Blue [®] mouse, <i>lacZ</i> plasmid mouse, Muta TM Mouse
Negative transgenic tissues	bone marrow, kidney, liver, lung, spleen, splenic lymphocytes, testes

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Cyproterone acetate (CAS No. 427-51-0)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	21.9m
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	liver, stomach
Mouse target sites female	liver, stomach
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	liver
Daidzein (CAS No. 486-66-8)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	mammary gland

Daidzein + genistein

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	mammary gland

Di(2-ethylhexyl)phthalate (DEHP) (CAS No. 117-81-7)

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	–
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	–

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> comet	–
Carcinogenicity	+
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	700m
TD ₅₀ (mg/kg bw per day) rat	716m
Rat target sites male	liver
Rat target sites female	liver
Mouse target sites male	liver
Mouse target sites female	liver
Positive transgenic systems	<i>lacZ</i> plasmid mouse
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver

Diallyl sulphide (CAS No. 592-88-1)

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	oesophagus

Diallyl sulphone (CAS No. 16841-48-8)

<i>Salmonella</i>	nd
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Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse <i>cII</i>
Negative transgenic tissues	lung, small intestine

Dichloroacetic acid (DCA) (CAS No. 79-43-6)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	inconclusive
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	102m
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	liver
Rat target sites female	nd
Mouse target sites male	liver
Mouse target sites female	liver

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver
Dicyclanil (CAS No. 112636-83-6)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	liver
Mouse target sites female	liver
Positive transgenic systems	<i>gpt</i> delta (<i>gpt</i>)
Positive transgenic tissues	liver
Negative transgenic systems	<i>gpt</i> delta (<i>gpt</i>)
Negative transgenic tissues	liver
Diesel exhaust	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	+

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	lung
Rat target sites female	nd
Mouse target sites male	skin
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	lung
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	lung
Diethylnitrosamine (DEN) (CAS No. 55-18-5)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	0.026 5m,v
Rat target sites male	kidney, liver, oesophagus, vascular system
Rat target sites female	haematopoietic system, liver, oesophagus, oral cavity, stomach
Mouse target sites male	liver, lung, nasal cavity, oesophagus, stomach
Mouse target sites female	nd
Positive transgenic systems	<i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi), Muta TM Mouse
Positive transgenic tissues	liver, lung
Negative transgenic systems	<i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi), Muta TM Mouse
Negative transgenic tissues	bone marrow, sperm, testes
DEN + phenobarbital	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta™Mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd
Dimethylarsinic acid (CAS No. 75-60-5)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	urinary bladder
Rat target sites female	nd
Mouse target sites male	lung
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	lung

Dimethylnitrosamine (DMN) (CAS No. 62-75-9)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	0.189m
TD ₅₀ (mg/kg bw per day) rat	0.095 9m,v
Rat target sites male	kidney, liver, lung, testes
Rat target sites female	liver, vascular system
Mouse target sites male	liver, nervous system
Mouse target sites female	lung, nervous system
Positive transgenic systems	Big Blue [®] mouse, Big Blue [®] mouse <i>cII</i> , Big Blue [®] rat <i>cII</i> , Muta TM Mouse
Positive transgenic tissues	kidney, liver, lung, spleen
Negative transgenic systems	Big Blue [®] mouse, Big Blue [®] rat, Big Blue [®] rat <i>cII</i> , Muta TM Mouse
Negative transgenic tissues	bladder, bone marrow, forestomach, kidney, liver, lung, spleen, testes

Dinitropyrenes

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	+
Carcinogenicity	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse, Muta TM Mouse <i>cII</i>
Positive transgenic tissues	bone marrow, colon, liver, lung, stomach
Negative transgenic systems	Muta TM Mouse, Muta TM Mouse <i>cII</i>
Negative transgenic tissues	bone marrow, liver, lung, stomach
Dipropylnitrosamine (DPN) (CAS No. 621-64-7)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	0.186
Rat target sites male	kidney, liver, nasal cavity
Rat target sites female	kidney, liver, nasal cavity, oesophagus
Mouse target sites male	kidney, liver, lung
Mouse target sites female	lung
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	bone marrow, kidney, liver, lung
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, kidney, testes
d-Limonene (CAS No. 5989-27-5)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	–

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	–
TD ₅₀ (mg/kg bw per day) rat	204
Rat target sites male	kidney
Rat target sites female	–
Mouse target sites male	–
Mouse target sites female	–
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	kidney, liver

Ellagic acid (CAS No. 476-66-4)

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	–
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	no positive
Rat target sites male	nd
Rat target sites female	none
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	Big Blue [®] rat

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Negative transgenic tissues	oesophagus
Ethylene oxide (CAS No. 75-21-8)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	inconclusive
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	63.7m
TD ₅₀ (mg/kg bw per day) rat	21.3m,v
Rat target sites male	brain, haematopoietic system, nervous system, peritoneal cavity
Rat target sites female	brain, nervous system, stomach
Mouse target sites male	Harderian gland, lung
Mouse target sites female	haematopoietic system, Harderian gland, lung, mammary gland, uterus
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	lung
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	bone marrow, spleen, spleen cell fraction, testicular germ cells
Ethylmethanesulphonate (EMS) (CAS No. 62-50-0)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	kidney, lung
Rat target sites female	nd
Mouse target sites male	kidney, lung
Mouse target sites female	lung, thymus
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	bone marrow, epididymal sperm, liver
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, brain, epididymal sperm, liver, small intestine
Etoposide (CAS No. 33419-42-0)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	<i>lacZ</i> plasmid mouse, Muta TM Mouse
Negative transgenic tissues	bone marrow, liver, lung, testes
Eugenol (CAS No. 97-53-0)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	–
TD ₅₀ (mg/kg bw per day) rat	–
Rat target sites male	–
Rat target sites female	–
Mouse target sites male	–
Mouse target sites female	–
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	liver
 <i>Fasciola hepatica</i>	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue® mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Ferric nitrilotriacetate (CAS No. 16448-54-7)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	kidney
Rat target sites female	kidney
Mouse target sites male	kidney
Mouse target sites female	nd
Positive transgenic systems	<i>gpt</i> delta (<i>gpt</i>)
Positive transgenic tissues	kidney
Negative transgenic systems	<i>gpt</i> delta (<i>gpt</i>)
Negative transgenic tissues	kidney
Flumequine (CAS No. 42835-25-6)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	none

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Rat target sites female	none
Mouse target sites male	liver
Mouse target sites female	liver
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	<i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi)
Negative transgenic tissues	liver

Folic acid (CAS No. 59-30-3)

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	colonic epithelium

Fructose (CAS No. 57-48-7)

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat <i>cII</i>
Negative transgenic tissues	colon

Gamma rays

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	haematopoietic system, liver, lung
Rat target sites female	haematopoietic system, liver, lung, mammary gland
Mouse target sites male	haematopoietic system, liver, lung
Mouse target sites female	haematopoietic system, liver, lung, mammary gland
Positive transgenic systems	Big Blue [®] mouse, <i>gpt</i> delta (<i>gpt</i>), Muta TM Mouse
Positive transgenic tissues	bone marrow, liver, spleen
Negative transgenic systems	Big Blue [®] mouse, <i>gpt</i> delta (Spi), Muta TM Mouse
Negative transgenic tissues	bone marrow, liver, spleen, testes

Gamma rays + NNK

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	<i>gpt</i> delta (<i>gpt</i>)
Positive transgenic tissues	liver, lung
Negative transgenic systems	<i>gpt</i> delta (<i>Spi</i>)
Negative transgenic tissues	lung

Genistein (CAS No. 446-72-0)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites female	uterus
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	heart, mammary gland
Glass wool fibres	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	none
Rat target sites female	none
Mouse target sites male	none
Mouse target sites female	none
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	lung
Glass wool fibres + B(a)P	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	lung
Negative transgenic systems	none
Negative transgenic tissues	none
Glucose (CAS No. 50-99-7)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat <i>cII</i>
Negative transgenic tissues	colon
Glycidamide (CAS No. 5694-00-8)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse <i>cII</i>
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] mouse <i>cII</i>
Negative transgenic tissues	liver
Green tea	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	none
Rat target sites female	none
Mouse target sites male	none
Mouse target sites female	none
Positive transgenic systems	none

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Positive transgenic tissues	none
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	oesophagus
Heavy-ion radiation	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	<i>gpt</i> delta (Spi)
Positive transgenic tissues	kidney, liver, spleen
Negative transgenic systems	<i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi)
Negative transgenic tissues	liver, testes
Heptachlor (CAS No. 76-44-8)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	–
Carcinogenicity	+
IARC	2B

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
TD ₅₀ (mg/kg bw per day) mouse	1.21m
TD ₅₀ (mg/kg bw per day) rat	–
Rat target sites male	–
Rat target sites female	–
Mouse target sites male	liver
Mouse target sites female	liver
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver

Hexachlorobutadiene (CAS No. 87-68-3)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	kidney
Rat target sites female	kidney
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	kidney
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, kidney, liver

Hexavalent chromium (CAS No. 7440-47-3)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	lung
Rat target sites female	nd
Mouse target sites male	lung
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse, Muta TM Mouse
Positive transgenic tissues	bone marrow, liver, lung
Negative transgenic systems	Big Blue [®] mouse, Muta TM Mouse
Negative transgenic tissues	bone marrow, liver, lung

High-energy charged particle (Fe)

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	<i>lacZ</i> plasmid mouse
Positive transgenic tissues	brain
Negative transgenic systems	<i>lacZ</i> plasmid mouse

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Negative transgenic tissues	brain
High-fat diet	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	colon
Mouse target sites female	colon
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	Big Blue [®] mouse <i>cII</i> , Big Blue [®] rat
Negative transgenic tissues	bone marrow, colon, small intestine
Hydrazine sulphate (CAS No. 10034-93-2)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	inconclusive
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	inconclusive
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	7.59m,v
TD ₅₀ (mg/kg bw per day) rat	40.8m

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Rat target sites male	liver, lung
Rat target sites female	lung
Mouse target sites male	liver, lung
Mouse target sites female	liver, lung
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, liver, lung
Hydroxyurea (CAS No. 127-07-1)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	–
Mouse target sites female	nd
Positive transgenic systems	<i>lacZ</i> plasmid mouse
Positive transgenic tissues	lung, testes
Negative transgenic systems	<i>lacZ</i> plasmid mouse
Negative transgenic tissues	spleen
Hydroxyurea + X-rays	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	<i>lacZ</i> plasmid mouse
Positive transgenic tissues	lung, testes
Negative transgenic systems	<i>lacZ</i> plasmid mouse
Negative transgenic tissues	spleen
Hyperglycaemia	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	embryo
Negative transgenic systems	nd
Negative transgenic tissues	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Isopropylmethanesulphonate (iPMS) (CAS No. 926-06-7)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	thymus
Positive transgenic systems	Big Blue [®] mouse, Muta TM Mouse
Positive transgenic tissues	epididymal sperm, testes, testicular germ cells
Negative transgenic systems	Big Blue [®] mouse, Muta TM Mouse
Negative transgenic tissues	epididymal sperm, testes, vas deferens sperm
Jervine (CAS No. 469-59-0)	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd

Kojic acid (CAS No. 501-30-4)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	658m
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	thyroid
Mouse target sites female	thyroid
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	liver

Leucomalachite green (CAS No. 129-73-7)

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> comet	nd
Carcinogenicity	±
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	liver
Levofloxacin (CAS No. 100986-85-4)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, liver, sperm, testes
Malachite green (CAS No. 569-64-2)	
<i>Salmonella</i>	+

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	equivocal
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	none
Rat target sites female	none
Mouse target sites male	none
Mouse target sites female	none
Positive transgenic systems	none
Positive transgenic tissues	none
Negative transgenic systems	Big Blue [®] mouse <i>cII</i>
Negative transgenic tissues	liver
Methyl bromide (CAS No. 74-83-9)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	–
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	stomach
Rat target sites female	stomach
Mouse target sites male	–
Mouse target sites female	–

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	glandular stomach, liver
Methyl clofenapate (CAS No. 21340-68-1)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	9.17
Rat target sites male	liver
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse, Muta TM Mouse
Negative transgenic tissues	liver

Methyl clofenapate + DMN

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse, Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd
Methylmethanesulphonate (MMS) (CAS No. 66-27-3)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	31.8
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nasal cavity
Rat target sites female	nd
Mouse target sites male	haematopoietic system, lung
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse, Muta TM Mouse
Positive transgenic tissues	bone marrow, epididymal sperm, liver, small intestine, testes
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver, seminiferous tubules, small intestine, sperm, testicular germ cells
MMS + 4-AAF	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd
MMS + DMN	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd
Metronidazole (CAS No. 443-48-1)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	506m
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	pituitary gland, testes
Rat target sites female	liver, mammary gland
Mouse target sites male	lung
Mouse target sites female	haematopoietic system, lung
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	stomach
Mitomycin-C (CAS No. 50-07-7)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	0.001 02m
Rat target sites male	peritoneal cavity
Rat target sites female	intestine, mammary gland, peritoneal cavity
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	<i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi)
Positive transgenic tissues	bone marrow, liver
Negative transgenic systems	<i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi), Muta TM Mouse
Negative transgenic tissues	bone marrow, liver, small intestine, testes

N7-Methyldibenzo(c,g)carbazole (NMDBC) (CAS No. 27093-62-5)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver, skin
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	liver

N-Ethyl-N-nitrosourea (ENU) (CAS No. 759-73-9)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	0.948m
Rat target sites male	nervous system, small intestine, stomach, thyroid gland, Zymbal's gland
Rat target sites female	bladder, lung, mammary gland, nervous system, small intestine, uterus
Mouse target sites male	haematopoietic system, Harderian gland, kidney, liver, lung, stomach
Mouse target sites female	ovary
Positive transgenic systems	Big Blue [®] mouse, Big Blue [®] mouse <i>cII</i> , Big Blue [®] rat, <i>gpt</i> delta (<i>gpt</i>), <i>lacZ</i> plasmid mouse
Positive transgenic tissues	bone marrow, colon, colonic epithelium, intestine, liver, lung, spleen
Negative transgenic systems	Big Blue [®] mouse, Muta TM Mouse
Negative transgenic tissues	bladder, bone marrow, brain, epididymal sperm, heart, kidney, liver, lung
ENU + 8-methoxypsoralen	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites female	nd
Positive transgenic systems	<i>gpt</i> delta (<i>gpt</i>)
Positive transgenic tissues	lung
Negative transgenic systems	none
Negative transgenic tissues	none
<i>N</i>-Hydroxy-2-acetylaminofluorene (CAS No. 53-95-2)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	6.23
TD ₅₀ (mg/kg bw per day) rat	0.000 988m
Rat target sites male	liver
Rat target sites female	liver
Mouse target sites male	nd
Mouse target sites female	kidney, liver, oesophagus, stomach
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	liver, splenic lymphocytes
Negative transgenic systems	nd
Negative transgenic tissues	nd
Nickel subsulphide (CAS No. 12035-72-2)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	lung
Rat target sites female	lung
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat, Muta TM Mouse
Negative transgenic tissues	lung, nasal mucosa
Nifuroxazide (CAS No. 965-52-6)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse <i>cII</i>
Negative transgenic tissues	bladder, caecum, colon, kidney, lung, small intestine, spleen, stomach
Nitrofurantoin (CAS No. 67-20-9)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	1 400
TD ₅₀ (mg/kg bw per day) rat	163
Rat target sites male	kidney
Rat target sites female	mammary gland
Mouse target sites male	haematopoietic system
Mouse target sites female	ovary
Positive transgenic systems	Big Blue [®] mouse <i>cII</i>
Positive transgenic tissues	kidney
Negative transgenic systems	Big Blue [®] mouse <i>cII</i>
Negative transgenic tissues	bladder, caecum, colon, lung, small intestine, spleen, stomach

***N*-Methyl-*N'*-nitro-*N*-nitrosoguanidine (MNNG) (CAS No. 70-25-7)**

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	0.803m,v
Rat target sites male	oesophagus, skin, small intestine, stomach
Rat target sites female	small intestine, stomach
Mouse target sites male	intestine, skin, stomach
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Positive transgenic tissues	skin, stomach
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, liver, skin, stomach
<i>N</i>-Methyl-<i>N</i>-nitrosourea (MNU) (CAS No. 684-93-5)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	lung, nervous system, skin, stomach, thyroid gland, Zymbal's gland
Rat target sites female	bladder, haematopoietic system, kidney, mammary gland, vagina
Mouse target sites male	haematopoietic system, lung, skin
Mouse target sites female	lung, skin
Positive transgenic systems	Big Blue [®] mouse, Muta TM Mouse, Muta TM Mouse <i>cII</i>
Positive transgenic tissues	brain, liver, lung, spleen, splenic lymphocytes, testicular germ cells
Negative transgenic systems	Big Blue [®] mouse, Big Blue [®] mouse <i>cI</i> , Big Blue [®] mouse <i>cII</i>
Negative transgenic tissues	brain, forestomach, glandular stomach, kidney, lung, splenic lymphocytes
<i>N</i>-Nitrosodibenzylamine (NDBzA) (CAS No. 5336-53-8)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, liver
<i>N</i>-Nitrosomethylbenzylamine (CAS No. 937-40-6)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	oesophagus
Rat target sites female	oesophagus
Mouse target sites male	forestomach
Mouse target sites female	forestomach
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	oesophagus
Negative transgenic systems	none
Negative transgenic tissues	none
<i>N</i>-Nitrosomethylbenzylamine + diallyl sulphide	

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	oesophagus
<i>N</i>-Nitrosomethylbenzylamine + ellagic acid	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	oesophagus
Negative transgenic systems	none
Negative transgenic tissues	none
<i>N</i>-Nitrosomethylbenzylamine + ethanol	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	oesophagus
Negative transgenic systems	nd
Negative transgenic tissues	nd
<i>N</i>-Nitrosomethylbenzylamine + green tea	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	oesophagus
Negative transgenic systems	none
Negative transgenic tissues	none
<i>N</i>-Nitrosornicotine (NNN) (CAS No. 80508-23-2)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	lung, nasal cavity, oesophagus
Rat target sites female	nasal cavity, oesophagus
Mouse target sites male	lung
Mouse target sites female	lung, nasal cavity
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	kidney, liver, lung, oesophagus, oral tissue, tongue
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	tongue
<i>N</i>-Nitrosopyrrolidine (CAS No. 930-55-2)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	-

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	0.679
TD ₅₀ (mg/kg bw per day) rat	0.799
Rat target sites male	kidney, liver
Rat target sites female	liver, vascular system
Mouse target sites male	lung
Mouse target sites female	lung
Positive transgenic systems	<i>gpt</i> delta (<i>gpt</i>)
Positive transgenic tissues	liver
Negative transgenic systems	none
Negative transgenic tissues	none
<i>N</i>-Propyl-<i>N</i>-nitrosourea (PNU) (CAS No. 816-57-9)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	3.77m
Rat target sites male	haematopoietic system
Rat target sites female	haematopoietic system
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	<i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi), Muta TM Mouse

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Positive transgenic tissues	bone marrow, heart, kidney, liver, lung, spleen, testes
Negative transgenic systems	<i>gpt</i> delta (Spi), Muta™Mouse
Negative transgenic tissues	bone marrow, brain, heart, kidney, liver, lung, spleen
<i>o</i>-Aminoazotoluene (CAS No. 97-56-3)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	4.04m
Rat target sites male	liver
Rat target sites female	liver
Mouse target sites male	liver, lung
Mouse target sites female	nd
Positive transgenic systems	Muta™Mouse, Muta™Mouse <i>cII</i>
Positive transgenic tissues	bladder, colon, kidney, liver
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	bladder, bone marrow, kidney, lung
<i>o</i>-Anisidine (CAS No. 90-04-0)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
TD ₅₀ (mg/kg bw per day) mouse	966m
TD ₅₀ (mg/kg bw per day) rat	29.7m
Rat target sites male	kidney, thyroid gland, urinary bladder
Rat target sites female	urinary bladder
Mouse target sites male	urinary bladder
Mouse target sites female	urinary bladder
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	bladder
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	bladder, liver
Oxazepam (CAS No. 604-75-1)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	–
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	35.8m
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	kidney
Rat target sites female	–
Mouse target sites male	liver
Mouse target sites female	liver, thyroid gland
Positive transgenic systems	Big Blue [®] mouse, Big Blue [®] mouse <i>cII</i>
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd
<i>p</i>-Cresidine (CAS No. 120-71-8)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	54.3m
TD ₅₀ (mg/kg bw per day) rat	98m
Rat target sites male	liver, nasal cavity, urinary bladder
Rat target sites female	nasal cavity, urinary bladder
Mouse target sites male	urinary bladder
Mouse target sites female	liver, urinary bladder
Positive transgenic systems	Big Blue [®] mouse, Big Blue [®] mouse <i>cII</i>
Positive transgenic tissues	bladder
Negative transgenic systems	nd
Negative transgenic tissues	nd

Peroxyacetyl nitrate (PAN) (CAS No. 2278-22-0)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	lung
Negative transgenic systems	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Negative transgenic tissues	nd
Phenobarbital (CAS No. 50-06-6)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	7.37m
TD ₅₀ (mg/kg bw per day) rat	–
Rat target sites male	–
Rat target sites female	–
Mouse target sites male	liver
Mouse target sites female	liver
Positive transgenic systems	Big Blue [®] mouse, Big Blue [®] mouse <i>cII</i>
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] mouse, Big Blue [®] rat, Muta TM Mouse
Negative transgenic tissues	liver
Phorbol-12-myristate-13-acetate (TPA) (CAS No. 16561-29-8)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	skin
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	skin
Polyphenon E (CAS No. 188265-33-0)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver, lung, spleen
Potassium bromate (CAS No. 7758-01-2)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	kidney, testes
Rat target sites female	kidney
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	<i>gpt</i> delta (Spi)
Positive transgenic tissues	kidney
Negative transgenic systems	<i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi)
Negative transgenic tissues	kidney

Procarbazine hydrochloride (CAS No. 366-70-1)

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	0.558m
TD ₅₀ (mg/kg bw per day) rat	0.351m
Rat target sites male	haematopoietic system, mammary gland, nervous system
Rat target sites female	haematopoietic system, mammary gland, nervous system
Mouse target sites male	haematopoietic system, lung, nervous system
Mouse target sites female	haematopoietic system, lung, nervous system, uterus
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	bone marrow, kidney, lung, spleen, testes
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, brain, kidney, liver, lung, spleen, testes

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Proton radiation	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	<i>lacZ</i> plasmid mouse
Positive transgenic tissues	brain, spleen
Negative transgenic systems	<i>lacZ</i> plasmid mouse
Negative transgenic tissues	brain, spleen
Quinoline (CAS No. 91-22-5)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	inconclusive
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	liver

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Rat target sites female	nd
Mouse target sites male	liver
Mouse target sites female	nd
Positive transgenic systems	Muta™Mouse, Muta™Mouse <i>cII</i>
Positive transgenic tissues	liver
Negative transgenic systems	Muta™Mouse
Negative transgenic tissues	bone marrow, kidney, lung, spleen, testicular germ cells

Riddelliine (CAS No. 23246-96-0)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	1.97m
TD ₅₀ (mg/kg bw per day) rat	0.119m
Rat target sites male	haematopoietic system, liver, vascular system
Rat target sites female	haematopoietic system, liver, vascular system
Mouse target sites male	liver, vascular system
Mouse target sites female	lung
Positive transgenic systems	Big Blue [®] rat <i>cII</i>
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] rat <i>cII</i>
Negative transgenic tissues	liver

Rock wool fibres

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	none
Rat target sites female	none
Mouse target sites male	none
Mouse target sites female	none
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	lung
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	lung
Rock wool fibres + B(a)P	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	lung
Negative transgenic systems	none
Negative transgenic tissues	none

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Sodium saccharin (CAS No. 128-44-9)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	–
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	–
TD ₅₀ (mg/kg bw per day) rat	2140m,v
Rat target sites male	urinary bladder
Rat target sites female	–
Mouse target sites male	–
Mouse target sites female	–
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	bladder, liver
Solanidine (CAS No. 80-78-4)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd
Solasodine (CAS No. 126-17-0)	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Muta TM Mouse
Positive transgenic tissues	liver
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	liver
Streptozotocin (CAS No. 18883-66-4)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	0.272m
TD ₅₀ (mg/kg bw per day) rat	0.963m
Rat target sites male	kidney, liver, pancreas
Rat target sites female	kidney
Mouse target sites male	kidney, lung
Mouse target sites female	kidney, lung, uterus
Positive transgenic systems	Big Blue [®] mouse
Positive transgenic tissues	kidney, liver
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	kidney, liver
Sucrose (CAS No. 57-50-1)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	–
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	inconclusive
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	–
Mouse target sites female	–
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	colon, liver
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	colon, liver

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Tamoxifen (CAS No. 10540-29-1)	
<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	+
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	4.39m
TD ₅₀ (mg/kg bw per day) rat	3.71m,v
Rat target sites male	liver
Rat target sites female	cervix, liver, uterus
Mouse target sites male	testes
Mouse target sites female	ovary, uterus
Positive transgenic systems	Big Blue [®] rat, Big Blue [®] rat <i>cII</i>
Positive transgenic tissues	liver
Negative transgenic systems	Big Blue [®] rat, Big Blue [®] rat <i>cII</i>
Negative transgenic tissues	liver
Tamoxifen + phenobarbital	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd

Thiotepa (CAS No. 52-24-4)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	0.223m
TD ₅₀ (mg/kg bw per day) rat	0.164m
Rat target sites male	ear/Zymbal's gland, haematopoietic system, skin
Rat target sites female	ear/Zymbal's gland, mammary gland
Mouse target sites male	haematopoietic system, preputial gland, skin
Mouse target sites female	haematopoietic system
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	splenic lymphocytes
Negative transgenic systems	nd
Negative transgenic tissues	nd

Toremifene citrate (CAS No. 89778-27-8)

<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	3
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	–
Rat target sites male	–
Rat target sites female	–
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	liver

***trans*-4-Hydroxy-2-nonenal (CAS No. 128946-65-6)**

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	–
<i>In vivo</i> comet	nd
Carcinogenicity	–
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	–
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	kidney, liver, lung

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Trichloroethylene (TCE) (CAS No. 79-01-6)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	–
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	–
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	–
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	–
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	1580m,v
TD ₅₀ (mg/kg bw per day) rat	668m
Rat target sites male	testes
Rat target sites female	–
Mouse target sites male	liver, lung
Mouse target sites female	liver, lung
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Muta TM Mouse
Negative transgenic tissues	bone marrow, kidney, liver, lung, spleen, testicular germ cells

Tris-(2,3-dibromopropyl)phosphate (CAS No. 126-72-7)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	+
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	–
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	128m
TD ₅₀ (mg/kg bw per day) rat	3.83m
Rat target sites male	kidney, large intestine
Rat target sites female	kidney

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites male	kidney, lung, stomach
Mouse target sites female	liver, lung, stomach
Positive transgenic systems	Big Blue [®] mouse, Big Blue [®] rat
Positive transgenic tissues	kidney
Negative transgenic systems	Big Blue [®] mouse, Big Blue [®] rat
Negative transgenic tissues	kidney, liver, stomach

Uracil (CAS No. 66-22-8)

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	2750m,v
TD ₅₀ (mg/kg bw per day) rat	671m,v
Rat target sites male	urinary bladder
Rat target sites female	urinary bladder
Mouse target sites male	urinary bladder
Mouse target sites female	urinary bladder
Positive transgenic systems	Big Blue [®] rat
Positive transgenic tissues	bladder
Negative transgenic systems	Big Blue [®] rat
Negative transgenic tissues	bladder

Urethane (CAS No. 51-79-6)

<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	–
<i>In vitro</i> mouse lymphoma	–
<i>In vitro</i> gene mutation	+
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	+

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	2B
TD ₅₀ (mg/kg bw per day) mouse	16.9m,v
TD ₅₀ (mg/kg bw per day) rat	41.3
Rat target sites male	all tumour-bearing animals
Rat target sites female	all tumour-bearing animals, liver, nervous system
Mouse target sites male	haematopoietic system, Harderian gland, liver, lung, vascular system
Mouse target sites female	haematopoietic system, liver, lung, skin
Positive transgenic systems	Big Blue [®] mouse, Muta TM Mouse
Positive transgenic tissues	bone marrow, forestomach, liver, lung, spleen
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	liver, lung, spleen
UVB	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	2A
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	skin
Rat target sites female	nd
Mouse target sites male	skin
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse, <i>gpt</i> delta (<i>gpt</i>), <i>gpt</i> delta (Spi), Muta TM Mouse
Positive transgenic tissues	skin
Negative transgenic systems	<i>gpt</i> delta (Spi)
Negative transgenic tissues	skin

Vinyl carbamate (CAS No. 15805-73-

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
9)	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	0.124m
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	liver
Rat target sites female	nd
Mouse target sites male	liver, vascular system
Mouse target sites female	lung, skin, vascular system
Positive transgenic systems	Big Blue [®] mouse <i>cII</i>
Positive transgenic tissues	lung, small intestine
Negative transgenic systems	Big Blue [®] mouse <i>cII</i>
Negative transgenic tissues	lung, small intestine
Vinyl carbamate + diallyl sulphone	
<i>Salmonella</i>	nd
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse <i>cII</i>
Positive transgenic tissues	lung, small intestine
Negative transgenic systems	Big Blue [®] mouse <i>cII</i>
Negative transgenic tissues	lung

Vitamin E (CAS No. 59-02-9)

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd
<i>In vivo</i> comet	nd
Carcinogenicity	nd
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	nd
Rat target sites female	nd
Mouse target sites male	nd
Mouse target sites female	nd
Positive transgenic systems	nd
Positive transgenic tissues	nd
Negative transgenic systems	Big Blue [®] mouse
Negative transgenic tissues	adipose tissue, heart, liver, testicular germ cells, thymus

Wyeth 14,643 (CAS No. 50892-23-4)

<i>Salmonella</i>	–
<i>In vitro</i> chromosomal aberrations	nd
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	nd
<i>In vivo</i> unscheduled DNA synthesis	nd
<i>In vivo</i> micronucleus	nd

Appendix B (continued)

Genotoxicity/carcinogenicity tests	Result ^a
<i>In vivo</i> comet	nd
Carcinogenicity	+
IARC	nd
TD ₅₀ (mg/kg bw per day) mouse	10.8
TD ₅₀ (mg/kg bw per day) rat	4.36m,v
Rat target sites male	liver
Rat target sites female	nd
Mouse target sites male	liver
Mouse target sites female	nd
Positive transgenic systems	Big Blue [®] mouse <i>cII</i>
Positive transgenic tissues	liver
Negative transgenic systems	nd
Negative transgenic tissues	nd
X-rays	
<i>Salmonella</i>	+
<i>In vitro</i> chromosomal aberrations	+
<i>In vitro</i> micronucleus	nd
<i>In vitro</i> mouse lymphoma	nd
<i>In vitro</i> gene mutation	nd
<i>In vivo</i> chromosomal aberrations	+
<i>In vivo</i> unscheduled DNA synthesis	+
<i>In vivo</i> micronucleus	+
<i>In vivo</i> comet	+
Carcinogenicity	+
IARC	1
TD ₅₀ (mg/kg bw per day) mouse	nd
TD ₅₀ (mg/kg bw per day) rat	nd
Rat target sites male	haematopoietic system, liver, lung
Rat target sites female	haematopoietic system, liver, lung, mammary gland
Mouse target sites male	haematopoietic system, liver, lung
Mouse target sites female	haematopoietic system, liver, lung, mammary gland
Positive transgenic systems	Big Blue [®] mouse, <i>gpt</i> delta (<i>gpt</i>), <i>lacZ</i> plasmid mouse, Muta TM Mouse
Positive transgenic tissues	brain, embryo, liver, lung, skin, small intestine, spleen, vas deferens sperm
Negative transgenic systems	Big Blue [®] mouse, <i>gpt</i> delta (<i>Spi</i>), <i>lacZ</i> plasmid mouse, Muta TM Mouse
Negative transgenic tissues	brain, liver, small intestine, spleen, vas deferens sperm

nd, not determined

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^a m indicates that the TD₅₀ is based on the harmonic mean of the most potent TD₅₀ value from each positive experiment in the Carcinogenic Potency Database (<http://potency.berkeley.edu/cpdb.html>); v indicates variation greater than 10-fold among statistically significant ($p < 0.01$) TD₅₀ values from different positive experiments in the Carcinogenic Potency Database (<http://potency.berkeley.edu/cpdb.html>).

APPENDIX C: TRANSGENIC RODENT MUTAGENICITY DATA ON CARCINOGENS IN TARGET TISSUES

Table C.1. Summary of TGR assays performed in liver for known liver carcinogens

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
1,2-Dibromoethane	6.36 (4, 2.14)	6.27 (3, 4.96)	ip	60	1	14	-0.09	0.99	-	Hachiya and Motohashi (2000)
	6.36 (4, 2.14)	4.45 (3, 2.99)	ip	80	5	14	-1.91	0.7	-	Hachiya and Motohashi (2000)
1,3-Butadiene	2.4 (5, 0.5)	3.1 (5, 0.6)	inhalation	2 400	5	14	0.7	1.29	-	Recio <i>et al.</i> (1992)
2,3,7,8-Tetrachloro-dibenzo- <i>p</i> -dioxin (TCDD)	3.4 (5, -)	3.3 (5, 3.4)	gavage	0.024	42	14	-0.1	0.97	-	Thornton <i>et al.</i> (2001)
	4.5 (5, -)	3.5 (5, 3.4)	gavage	0.024	42	14	-1	0.78	-	Thornton <i>et al.</i> (2001)
2,4-Diaminotoluene	5.7 (5, 0.7)	12.1 (5, 0.6)	diet	10 800	90	0	6.4	2.12	+	Hayward <i>et al.</i> (1995)
	10 (5, 0.6)	9.3 (5, 0.6)	diet	3 600	30	0	-0.7	0.93	-	Hayward <i>et al.</i> (1995)
	5 (5, 1)	9.7 (5, 1)	gavage	800	12	28	4.7	1.94	+	Suter <i>et al.</i> (1996)
	4.064 (4, 4.473)	18.407 (5, 2.123)	topical	5 600	28	7	14.34 3	4.53	+	Kirkland and Beevers (2006)
	4.2 (5, 1.4)	7.5 (4, 1.1)	gavage	800	12	10	3.3	1.79	+	Suter <i>et al.</i> (1996)
	5.1 (5, 1.3)	5.2 (5, 1.1)	gavage	800	12	10	0.1	1.02	-	Suter <i>et al.</i> (1996)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
2-Acetylaminofluorene (2-AAF)	5.7 (5, -)	12.1 (5, -)	diet	10 800	90	0	6.4	2.12	+	Cunningham <i>et al.</i> (1996)
	10 (5, -)	9.3 (5, -)	diet	3 600	30	0	-0.7	0.93	-	Cunningham <i>et al.</i> (1996)
	4.3 (5, 1)	8.5 (5, 1)	gavage	800	12	28	4.2	1.98	+	Suter <i>et al.</i> (1996)
	7.8 (2, 0.6)	4.4 (2, 0.6)	gavage	50	1	112	-3.4	0.56	-	Brooks <i>et al.</i> (1995)
	5.02 (6, 1.5)	6.53 (4, 1.3)	ip	400	4	420	1.51	1.3	+	Ross and Leavitt (1998)
	10 (3, 0.5)	27 (3, 0.3)	diet	9 000	120	0	17	2.7	+	Gunz, Shephard and Lutz (1993)
	10 (3, 0.5)	51 (3, 0.3)	diet	18 000	120	0	41	5.1	+	Gunz, Shephard and Lutz (1993)
	2.7 (2, 0.3)	3.5 (2, 0.2)	diet	1 008	28	0	0.8	1.3	-	Shephard <i>et al.</i> (1993)
	6.85 (2, 0.5)	7.4 (2, 0.5)	gavage	50	1	3	0.55	1.08	-	Brooks <i>et al.</i> (1995)
	6.85 (2, 0.5)	4.4 (2, 0.7)	gavage	50	1	56	-2.45	0.64	-	Brooks <i>et al.</i> (1995)
	6.85 (2, 0.5)	5.14 (2, 0.8)	gavage	50	1	28	-1.71	0.75	-	Brooks <i>et al.</i> (1995)
	4.83 (5, 1.3)	7.43 (4, 1.2)	ip	400	4	70	2.6	1.54	+	Ross and Leavitt (1998)
	6.85 (2, 0.5)	4.67 (2, 0.8)	gavage	50	1	7	-2.18	0.68	-	Brooks <i>et al.</i> (1995)
	6.85 (2, 0.5)	13.4 (2, 0.5)	gavage	100	1	28	6.55	1.96	-	Brooks <i>et al.</i> (1995)
	2.7 (2, 0.3)	7.7 (2, 0.2)	diet	2 016	28	0	5	2.85	+	Shephard <i>et al.</i> (1993)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
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Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
2-Amino-1-methyl-6-phenylimidazo(4,5-b)pyridine (PhIP)	6.85 (2, 0.5)	4.4 (2, 0.5)	gavage	50	1	14	-2.45	0.64	-	Brooks <i>et al.</i> (1995)
	8.5 (8, -)	84.5 (8, -)	diet	3 024	84	0	76	9.94	+	van Steeg (2001)
	6.85 (2, 0.5)	7 (2, 0.5)	gavage	100	1	3	0.15	1.02	-	Brooks <i>et al.</i> (1995)
	6.85 (2, 0.5)	4 (2, 0.6)	gavage	100	1	7	-2.85	0.58	-	Brooks <i>et al.</i> (1995)
	6.85 (2, 0.5)	8.4 (2, 0.5)	gavage	100	1	14	1.55	1.23	-	Brooks <i>et al.</i> (1995)
	6.85 (2, 0.5)	13.9 (2, 0.5)	gavage	100	1	56	7.05	2.03	+	Brooks <i>et al.</i> (1995)
	7.8 (2, 0.6)	12.9 (2, 0.5)	gavage	100	1	112	5.1	1.65	-	Brooks <i>et al.</i> (1995)
	6.3 (8, -)	38.5 (8, -)	diet	3 024	84	0	32.2	6.11	+	van Steeg (2001)
	7.5 (8, -)	94.2 (8, -)	diet	3 024	84	0	86.7	12.56	+	van Steeg (2001)
	3.93 (5, 1.2)	8.13 (3, 0.9)	ip	400	4	35	4.2	2.07	+	Ross and Leavitt (1998)
	4.8 (3, -)	6 (3, -)	gavage	1 680	60	0	1.2	1.25	-	Nakai, Nelson and De Marzo (2007)
	5.4 (3, -)	4.8 (3, -)	gavage	840	30	0	-0.6	0.89	-	Nakai, Nelson and De Marzo (2007)
	6 (-, -)	10 (4, -)	diet	672	56	0	4	1.67	-	Klein <i>et al.</i> (2001)
	0.5 (3, -)	2.5 (3, -)	diet	4 368	91	14	2	5	+	Masumura <i>et al.</i> (1999a)
	6 (-, -)	10 (4, -)	diet	67.2	14	0	4	1.67	-	Klein <i>et al.</i> (2001)
	6 (-, -)	9 (4, -)	diet	436.8	91	0	3	1.5	-	Klein <i>et al.</i> (2001)
	6 (-, -)	9 (4, -)	diet	268.8	56	0	3	1.5	-	Klein <i>et al.</i> (2001)
	6 (-, -)	5 (4, -)	diet	273	91	0	-1	0.83	-	Klein <i>et al.</i> (2001)
5 (-, -)	5 (5, -)	diet	42	14	0	0	1	-	Klein <i>et al.</i> (2001)	
5 (-, -)	5 (4, -)	diet	168	56	0	0	1	-	Klein <i>et al.</i> (2001)	

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	5 (-, -)	20 (4, -)	diet	273	91	0	15	4	+	Klein <i>et al.</i> (2001)
	5 (-, -)	5 (4, -)	diet	33.6	7	0	0	1	-	Klein <i>et al.</i> (2001)
	5 (-, -)	8 (4, -)	diet	67.2	14	0	3	1.6	-	Klein <i>et al.</i> (2001)
	5 (-, -)	22 (4, -)	diet	268.8	56	0	17	4.4	+	Klein <i>et al.</i> (2001)
	5 (-, -)	5 (4, -)	diet	21	7	0	0	1	-	Klein <i>et al.</i> (2001)
	6 (-, -)	6 (4, -)	diet	21	7	0	0	1	-	Klein <i>et al.</i> (2001)
	6 (-, -)	9 (4, -)	diet	33.6	7	0	3	1.5	-	Klein <i>et al.</i> (2001)
	6 (-, -)	7 (4, -)	diet	42	14	0	1	1.17	-	Klein <i>et al.</i> (2001)
	0.5 (3, -)	4 (3, -)	diet	4 368	91	14	3.5	8	+	Masumura <i>et al.</i> (1999a)
	0.3 (3, -)	0.9 (3, -)	diet	4 368	91	14	0.6	3	+	Masumura <i>et al.</i> (1999a)
	0.2 (3, -)	1 (3, -)	diet	4 368	91	14	0.8	5	+	Masumura <i>et al.</i> (1999a)
	3.5 (2, 0.5)	5.6 (3, 0.8)	gavage	80	4	7	2.1	1.6	-	Lynch, Gooderham and Boobis (1996)
	3.5 (2, 0.5)	2.6 (3, 0.5)	gavage	0.8	4	7	-0.9	0.74	-	Lynch, Gooderham and Boobis (1996)
	3.5 (2, 0.5)	2.4 (3, 0.2)	gavage	8	4	7	-1.1	0.69	-	Lynch, Gooderham and Boobis (1996)
	6 (-, -)	6 (4, -)	diet	168	56	0	0	1	-	Klein <i>et al.</i> (2001)
	6 (-, -)	13 (4, -)	diet	1 092	91	0	7	2.17	+	Klein <i>et al.</i> (2001)
	6 (-, -)	8 (4, -)	diet	168	14	0	2	1.33	-	Klein <i>et al.</i> (2001)
	6 (-, -)	4 (4, -)	diet	84	7	0	-2	0.67	-	Klein <i>et al.</i> (2001)
	5 (-, -)	25 (4, -)	diet	436.8	91	0	20	5	+	Klein <i>et al.</i> (2001)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
2-Amino-3,4-dimethylimidazo(4,5-f)quinoline (MeIQ)	2.5 (6, 1.3)	3.1 (3, 0.8)	diet	1 008	28	0	0.6	1.24	-	Suzuki <i>et al.</i> (1996a)
	3.1 (3, 0.6)	14.2 (3, 0.6)	diet	3 024	84	0	11.1	4.58	+	Suzuki <i>et al.</i> (1996a)
	2.1 (3, 0.7)	2.1 (3, 0.8)	diet	252	7	0	0	1	-	Suzuki <i>et al.</i> (1996a)
2-Amino-3,8-dimethylimidazo(4,5-f)quinoxaline (MeIQx)	1.48 (10, 1.213)	1.99 (5, 0.588)	diet	0.46	112	0	0.51	1.34	-	Hoshi <i>et al.</i> (2004)
	0.66 (5, 5.54)	0.55 (5, 2.2)	diet	30	84	0	-0.11	0.83	-	unpublished
	1.22 (5, 2.51)	23.8 (5, 2.49)	diet	19 650	546	0	22.58	19.51	+	unpublished
	1.22 (5, -)	23.84 (5, -)	diet	22 386	546	0	22.62	19.54	+	Masumura <i>et al.</i> (2003a)
	0.617 (5, 8.022)	5.285 (5, 7.264)	diet	4 200	84	0	4.67	8.57	+	Masumura <i>et al.</i> (2003a)
	0.617 (5, 8.022)	1.401 (5, 4.921)	diet	420	84	0	0.78	2.27	+	Masumura <i>et al.</i> (2003a)
	0.617 (5, 8.022)	0.758 (4, 7.478)	diet	42	84	0	0.14	1.23	-	Masumura <i>et al.</i> (2003a)
	1.48 (10, 1.213)	64.15 (5, 0.616)	diet	474.8	112	0	62.67	43.34	+	Hoshi <i>et al.</i> (2004)
	0.66 (5, 5.54)	2.02 (5, 2.32)	diet	302	84	0	1.36	3.06	+	unpublished
	1.48 (10, 1.213)	2.94 (5, 0.567)	diet	4.78	112	0	1.46	1.99	-	Hoshi <i>et al.</i> (2004)
	11.5 (3, -)	519 (3, -)	diet	20 160	280	0	507.5	45.13	+	Ryu <i>et al.</i> (1999a)
	1.48 (10, 1.213)	1.56 (5, 0.583)	diet	0.046	112	0	0.08	1.05	-	Hoshi <i>et al.</i> (2004)
	1.48 (10, 1.213)	1.49 (5, 0.598)	diet	0.005	112	0	0.01	1.01	-	Hoshi <i>et al.</i> (2004)
	0.36 (5, 0.598)	18.71 (5, 0.824)	diet	474.8	112	0	18.35	51.97	+	Hoshi <i>et al.</i> (2004)
	1.48 (10, 1.213)	5.14 (5, 0.565)	diet	47.26	112	0	3.66	3.47	+	Hoshi <i>et al.</i> (2004)
9 (3, -)	520 (3, -)	diet	15 120	210	0	511	57.78	+	Ryu <i>et al.</i> (1999a)	
2.9 (3, 0.8)	1.8 (3, 0.7)	gavage	100	1	14	-1.1	0.62	-	Itoh <i>et al.</i> (2000)	
1.8 (3, 0.4)	3.2 (3, 0.2)	diet	1 008	28	0	1.4	1.78	-	Itoh <i>et al.</i> (2000)	
1.6 (3, 0.3)	6.5 (3, 0.2)	diet	1 008	28	0	4.9	4.06	+	Itoh <i>et al.</i> (2000)	

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
2-Amino-3-methylimidazo(4,5-f)quinoline (IQ)	2.3 (3, 0.5)	7.1 (3, 0.5)	diet	3 024	84	0	4.8	3.09	+	Itoh <i>et al.</i> (2000)
	2.9 (6, 2)	11.3 (6, 2.2)	gavage	200	10	28	8.4	3.9	+	Davis <i>et al.</i> (1996)
	3.5 (3, -)	243 (3, -)	diet	15 120	210	0	239.5	69.43	+	Ryu <i>et al.</i> (1999a)
	0.66 (5, 5.54)	5.49 (5, 4.65)	diet	3 025	84	0	4.83	8.32	+	unpublished
	3.5 (3, -)	191 (3, -)	diet	20 160	280	0	187.5	54.57	+	Ryu <i>et al.</i> (1999a)
	8 (3, -)	520 (3, -)	diet	20 160	280	0	512	65	+	Ryu <i>et al.</i> (1999a)
	6 (3, -)	495 (3, -)	diet	15 120	210	0	489	82.5	+	Ryu <i>et al.</i> (1999a)
	13 (3, -)	714 (3, -)	diet	15 120	210	0	701	54.92	+	Ryu <i>et al.</i> (1999a)
	17 (3, -)	836 (3, -)	diet	20 160	280	0	819	49.18	+	Ryu <i>et al.</i> (1999a)
	3.3 (6, 2)	16.1 (6, 2)	gavage	200	10	28	12.8	4.88	+	Davis <i>et al.</i> (1996)
	2.3 (3, 0.5)	20.7 (3, 0.4)	diet	3 024	84	0	18.4	9	+	Itoh <i>et al.</i> (2000)
	3.8 (9, -)	12 (8, -)	diet	123	21	0	8.2	3.16	+	Hansen <i>et al.</i> (2004)
	2.23 (6, 1.787)	9.85 (6, 2.892)	diet	177	21	0	7.62	4.42	+	Dybdahl <i>et al.</i> (2003)
	2.3 (6, -)	5.3 (6, -)	diet	420	21	0	3	2.3	-	Moller <i>et al.</i> (2002)
	0.55 (5, 2.976)	18.8 (5, 0.525)	diet	1 374.1	91	0	18.25	34.18	+	Kanki <i>et al.</i> (2005)
	2.8 (4, 1.7)	5.1 (4, 1.4)	gavage	20	1	14	2.3	1.82	-	Bol <i>et al.</i> (2000)
2.9 (6, 2)	13.4 (6, 2)	gavage	200	10	28	10.5	4.62	+	Davis <i>et al.</i> (1996)	
3.3 (6, 2)	17.5 (6, 2.1)	gavage	200	10	28	14.2	5.3	+	Davis <i>et al.</i> (1996)	
2.3 (6, -)	10 (6, -)	diet	1 470	21	0	7.7	4.3	+	Moller <i>et al.</i> (2002)	

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	2.3 (6, -)	13.8 (6, -)	diet	4 200 mg/kg feed	21	0	11.5	6	+	Moller <i>et al.</i> (2002)
2-Nitro- <i>p</i> -phenylenediamine	2.8 (4, 1.7)	12.9 (4, 2.7)	gavage	100	5	14	10.1	4.61	+	Bol <i>et al.</i> (2000)
	2.7 (5, 1.4)	5.4 (5, 1.5)	gavage	1 500	12	10	2.7	2	+	Suter <i>et al.</i> (1996)
	2.2 (4, 1.3)	2.4 (4, 1.5)	gavage	1 500	12	10	0.2	1.09	-	Suter <i>et al.</i> (1996)
3-Chloro-4-(dichloromethyl)-5-hydroxy-2(5H)-furanone (MX)	0.203 (5, 3.159)	0.419 (5, 2.48)	drinking water	445	84	0	0.22	2.06	-	Nishikawa <i>et al.</i> (2006)
	0.247 (5, 3.206)	0.265 (5, 3.902)	drinking water	5 842	546	0	0.02	1.07	-	Nishikawa <i>et al.</i> (2006)
	0.217 (5, 3.675)	0.176 (5, 3.473)	drinking water	361	84	0	-0.04	0.81	-	Nishikawa <i>et al.</i> (2006)
	0.203 (5, 3.159)	0.217 (5, 2.192)	drinking water	151	84	0	0.01	1.07	-	Nishikawa <i>et al.</i> (2006)
	0.217 (5, 3.675)	0.232 (5, 4.397)	drinking water	118	84	0	0.02	1.07	-	Nishikawa <i>et al.</i> (2006)
	0.203 (5, 3.159)	0.24 (5, 2.24)	drinking water	1 470	84	0	0.04	1.18	-	Nishikawa <i>et al.</i> (2006)
	0.155 (5, 6.645)	0.174 (5, 9.267)	drinking water	118	84	0	0.02	1.12	-	Nishikawa <i>et al.</i> (2006)
	0.155 (5, 6.645)	0.199 (5, 9.774)	drinking water	361	84	0	0.04	1.28	-	Nishikawa <i>et al.</i> (2006)
	0.155 (5, 6.645)	0.168 (5, 10.245)	drinking water	1 210	84	0	0.01	1.08	-	Nishikawa <i>et al.</i> (2006)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK)	0.335 (5, 2.069)	0.363 (5, 4.302)	drinking water	6 006	546	0	0.03	1.08	-	Nishikawa <i>et al.</i> (2006)
	0.217 (5, 3.675)	0.15 (5, 5.811)	drinking water	1 210	84	0	-0.07	0.69	-	Nishikawa <i>et al.</i> (2006)
	2.34 (4, 1.154)	15.4 (4, 0.877)	ip	500	28	0	13.06	6.58	+	Hashimoto, Ohsawa and Kimura (2004)
	3.9 (6, -)	39.4 (5, -)	drinking water	615	5	14	35.5	10.1	+	von Pressentin, Chen and Guttenplan (2001)
	2.34 (4, 1.154)	25.25 (4, 0.887)	ip	1 000	28	0	22.91	10.79	+	Hashimoto, Ohsawa and Kimura (2004)
	0.81 (6, -)	13.4 (6, -)	ip	400	4	0	12.59	16.54	+	Ikeda <i>et al.</i> (2007)
	5.89 (4, 1.51)	45.76 (4, 0.911)	ip	1 000	28	0	39.87	7.77	+	Hashimoto, Ohsawa and Kimura (2004)
	5.89 (4, 1.51)	36.63 (4, 1.278)	ip	500	28	0	30.74	6.22	+	Hashimoto, Ohsawa and Kimura (2004)
4-Aminobiphenyl	3.7 (6, 0.5)	6 (6, 0.6)	gavage	75	1	14	2.3	1.62	-	Fletcher, Tinwell and Ashby (1998)
	7.7 (6, 1.458)	15.6 (6, 1.913)	ip	9	7	56	7.9	2.03	+	Chen <i>et al.</i> (2005b)
	7.7 (6, 1.458)	22.1 (5, 1.54)	ip	31	7	56	14.4	2.87	+	Chen <i>et al.</i> (2005b)
	1.5 (6, 0.673)	17.4 (6, 0.727)	ip	31	7	56	15.9	11.6	+	Chen <i>et al.</i> (2005b)
	1.5 (6, 0.673)	6.3 (6, 0.785)	ip	9	7	56	4.8	4.2	+	Chen <i>et al.</i> (2005b)
	5.6 (6, 3.6)	20.4 (6, 4)	gavage	200	10	14	14.8	3.64	+	Fletcher, Tinwell and Ashby (1998)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	3 (6, 0.3)	14.4 (6, 0.3)	gavage	200	10	14	11.4	4.8	+	Fletcher, Tinwell and Ashby (1998)
	1.44 (6, 1.2)	4.49 (6, 1.2)	gavage	200	10	14	3.05	3.12	+	Turner <i>et al.</i> (2001)
	3 (6, 0.3)	7 (6, 0.3)	gavage	75	1	14	4	2.33	+	Fletcher, Tinwell and Ashby (1998)
	8.6 (5, 1.609)	27.8 (5, 1.083)	ip	31	7	56	19.2	3.23	+	Chen <i>et al.</i> (2005b)
	7.2 (5, 2.049)	6.7 (6, 2.868)	ip	31	7	56	-0.5	0.93	-	Chen <i>et al.</i> (2005b)
	8.1 (5, 1.433)	7.1 (5, 1.71)	ip	31	7	56	-1	0.88	-	Chen <i>et al.</i> (2005b)
	5.6 (6, 3.6)	7.8 (6, 2.3)	gavage	75	1	14	2.2	1.39	-	Fletcher, Tinwell and Ashby (1998)
4-Chloro- <i>o</i> -phenylenediamine	2.7 (5, 1.5)	4.6 (5, 1.5)	gavage	2 000	12	10	1.9	1.7	+	Suter <i>et al.</i> (1996)
	7.2 (3, 0.7)	36.2 (3, 0.8)	diet	218 400	182	0	29	5.03	+	Suter <i>et al.</i> (1998)
	2.7 (3, 0.7)	20.5 (3, 0.7)	diet	218 400	182	0	17.8	7.59	+	Suter <i>et al.</i> (1998)
	2.7 (3, 0.7)	18.9 (3, 0.6)	diet	109 200	182	0	16.2	7	+	Suter <i>et al.</i> (1998)
	7.2 (3, 0.7)	24.9 (3, 0.7)	diet	109 200	182	0	17.7	3.46	+	Suter <i>et al.</i> (1998)
	2.4 (5, 1.1)	2.7 (4, 1.4)	gavage	2 000	12	10	0.3	1.13	-	Suter <i>et al.</i> (1996)
5,9-Dimethyldibenzo-(c,g)carbazole (DMDBC)	3.1 (8, 2.6)	96 (5, 1.5)	topical	30	1	28	92.9	30.97	+	Renault <i>et al.</i> (1998)
	4.5 (4, 1.4)	10.7 (5, 1.5)	topical	10	1	21	6.2	2.38	+	Tombolan <i>et al.</i> (1999b)
	4.5 (4, 1.4)	7.9 (5, 1.4)	topical	10	1	14	3.4	1.76	-	Tombolan <i>et al.</i> (1999b)
	5.4 (5, -)	13 (5, -)	topical	10	1	28	7.6	2.41	+	Tombolan <i>et al.</i> (1999a)
	4.5 (4, 1.4)	5.1 (5, 1.9)	topical	10	1	7	0.6	1.13	-	Tombolan <i>et al.</i> (1999b)
	4 (5, -)	11.5 (5, -)	topical	10	1	28	7.5	2.88	+	Tombolan <i>et al.</i> (1999a)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	3.8 (5, 1.2)	4.7 (5, 1.2)	topical	3	1	28	0.9	1.24	-	Tombolan <i>et al.</i> (1999b)
	3.8 (5, 1.2)	91.2 (5, 1)	topical	30	1	28	87.4	24	+	Tombolan <i>et al.</i> (1999b)
	3.1 (8, 2.6)	150 (5, 1.5)	topical	90	1	28	146.9	48.39	+	Renault <i>et al.</i> (1998)
	3.8 (5, 1.2)	184.4 (5, 1)	topical	90	1	28	180.6	48.53	+	Tombolan <i>et al.</i> (1999b)
	3.8 (5, 1.2)	221.2 (5, 1.1)	topical	180	1	28	217.4	58.21	+	Tombolan <i>et al.</i> (1999b)
	4.5 (4, 1.4)	4.5 (5, 1.4)	topical	10	1	2	0	1	-	Tombolan <i>et al.</i> (1999b)
	4.5 (4, 1.4)	5.2 (5, 1.4)	topical	10	1	4	0.7	1.16	-	Tombolan <i>et al.</i> (1999b)
	4.5 (4, 1.4)	10.6 (5, 1.1)	topical	10	1	28	6.1	2.36	+	Tombolan <i>et al.</i> (1999b)
	3.8 (5, 1.2)	7.6 (5, 1.2)	topical	10	1	28	3.8	2	+	Tombolan <i>et al.</i> (1999b)
	4.5 (4, 1.4)	124.3 (5, 1.6)	topical	90	1	14	119.8	27.62	+	Tombolan <i>et al.</i> (1999b)
	3.6 (8, 2.6)	4.7 (5, 1.3)	topical	3	1	28	1.1	1.31	-	Renault <i>et al.</i> (1998)
	4.5 (4, 1.4)	8.1 (5, 1.5)	topical	90	1	2	3.6	1.8	-	Tombolan <i>et al.</i> (1999b)
	4.5 (4, 1.4)	190 (5, 1.4)	topical	90	1	21	185.5	42.22	+	Tombolan <i>et al.</i> (1999b)
	4.5 (4, 1.4)	77.3 (5, 1.2)	topical	90	1	7	72.8	17.18	+	Tombolan <i>et al.</i> (1999b)
	4.5 (4, 1.4)	43.4 (5, 1.1)	topical	90	1	4	38.9	9.64	-	Tombolan <i>et al.</i> (1999b)
	3.1 (8, 2.6)	14 (5, 1.3)	topical	10	1	28	10.9	4.52	+	Renault <i>et al.</i> (1998)
	3.6 (8, 2.6)	133 (5, 1.2)	topical	30	1	28	129.4	36.94	+	Renault <i>et al.</i> (1998)
	3.6 (8, 2.6)	184 (5, 1)	topical	90	1	28	180.4	51.11	+	Renault <i>et al.</i> (1998)
	3.6 (8, 2.6)	8.2 (5, 1.4)	topical	10	1	28	4.6	2.28	+	Renault <i>et al.</i> (1998)
	4.5 (4, 1.4)	199.8 (5, 1)	topical	90	1	28	195.3	44.4	+	Tombolan <i>et al.</i> (1999b)
5-Fluoroquinoline	5.1 (5, 0.5)	24 (5, 0.5)	ip	200	4	14	18.9	4.71	+	Miyata <i>et al.</i> (1998)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
6-(<i>p</i> -Dimethylamino-phenylazo)benzothiazole	4.4 (1, 0.1)	34.1 (1, 0.1)	gavage	100	10	11	29.7	7.75	+	Lefevre, Tinwell and Ashby (1997)
	2.9 (6, 0.2)	28.3 (7, 0.2)	gavage	100	10	11	25.4	9.76	+	Lefevre, Tinwell and Ashby (1997)
	4.2 (5, 1.1)	19.3 (3, 0.6)	gavage	100	10	7	15.1	4.6	+	Fletcher <i>et al.</i> (1999)
	4.4 (1, 0.1)	20.5 (1, 0.1)	gavage	100	10	11	16.1	4.66	+	Lefevre, Tinwell and Ashby (1997)
7,12-Dimethylbenzanthracene (7,12-DMBA)	3.9 (5, 1)	42.4 (5, 1.1)	diet	360	10	10	38.5	10.87	+	Fletcher <i>et al.</i> (1999)
	4.1 (3, 1.1)	13.5 (3, 0.6)	ip	20	1	28	9.4	3.29	+	Kohara <i>et al.</i> (2001)
	3.6 (7, 2.5)	34.8 (2, 1.3)	ip	20	1	28	31.2	9.67	+	Hachiya <i>et al.</i> (1999)
	4.4 (4, 0.857)	13.5 (4, 1.308)	gavage	80	1	112	9.1	3.07	+	Chen <i>et al.</i> (2005a)
	3.6 (7, 2.5)	37.5 (4, 1.2)	ip	20	1	14	33.9	10.42	+	Hachiya <i>et al.</i> (1999)
	5.89 (4, 1.51)	35.45 (3, 0.604)	ip	20	28	0	29.56	6.02	+	Hashimoto, Ohsawa and Kimura (2004)
	3.6 (7, 2.5)	13.8 (6, 3.1)	ip	20	1	7	10.2	3.83	+	Hachiya <i>et al.</i> (1999)
	9.9 (5, 0.7)	18.4 (5, 0.7)	ip	20	1	14	8.5	1.86	+	Ohsawa <i>et al.</i> (2000)
2.34 (4, 1.154)	11.03 (3, 0.499)	ip	20	28	0	8.69	4.71	+	Hashimoto, Ohsawa and Kimura (2004)	
7H-Dibenzo(c,g)carbazole (DBC)	3.6 (8, 2.6)	186 (5, 1.2)	topical	10	1	28	182.4	51.67	+	Renault <i>et al.</i> (1998)
	3.1 (8, 2.2)	155 (5, 1.7)	topical	10	1	28	151.9	50	+	Renault <i>et al.</i> (1998)
	3.6 (8, 2.6)	7.2 (5, 1.6)	topical	3	1	28	3.6	2	+	Renault <i>et al.</i> (1998)
A-alpha-C	2.9 (6, 2)	7.8 (6, 2.1)	gavage	200	10	28	4.9	2.69	+	Davis <i>et al.</i> (1996)
	3.3 (6, 2)	10.8 (6, 2)	gavage	200	10	28	7.5	3.27	+	Davis <i>et al.</i> (1996)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
Acetaminophen	0.55 (5, 2.976)	0.55 (5, 3.638)	diet	47 802.3	91	0	0	1	-	Kanki <i>et al.</i> (2005)
Aflatoxin B1	10.2 (4, 1.4)	16.6 (4, 1.4)	gavage	32	4	21	6.4	1.63	+	Astrup, Jorgensen and Jensen (1996)
	3.1 (6, 2.3)	4.1 (6, 2)	ip	2.5	1	14	1	1.32	-	Dycaico <i>et al.</i> (1996)
	4.5 (5, 0.3)	13 (4, 0.1)	gavage	0.5	1	14	8.5	2.89	+	Davies <i>et al.</i> (1997)
	5 (5, -)	23 (5, -)	gavage	0.5	1	14	18	4.6	+	Davies <i>et al.</i> (1999)
	3.4 (5, -)	25 (5, -)	gavage	0.5	1	14	21.6	7.35	+	Thornton <i>et al.</i> (2004)
	4.5 (5, -)	21 (5, -)	gavage	0.5	1	14	16.5	4.67	+	Thornton <i>et al.</i> (2004)
	2.7 (6, 2)	49 (6, 2)	ip	0.25	1	14	46.3	18.15	+	Dycaico <i>et al.</i> (1996)
Aminophenylnorharman	0.66 (5, 3.6)	3.8 (5, 3.6)	diet	143	84	14	3.14	5.76	+	Masumura <i>et al.</i> (2003b)
	0.66 (5, 3.6)	6.8 (5, 3.6)	diet	286	84	14	6.14	10.3	+	Masumura <i>et al.</i> (2003b)
	0.12 (5, 11.8)	1.6 (5, 11.8)	diet	286	84	14	1.48	13.33	+	Masumura <i>et al.</i> (2003b)
	0.12 (5, 11.8)	1.2 (5, 11.8)	diet	143	84	14	1.08	10	+	Masumura <i>et al.</i> (2003b)
Carbon tetrachloride	6.36 (4, 2.14)	9.42 (3, 0.775)	gavage	1 400	1	28	3.06	1.5	-	Hachiya and Motohashi (2000)
	6.36 (4, 2.14)	12.1 (3, 0.124)	gavage	1 400	1	7	5.74	1.9	-	Hachiya and Motohashi (2000)
	6.36 (4, 2.14)	14.6 (3, 0.63)	gavage	1 400	1	14	8.24	2.3	-	Hachiya and Motohashi (2000)
	5.4 (5, -)	8.6 (5, -)	gavage	80	1	14	3.2	1.59	-	Tombolan <i>et al.</i> (1999a)
	6.36 (4, 2.14)	8.28 (3, 1.69)	gavage	700	1	14	1.92	1.3	-	Hachiya and Motohashi (2000)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
Chloroform	9.5 (5, 1)	10.4 (5, 1)	inhalation	4 600	30	10	0.9	1.09	-	Butterworth <i>et al.</i> (1998)
	13 (5, 1)	14.7 (5, 1)	inhalation	13 850	90	10	1.7	1.13	-	Butterworth <i>et al.</i> (1998)
	10.1 (5, 1)	12.7 (5, 1)	inhalation	1 540	10	10	2.6	1.26	-	Butterworth <i>et al.</i> (1998)
	10.1 (5, 1)	11.7 (5, 1)	inhalation	171	10	10	1.6	1.16	-	Butterworth <i>et al.</i> (1998)
	12.3 (5, 1)	13.7 (5, 1)	inhalation	27 700	180	10	1.4	1.11	-	Butterworth <i>et al.</i> (1998)
Cisplatin	4.8 (5, 2.1)	10.8 (4, 1.9)	ip	6	1	17	6	2.3	+	Louro, Silva and Boavida (2002)
	5 (9, 4.7)	9.4 (9, 2.8)	ip	6	1	28	4.4	1.9	+	Louro, Silva and Boavida (2002)
Clofibrate	6.37 (4, -)	7.7 (4, -)	nd	540	14	21	1.33	1.21	-	Boerrigter (2004)
	6.69 (4, -)	7 (4, -)	nd	540	14	21	0.31	1.05	-	Boerrigter (2004)
Coal tar	21.4 (11, 0.4)	26.5 (3, 0.2)	topical	10 mg/cm ²	1	32	5.1	1.24	-	Thein <i>et al.</i> (2000)
Comfrey	3 (6, -)	13.9 (6, -)	diet	577 920	84	0	10.9	4.63	+	Mei <i>et al.</i> (2006b)
	3 (6, 2.789)	14.6 (6, 1.565)	diet	119 280	84	0	11.6	4.87	+	Mei <i>et al.</i> (2005a)
Cyproterone acetate	1.6 (15, 4.488)	2.2 (10, 2.983)	gavage	21	21	1	0.6	1.38	-	Topinka <i>et al.</i> (2004c)
	1.6 (15, 4.488)	1.9 (10, 3.013)	gavage	4.2	21	1	0.3	1.19	-	Topinka <i>et al.</i> (2004c)
	1.25 (5, -)	3 (5, -)	gavage	100	1	1	1.75	2.4	+	Wolff <i>et al.</i> (2001)
	2.7 (1, 0.3)	9.6 (1, 0.2)	gavage	100	1	144	6.9	3.56	+	Krebs <i>et al.</i> (1998)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	1.6 (15, 4.488)	4.1 (15, 4.217)	gavage	105	21	1	2.5	2.56	+	Topinka <i>et al.</i> (2004c)
	2.9 (1, 0.3)	3 (1, 0.3)	gavage	25	1	77	0.1	1.03	-	Krebs <i>et al.</i> (1998)
	2.9 (1, 0.3)	4.3 (1, 1.2)	gavage	50	1	77	1.4	1.48	-	Krebs <i>et al.</i> (1998)
	2.9 (1, 0.3)	11 (1, 0.3)	gavage	100	1	77	8.1	3.79	+	Krebs <i>et al.</i> (1998)
	2.7 (1, 0.3)	2.6 (1, 0.3)	gavage	25	1	144	-0.1	0.96	-	Krebs <i>et al.</i> (1998)
	2.7 (1, 0.3)	2.8 (1, 0.2)	gavage	50	1	144	0.1	1.04	-	Krebs <i>et al.</i> (1998)
	1.25 (5, -)	5 (5, -)	gavage	100	1	28	3.75	4	+	Wolff <i>et al.</i> (2001)
	1.6 (5, -)	19 (5, -)	gavage	160	1	14	17.4	11.875	+	Wolff <i>et al.</i> (2001)
	1.6 (5, -)	14.5 (5, -)	gavage	80	1	14	12.9	9.0625	+	Wolff <i>et al.</i> (2001)
	1.6 (5, -)	5.2 (5, -)	gavage	40	1	14	3.6	3.25	+	Wolff <i>et al.</i> (2001)
	1.6 (5, -)	3.5 (5, -)	gavage	20	1	14	1.9	2.1875	+	Wolff <i>et al.</i> (2001)
	1.6 (5, -)	2.4 (5, -)	gavage	10	1	14	0.8	1.5	+	Wolff <i>et al.</i> (2001)
	1.6 (5, -)	1.7 (5, -)	gavage	5	1	14	0.1	1.0625	-	Wolff <i>et al.</i> (2001)
	1.7 (5, 1.4)	2.7 (-, 1.2)	gavage	75	1	42	1	1.59	-	Krebs <i>et al.</i> (1998)
	1.25 (5, -)	5.5 (5, -)	gavage	100	1	42	4.25	4.4	+	Wolff <i>et al.</i> (2001)
	1.7 (5, 1.4)	1.9 (5, 1.2)	gavage	25	1	42	0.2	1.12	-	Krebs <i>et al.</i> (1998)
	1.25 (5, -)	15.5 (5, -)	gavage	100	1	14	14.25	12.4	+	Wolff <i>et al.</i> (2001)
	1.25 (5, -)	14 (5, -)	gavage	100	1	7	12.75	11.2	+	Wolff <i>et al.</i> (2001)
	1.25 (5, -)	13.5 (5, -)	gavage	100	1	3	12.25	10.8	+	Wolff <i>et al.</i> (2001)
	1.25 (5, -)	10.5 (5, -)	gavage	100	1	2	9.25	8.4	+	Wolff <i>et al.</i> (2001)
	1.7 (5, 1.4)	1.7 (-, 1.2)	gavage	50	1	42	0	1	-	Krebs <i>et al.</i> (1998)
	1.7 (5, 1.4)	8 (-, 1.2)	gavage	200	1	42	6.3	4.71	+	Krebs <i>et al.</i> (1998)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	1.6 (5, 1.486)	18.5 (5, 1.453)	gavage	160	1	14	16.9	11.56	+	Topinka <i>et al.</i> (2004b)
	1.25 (5, -)	4.8 (5, -)	gavage	100	1	56	3.55	3.84	+	Wolff <i>et al.</i> (2001)
	1.7 (5, 1.4)	3.5 (-, 1.2)	gavage	100	1	42	1.8	2.06	+	Krebs <i>et al.</i> (1998)
	1.2 (7, 1.597)	10.9 (3, 1.002)	gavage	100	1	3	9.7	9.08	+	Topinka <i>et al.</i> (2004b)
	1.8 (2, 0.665)	10.4 (3, 0.81)	gavage	100	1	2	8.6	5.78	+	Topinka <i>et al.</i> (2004b)
	1.2 (7, 1.597)	14 (4, 1.236)	gavage	100	1	7	12.8	11.67	+	Topinka <i>et al.</i> (2004b)
	1.8 (2, 0.665)	2.6 (3, 0.907)	gavage	100	1	1	0.8	1.44	-	Topinka <i>et al.</i> (2004b)
	1.8 (2, 0.665)	4.6 (3, 0.928)	gavage	40	1	3	2.8	2.56	+	Topinka <i>et al.</i> (2004b)
	1.8 (2, 0.665)	2.9 (3, 0.848)	gavage	40	1	2	1.1	1.61	-	Topinka <i>et al.</i> (2004b)
	1.8 (2, 0.665)	2.8 (3, 0.833)	gavage	40	1	1	1	1.56	-	Topinka <i>et al.</i> (2004b)
	1.8 (2, 0.665)	16 (3, 0.924)	gavage	100	1	3	14.2	8.89	+	Topinka <i>et al.</i> (2004b)
	1.2 (7, 1.597)	4.8 (3, 0.896)	gavage	100	1	56	3.6	4	+	Topinka <i>et al.</i> (2004b)
	1.2 (7, 1.597)	5.4 (3, 0.839)	gavage	100	1	42	4.2	4.5	+	Topinka <i>et al.</i> (2004b)
	1.2 (7, 1.597)	5.1 (3, 0.809)	gavage	100	1	28	3.9	4.25	+	Topinka <i>et al.</i> (2004b)
	1.2 (7, 1.597)	15 (6, 1.634)	gavage	100	1	14	13.8	12.5	+	Topinka <i>et al.</i> (2004b)
	1.6 (5, 1.486)	1.7 (5, 1.608)	gavage	5	1	14	0.1	1.06	-	Topinka <i>et al.</i> (2004b)
	1.6 (5, 1.486)	2.3 (5, 1.445)	gavage	10	1	14	0.7	1.44	-	Topinka <i>et al.</i> (2004b)
	1.6 (5, 1.486)	3.6 (5, 1.654)	gavage	20	1	14	2	2.25	+	Topinka <i>et al.</i> (2004b)
	1.6 (5, 1.486)	5.3 (5, 1.425)	gavage	40	1	14	3.7	3.31	+	Topinka <i>et al.</i> (2004b)
	1.6 (5, 1.486)	12.1 (4, 1.147)	gavage	80	1	14	10.5	7.56	+	Topinka <i>et al.</i> (2004b)
Di(2-ethylhexyl)-phthalate (DEHP)	10 (3, 0.5)	17 (3, 0.3)	diet	43 200	120	0	7	1.7	-	Gunz, Shephard and Lutz (1993)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
Dichloroacetic acid (DCA)	0.43 (5, 9.341)	0.45 (5, 7.355)	diet	60 924.5	91	0	0.02	1.05	-	Kanki <i>et al.</i> (2005)
	6.37 (4, -)	10.5 (4, -)	nd	13 998	14	21	4.13	1.65	+	Boerrigter (2004)
	10 (3, 0.5)	12 (3, 0.3)	diet	86 400	120	0	2	1.2	-	Gunz, Shephard and Lutz (1993)
	6.69 (4, -)	10.8 (4, -)	nd	13 998	14	21	4.11	1.61	+	Boerrigter (2004)
	0.55 (5, 2.976)	0.33 (5, 3.248)	diet	60 924.5	91	0	-0.22	0.6	-	Kanki <i>et al.</i> (2005)
	5.4 (5, 1)	5.3 (-, 1.1)	drinking water	15 400	70	0	-0.1	0.98	-	Leavitt <i>et al.</i> (1997)
	4.3 (5, 1.2)	4.9 (-, 1.3)	drinking water	6 160	28	0	0.6	1.14	-	Leavitt <i>et al.</i> (1997)
	4.1 (5, 1.21)	5.3 (-, 1.1)	drinking water	92 400	420	0	1.2	1.29	+	Leavitt <i>et al.</i> (1997)
	5.4 (5, 1)	6.3 (-, 1.1)	drinking water	53 900	70	0	0.9	1.17	-	Leavitt <i>et al.</i> (1997)
	4.1 (5, 1.21)	9.6 (-, 1.4)	drinking water	325 000	420	0	5.5	2.34	+	Leavitt <i>et al.</i> (1997)
4.3 (5, 1.2)	4.4 (-, 1.2)	drinking water	21 500	28	0	0.1	1.02	-	Leavitt <i>et al.</i> (1997)	
Dicyclanil	0.48 (5, 4.42)	2.23 (5, 4.68)	diet	1 500 mg/kg diet	91	0	1.75	4.65	+	Umemura <i>et al.</i> (2007)
	0.42 (5, 4.85)	0.48 (5, 4.69)	diet	1 500 mg/kg diet	91	0	0.06	1.14	-	Umemura <i>et al.</i> (2007)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
Diethylnitrosamine (DEN)	2.1 (3, 0.6)	38.8 (3, 0.5)	ip	100	1	7	36.7	18.48	+	Okada <i>et al.</i> (1997)
	2.3 (3, 0.7)	33.6 (2, 0.4)	ip	100	1	28	31.3	14.61	+	Okada <i>et al.</i> (1997)
	3.1 (2, 0.7)	6.6 (2, 0.4)	ip	50	1	7	3.5	2.13	+	Okada <i>et al.</i> (1997)
	1.6 (4, 1.7)	8.2 (2, 0.7)	ip	50	1	21	6.6	5.13	+	Okada <i>et al.</i> (1997)
	1.5 (2, 1.8)	9 (2, 1.8)	ip	50	1	28	7.5	6	+	Okada <i>et al.</i> (1997)
	3.7 (2, 0.3)	12.5 (2, 0.3)	ip	100	1	7	8.8	3.38	+	Suzuki, Hayashi and Sofuni (1994)
	5.5 (8, 3)	14.1 (2, 0.5)	ip	66	1	3	8.6	2.56	+	Mientjes <i>et al.</i> (1998)
	5.5 (8, 3)	33.3 (4, 0.7)	ip	66	1	14	27.8	6.05	+	Mientjes <i>et al.</i> (1998)
	5.5 (8, 3)	35.7 (4, 1.5)	ip	66	1	28	30.2	6.49	+	Mientjes <i>et al.</i> (1998)
	0.94 (4, 7.8)	6.7 (5, 7.2)	ip	80	1	28	5.76	7.13	+	unpublished
	0.94 (4, 7.8)	2.3 (4, 11)	ip	40	1	28	1.36	2.45	+	unpublished
	0.255 (3, 4)	0.681 (4, 5.7)	ip	40	1	28	0.426	2.67	+	unpublished
	0.255 (3, 4)	0.483 (4, 6.7)	ip	80	1	28	0.228	1.89	+	unpublished
	1.1 (5, 14.5)	2.3 (5, 14.7)	ip	50	1	14	1.2	2.09	+	unpublished
	1.1 (5, 14.5)	5.3 (3, 6.39)	ip	100	1	14	4.2	4.82	+	unpublished
	1.1 (5, 14.5)	9.7 (2, 1.96)	ip	150	1	14	8.6	8.82	+	unpublished
	0.32 (5, 30.3)	0.39 (5, 57.2)	ip	50	1	14	0.07	1.22	-	unpublished
	0.32 (5, 30.3)	0.47 (3, 17)	ip	100	1	14	0.15	1.47	-	unpublished
	0.32 (5, 30.3)	0.43 (2, 2.1)	ip	150	1	14	0.11	1.34	-	unpublished
	4.7 (6, 0.45)	205.7 (6, 0.18)	ip	175	5	5	201	43.77	+	unpublished
5.8 (11, 0.77)	234.5 (6, 0.21)	ip	175	5	15	228.7	40.43	+	unpublished	

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
Dimethylnitrosamine (DMN)	5.8 (11, 0.77)	312.7 (6, 0.1)	ip	175	5	35	306.9	53.91	+	unpublished
	0.94 (4, 7.8)	2.2 (4, 5.6)	ip	80	1	7	1.26	2.34	+	unpublished
	0.94 (4, 7.8)	2.2 (4, 6)	ip	80	1	14	1.26	2.34	+	unpublished
	7 (5, 0.32)	428.3 (7, 0.43)	ip	175	5	55	421.3	61.19	+	unpublished
	14.8 (5, 2.067)	60 (2, 0.3982)	ip	45	5	725	45.2	4.05	+	Mirsalis <i>et al.</i> (2005)
	14.4 (3, 0.9542)	102.3 (3, 0.9202)	ip	45	5	511	87.9	7.1	+	Mirsalis <i>et al.</i> (2005)
	11 (4, 1.337)	70 (4, 0.7864)	ip	45	5	298	59	6.36	+	Mirsalis <i>et al.</i> (2005)
	4.9 (3, 0.8588)	58.9 (3, 0.73)	ip	45	5	185	54	12.02	+	Mirsalis <i>et al.</i> (2005)
	4.6 (3, 0.6)	59 (2, 0.4)	ip	10	5	22	54.4	12.83	+	Mirsalis <i>et al.</i> (1993)
	4.6 (4, 1)	27.2 (2, 0.5)	ip	30	5	14	22.6	5.91	+	Mirsalis <i>et al.</i> (1993)
	4.6 (4, 1)	20.4 (4, 1.2)	ip	20	5	14	15.8	4.43	+	Mirsalis <i>et al.</i> (1993)
	4 (3, 0.6)	3 (3, 0.7)	ip	10	5	8	-1	0.75	-	Mirsalis <i>et al.</i> (1993)
	2.9 (4, 0.9)	37.8 (3, 0.8)	ip	30	5	14	34.9	13.03	+	Mirsalis <i>et al.</i> (1993)
	2.9 (4, 0.9)	25.2 (4, 1)	ip	20	5	14	22.3	8.69	+	Mirsalis <i>et al.</i> (1993)
	2.5 (3, 0.7)	39.5 (3, 0.6)	ip	42	21	1	37	15.8	+	Mirsalis <i>et al.</i> (1993)
	4.8 (4, 1)	19.9 (4, 1.2)	ip	20	5	14	15.1	4.15	+	Mirsalis <i>et al.</i> (1993)
	3.9 (3, 0.8)	26.1 (2, 0.4)	ip	28	14	1	22.2	6.69	+	Mirsalis <i>et al.</i> (1993)
6.4 (4, 2)	21.2 (1, 0.4)	gavage	10	1	20	14.8	3.31	+	Lefevre <i>et al.</i> (1994)	
4.2 (3, 0.6)	35.8 (2, 0.3)	ip	10	5	8	31.6	8.52	+	Mirsalis <i>et al.</i> (1993)	
3.6 (3, 0.8)	22.9 (2, 0.4)	ip	10	5	1	19.3	6.36	+	Mirsalis <i>et al.</i> (1993)	

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	4.1 (3, 1.7)	21.2 (4, 1.6)	gavage	10	1	20	17.1	5.17	+	Tinwell, Lefevre and Ashby (1994b)
	4 (4, 2.1)	14.4 (4, 1.5)	gavage	10	1	10	10.4	3.6	+	Tinwell, Lefevre and Ashby (1994b)
	6.2 (4, 1.8)	23.8 (4, 2)	gavage	10	1	7	17.6	3.84	+	Tinwell, Lefevre and Ashby (1994b)
	1.4 (3, 2)	6.2 (3, 1.6)	ip	10	1	14	4.8	4.43	+	Tinwell <i>et al.</i> (1995)
	6.1 (3, 1)	13.3 (3, 1.1)	ip	10	1	14	7.2	2.18	+	Tinwell <i>et al.</i> (1995)
	8.3 (3, 1.5)	13 (3, 1.5)	ip	10	1	14	4.7	1.57	+	Tinwell <i>et al.</i> (1995)
	5.7 (6, 2.2)	10.3 (5, 2)	gavage	10	1	14	4.6	1.81	+	Tinwell <i>et al.</i> (1995)
	1.8 (6, 2.6)	10.9 (5, 1.5)	gavage	10	1	14	9.1	6.06	+	Tinwell <i>et al.</i> (1995)
	4.5 (6, 2.5)	15.5 (5, 1.8)	gavage	10	1	14	11	3.44	+	Tinwell <i>et al.</i> (1995)
	5.7 (5, 0.7)	31.2 (3, 0.3)	ip	30	5	15	25.5	5.47	+	Hayward <i>et al.</i> (1995)
	10 (5, -)	31 (5, -)	ip	30	5	15	21	3.1	+	Cunningham <i>et al.</i> (1996)
	2.8 (4, 0.9)	15.7 (2, 0.5)	ip	30	5	14	12.9	5.61	+	Mirsalis <i>et al.</i> (1993)
	6.4 (4, -)	10.2 (4, -)	ip	10	10	14	3.8	1.59	-	Souliotis <i>et al.</i> (1998)
	9.8 (6, 3.2)	18.7 (6, 3.4)	gavage	10	1	7	8.9	1.91	+	Tinwell, Lefevre and Ashby (1994a)
	7.1 (3, 1.6)	11.6 (3, 1.7)	gavage	10	1	20	4.5	1.63	?pos	Tinwell, Lefevre and Ashby (1994a)
	7.2 (4, 2.1)	13.6 (4, 2.2)	gavage	10	1	10	6.4	1.89	+	Tinwell, Lefevre and Ashby (1994a)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	5.9 (4, -)	10.9 (4, -)	ip	5	1	14	5	1.85	+	Souliotis <i>et al.</i> (1998)
	5.9 (4, -)	10.6 (4, -)	ip	5	1	28	4.7	1.8	+	Souliotis <i>et al.</i> (1998)
	5.9 (4, -)	11 (4, -)	ip	5	1	49	5.1	1.86	+	Souliotis <i>et al.</i> (1998)
	1.8 (6, 2.6)	10.9 (6, 2)	gavage	10	1	14	9.1	6.06	+	Tinwell, Lefevre and Ashby (1998)
	5.7 (4, -)	21.9 (4, -)	ip	10	1	14	16.2	3.84	+	Souliotis <i>et al.</i> (1998)
	5.7 (4, -)	20.5 (4, -)	ip	10	1	28	14.8	3.6	+	Souliotis <i>et al.</i> (1998)
	1.8 (6, 2.6)	14.4 (3, 0.4)	gavage	10	1	14	12.6	8	+	Tinwell, Lefevre and Ashby (1998)
	6.4 (4, -)	13.7 (4, -)	ip	10	10	28	7.3	2.14	+	Souliotis <i>et al.</i> (1998)
	5.6 (6, 3.6)	29.2 (2, 0.6)	gavage	10	1	14	23.6	5.21	+	Fletcher, Tinwell and Ashby (1998)
	4.5 (3, 1.6)	11.2 (3, 1.7)	gavage	10	1	7	6.7	2.49	?pos	Tinwell, Lefevre and Ashby (1994a)
	6.2 (6, 1.6)	23.2 (6, 1.6)	ip	20	5	21	17	3.74	+	Shane <i>et al.</i> (2000b)
	5.8 (6, 2.1)	18.7 (6, 1.7)	ip	20	5	21	12.9	3.22	+	Shane <i>et al.</i> (2000b)
	1.7 (3, 0.7)	10.6 (3, 1)	ip	5	5	7	8.9	6.24	+	Suzuki <i>et al.</i> (1996b)
	0.7 (3, 1.4)	2.7 (3, 1.4)	ip	5	1	14	2	3.86	+	Suzuki <i>et al.</i> (1996b)
	8 (2, 0.8)	15 (2, 0.4)	diet	31.5	105	0	7	1.88	+	Shephard, Gunz and Schlatter (1995)
	0.7 (3, 1.4)	6 (3, 1.2)	ip	10	1	14	5.3	8.57	+	Suzuki <i>et al.</i> (1996b)
	5 (4, 2.1)	11.6 (1, 0.5)	gavage	10	1	20	6.6	2.32	+	Lefevre <i>et al.</i> (1994)
	5.9 (4, -)	9.7 (4, -)	ip	5	1	7	3.8	1.64	+	Souliotis <i>et al.</i> (1998)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	2.4 (3, 1.1)	11.2 (4, 1.8)	gavage	10	1	7	8.8	4.67	+	Ashby <i>et al.</i> (1994)
	4.8 (4, 1)	24.8 (3, 0.8)	ip	30	5	14	20	5.17	+	Mirsalis <i>et al.</i> (1993)
	3 (6, 0.3)	21 (4, 0.2)	gavage	10	1	14	18	7	+	Fletcher, Tinwell and Ashby (1998)
	8.5 (4, 0.4)	40 (4, 0.4)	gavage	54	11	1	31.5	4.71	+	Gollapudi, Jackson and Stott (1998)
	6.7 (3, 0.2)	20.4 (3, 0.2)	ip	4	4	14	13.7	3.04	+	Suzuki <i>et al.</i> (1998)
	7.3 (5, 3.5)	22.7 (5, 2.2)	gavage	2	1	30	15.4	3.11	+	Jiao <i>et al.</i> (1997)
	5 (9, 1.8)	28.6 (5, 1.3)	ip	30	5	15	23.6	5.72	+	Shane <i>et al.</i> (2000c)
	7.3 (5, 3.5)	13.3 (5, 3.6)	gavage	6	1	30	6	1.82	-	Jiao <i>et al.</i> (1997)
	7.3 (5, 3.5)	8.4 (5, 3.1)	gavage	10	1	30	1.1	1.15	-	Jiao <i>et al.</i> (1997)
	6.3 (5, 3.8)	7.5 (5, 2.8)	gavage	2	1	90	1.2	1.19	-	Jiao <i>et al.</i> (1997)
	6.3 (5, 3.8)	16.5 (5, 3.4)	gavage	6	1	90	10.2	2.62	+	Jiao <i>et al.</i> (1997)
	6.3 (5, 3.8)	26.9 (5, 3.6)	gavage	10	1	90	20.6	4.27	+	Jiao <i>et al.</i> (1997)
	5 (9, 1.8)	28.6 (-, 1.2)	ip	30	5	15	23.6	5.72	+	Shane <i>et al.</i> (1999)
	8.5 (4, 0.4)	12.5 (4, 0.5)	gavage	1.8	11	1	4	1.47	-	Gollapudi, Jackson and Stott (1998)
	2.8 (4, 0.9)	20.8 (4, 1)	ip	20	5	14	18	7.43	+	Mirsalis <i>et al.</i> (1993)
	8.5 (4, 0.4)	16 (4, 0.3)	gavage	18	11	1	7.5	1.88	+	Gollapudi, Jackson and Stott (1998)
	9.9 (4, 1.4)	10.6 (4, 1.4)	gavage	1.8	11	1	0.7	1.07	-	Gollapudi, Jackson and Stott (1998)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	9.5 (4, 0.8)	31.9 (4, 0.8)	gavage	16	4	33	22.4	3.36	+	Butterworth <i>et al.</i> (1998)
	4.6 (3, 0.3)	21.5 (3, 0.2)	ip	4	4	14	16.9	4.67	+	Suzuki <i>et al.</i> (1998)
	12.3 (4, 0.8)	39.7 (4, 0.8)	gavage	16	4	183	27.4	3.23	+	Butterworth <i>et al.</i> (1998)
	12.3 (4, 0.8)	29.7 (4, 0.8)	gavage	8	4	183	17.4	2.41	+	Butterworth <i>et al.</i> (1998)
	8.5 (4, 0.4)	11.5 (4, 0.5)	gavage	5.4	11	1	3	1.35	-	Gollapudi, Jackson and Stott (1998)
	13 (4, 0.8)	20.8 (4, 0.8)	gavage	8	4	93	7.8	1.6	+	Butterworth <i>et al.</i> (1998)
	9.9 (4, 1.4)	12.1 (4, 1.3)	gavage	5.4	11	1	2.2	1.22	-	Gollapudi, Jackson and Stott (1998)
	9.5 (4, 0.8)	15.8 (4, 0.8)	gavage	8	4	33	6.3	1.66	+	Butterworth <i>et al.</i> (1998)
	10.1 (4, 0.8)	54.3 (4, 0.8)	gavage	32	4	0	44.2	5.38	+	Butterworth <i>et al.</i> (1998)
	10.1 (4, 0.8)	35.4 (4, 0.8)	gavage	16	4	13	25.3	3.5	+	Butterworth <i>et al.</i> (1998)
	10.1 (4, 0.8)	23 (4, 0.8)	gavage	8	4	13	12.9	2.28	+	Butterworth <i>et al.</i> (1998)
	9.9 (4, 1.4)	41.5 (4, 0.8)	gavage	54	11	1	31.6	4.19	+	Gollapudi, Jackson and Stott (1998)
	9.9 (4, 1.4)	23.3 (4, 0.7)	gavage	18	11	1	13.4	2.35	+	Gollapudi, Jackson and Stott (1998)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	13 (4, 0.8)	35.7 (4, 0.8)	gavage	16	4	93	22.7	2.75	+	Butterworth <i>et al.</i> (1998)
Dipropylnitrosamine (DPN)	4.5 (8, 3.8)	61.9 (4, 1.1)	ip	250	1	28	57.4	13.76	+	Itoh <i>et al.</i> (1999)
	4.5 (8, 3.8)	37.7 (4, 1.3)	ip	250	1	14	33.2	8.38	+	Itoh <i>et al.</i> (1999)
	4.5 (8, 3.8)	12 (4, 1.6)	ip	250	1	7	7.5	2.67	+	Itoh <i>et al.</i> (1999)
Flumequine	0.8 (5, 3.378)	1.01 (5, 6.126)	diet	53 690	91	0	0.21	1.26	-	Kuroiwa <i>et al.</i> (2007)
	0.33 (5, 7.587)	0.48 (5, 5.477)	diet	69 433	91	0	0.15	1.45	-	Kuroiwa <i>et al.</i> (2007)
	0.4 (5, 4.932)	0.38 (5, 5.351)	diet	53 690	91	0	-0.02	0.95	-	Kuroiwa <i>et al.</i> (2007)
	0.46 (5, 5.166)	0.65 (5, 6.864)	diet	69 433	91	0	0.19	1.41	-	Kuroiwa <i>et al.</i> (2007)
Gamma rays	0.22 (3, -)	0.3 (3, -)	whole-body irradiation	10 Gy	1	2	0.09	1.4	-	Masumura <i>et al.</i> (2002)
	4.72 (3, 0.212)	3.29 (5, 0.365)	irradiation	3 Gy	90	0	-1.43	0.7	-	Wickliffe <i>et al.</i> (2003)
	0.23 (3, -)	0.77 (3, -)	whole-body irradiation	10 Gy	1	2	0.54	3.3	+	Masumura <i>et al.</i> (2002)
	3.8 (2, 0.2)	12.6 (2, 0.1)	whole-body irradiation	7.5 Gy	5	9	8.8	3.32	+	Takahashi, Kubota and Sato (1998)
	6.7 (6, 1)	31.5 (7, 1.2)	whole-body irradiation	1 Gy	1	35	24.8	4.7	+	Hoyes <i>et al.</i> (1998)
	0.411 (6, 18.25)	0.465 (6, 13.12)	irradiation	1.02 Gy	31	0	0.054	1.13	-	Ikeda <i>et al.</i> (2007)
	0.81 (6, -)	0.68 (6, -)	irradiation	1.02 Gy	31	0	-0.13	0.84	-	Ikeda <i>et al.</i> (2007)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	0.81 (6, -)	0.8 (6, -)	irradiation	0.68 Gy	31	0	-0.01	0.99	-	Ikeda <i>et al.</i> (2007)
	0.81 (6, -)	0.87 (6, -)	irradiation	0.34 Gy	31	0	6.00 E-02	1.07	-	Ikeda <i>et al.</i> (2007)
Heptachlor	10 (3, 0.5)	14 (3, 0.3)	diet	288	120	0	4	1.4	-	Gunz, Shephard and Lutz (1993)
	10 (3, 0.5)	25 (3, 0.3)	diet	144	120	0	15	2.5	-	Gunz, Shephard and Lutz (1993)
Hydrazine sulphate	9.5 (5, 2.9)	9.2 (5, 2.9)	gavage	135	1	14	-0.3	0.97	-	Douglas, Gingerich and Soper (1995)
	8.6 (5, 1.7)	12.5 (5, 2.3)	gavage	350	1	56	3.9	1.45	-	Douglas, Gingerich and Soper (1995)
	8.6 (5, 1.7)	12.9 (5, 3)	gavage	270	1	56	4.3	1.5	-	Douglas, Gingerich and Soper (1995)
	8.6 (5, 1.7)	8.8 (4, 2.6)	gavage	135	1	56	0.2	1.02	-	Douglas, Gingerich and Soper (1995)
	9.5 (5, 2.9)	10.3 (4, 2.6)	gavage	400	1	14	0.8	1.08	-	Douglas, Gingerich and Soper (1995)
	9.5 (5, 2.9)	12 (5, 1.9)	gavage	350	1	14	2.5	1.26	-	Douglas, Gingerich and Soper (1995)
	9.5 (5, 2.9)	10.1 (5, 2)	gavage	270	1	14	0.6	1.06	-	Douglas, Gingerich and Soper (1995)
	8.6 (5, 1.7)	11.6 (4, 1.3)	gavage	400	1	56	3	1.35	-	Douglas, Gingerich and Soper (1995)
Methyl clofenapate	5 (4, 2.1)	6.2 (3, 1.5)	gavage	225	9	10	1.2	1.24	-	Lefevre <i>et al.</i> (1994)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
N-Ethyl-N-nitrosourea (ENU)	6.4 (4, 2)	5.2 (4, 1.7)	gavage	225	9	10	-1.2	0.81	-	Lefevre <i>et al.</i> (1994)
	3.6 (3, 1)	20.5 (2, 0.2)	ip	200	2	7	16.9	5.69	+	Itoh and Shimada (1997)
	8 (4, 1.2)	10.5 (5, 1.5)	ip	50	1	14	2.5	1.31	-	Hara <i>et al.</i> (1999b)
	7.25 (7, -)	22.75 (3, -)	gavage	250	5	10	15.5	3.14	-	Suter <i>et al.</i> (2002)
	1.9 (6, 0.4)	29 (2, 0.1)	ip	125	1	28	27.1	15.26	+	da Costa <i>et al.</i> (2002)
	1 (6, 1.5)	10 (2, 0.2)	ip	125	1	28	9	10	+	da Costa <i>et al.</i> (2002)
	5.5 (8, 3)	32.8 (3, 1.1)	ip	150	1	28	27.3	5.96	+	Mientjes <i>et al.</i> (1998)
	5.5 (8, 3)	22 (6, 1.3)	ip	150	1	14	16.5	4	+	Mientjes <i>et al.</i> (1998)
	5.5 (8, 3)	8.9 (5, 1)	ip	150	1	3	3.4	1.62	+	Mientjes <i>et al.</i> (1998)
	5.5 (8, 3)	8.2 (2, 0.8)	ip	150	1	1	2.7	1.49	-	Mientjes <i>et al.</i> (1998)
	5.5 (8, 3)	7.9 (2, 1.1)	ip	150	1	0	2.4	1.44	-	Mientjes <i>et al.</i> (1998)
	2 (2, -)	8.8 (2, -)	ip	100	5	10	6.8	4.4	+	Myhr (1991)
	3.5 (2, 0.5)	10.5 (3, 0.5)	ip	100	1	7	7	3	+	Lynch, Gooderham and Boobis (1996)
	7.3 (8, 3.219)	10.6 (5, 1.493)	ip	120	1	15	3.3	1.45	-	Wang <i>et al.</i> (2004)
	2 (2, -)	24.2 (2, -)	ip	250	1	10	22.2	12.1	+	Myhr (1991)
	2 (2, -)	6.2 (2, -)	ip	250	1	7	4.2	3.1	+	Myhr (1991)
	2 (2, -)	5.8 (2, -)	ip	250	1	3	3.8	2.9	+	Myhr (1991)
	2 (2, -)	3.3 (2, -)	ip	100	1	10	1.3	1.65	-	Myhr (1991)
	2 (2, -)	12.3 (2, -)	ip	100	1	7	10.3	6.15	+	Myhr (1991)
	2 (2, -)	32.5 (2, -)	ip	100	1	3	30.5	16.25	+	Myhr (1991)
2 (2, -)	20 (2, -)	ip	250	5	10	18	10	+	Myhr (1991)	

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	2 (2, -)	22.7 (2, -)	ip	250	5	7	20.7	11.35	+	Myhr (1991)
	2 (2, -)	6.5 (2, -)	ip	250	5	3	4.5	3.25	+	Myhr (1991)
	13.8 (5, 1.7)	36.8 (5, 2.1)	ip	100	1	30	23	2.67	+	Zimmer <i>et al.</i> (1999)
	3.9 (5, 1.53)	38.2 (4, 1.184)	tp	120	1	42	34.3	9.79	+	Mei <i>et al.</i> (2005b)
	4.5 (-, -)	27.9 (-, -)	tp	120	1	42	23.4	6.2	+	Mei <i>et al.</i> (2005b)
	3.6 (-, -)	27.1 (-, -)	tp	120	1	84	23.5	7.53	+	Mei <i>et al.</i> (2005b)
	3.2 (3, 2.2)	3.2 (2, 2)	ip	100	1	7	0	1	-	Suzuki <i>et al.</i> (1997a)
	4.2 (-, -)	29 (-, -)	tp	120	1	168	24.8	6.9	+	Mei <i>et al.</i> (2005b)
	4.9 (5, 1.4)	17.2 (5, 2)	ip	100	1	10	12.3	3.51	+	Itoh, Miura and Shimada (1998)
	4.5 (5, 1.605)	27.9 (4, 1.475)	tp	120	1	42	23.4	6.2	+	Mei <i>et al.</i> (2005b)
	4.5 (5, 1.605)	20.6 (5, 1.339)	ip	120	1	42	16.1	4.58	+	Mei <i>et al.</i> (2005b)
	4.5 (5, 1.605)	44.2 (5, 1.544)	ip	120	1	42	39.7	9.82	+	Mei <i>et al.</i> (2005b)
	4.5 (5, 1.605)	41.6 (7, 2.606)	ip	120	1	42	37.1	9.24	+	Mei <i>et al.</i> (2005b)
	7.3 (8, 3.219)	38.2 (3, 0.743)	ip	120	1	120	30.9	5.23	+	Wang <i>et al.</i> (2004)
	4.1 (5, 1.394)	13.6 (4, 1.151)	ip	120	1	42	9.5	3.32	+	Mei <i>et al.</i> (2005b)
	7.3 (8, 3.219)	22.4 (4, 1.565)	ip	120	1	30	15.1	3.07	+	Wang <i>et al.</i> (2004)
	3.9 (5, 1.53)	20.1 (4, 1.284)	ip	120	1	42	16.2	5.15	+	Mei <i>et al.</i> (2005b)
	3.9 (5, 1.53)	64.6 (5, 1.501)	ip	120	1	42	60.7	16.56	+	Mei <i>et al.</i> (2005b)
	3.9 (5, 1.53)	53.1 (5, 1.281)	ip	120	1	42	49.2	13.62	+	Mei <i>et al.</i> (2005b)
	3.9 (5, 1.53)	38.8 (4, 1.179)	ip	120	1	42	34.9	9.95	+	Mei <i>et al.</i> (2005b)
	3.9 (5, 1.53)	14.5 (5, 1.547)	ip	120	1	42	10.6	3.72	+	Mei <i>et al.</i> (2005b)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	7.3 (8, 3.219)	7.3 (5, 1.241)	ip	120	1	1	0	1	-	Wang <i>et al.</i> (2004)
	7.3 (8, 3.219)	7.1 (5, 1.776)	ip	120	1	3	-0.2	0.97	-	Wang <i>et al.</i> (2004)
	7.3 (8, 3.219)	8.7 (5, 1.51)	ip	120	1	7	1.4	1.19	-	Wang <i>et al.</i> (2004)
	10.4 (3, 0.9)	70.7 (5, 1.6)	ip + partial hepatectomy	50	1	14	60.3	6.8	+	Hara <i>et al.</i> (1999b)
	3.6 (4, 1.934)	15.8 (5, 1.482)	ip	120	1	42	12.2	4.39	+	Mei <i>et al.</i> (2005b)
	2 (2, -)	12.3 (2, -)	ip	100	5	7	10.3	6.15	+	Myhr (1991)
	4.9 (5, 4)	6.9 (5, 4.1)	ip	150	1	3	2	1.41	-	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	4.7 (4, 1.1)	4.9 (5, 1.8)	ip	25	1	5	0.2	1.04	-	Morrison, Tinwell and Ashby (1995)
	4.6 (5, 0.3)	16.3 (4, 0.3)	ip	150	1	14	11.7	3.54	+	Mientjes <i>et al.</i> (1996)
	5.5 (8, 3.1)	8 (2, 1.1)	ip	150	1	0	2.5	1.45	-	Mientjes <i>et al.</i> (1996)
	5.5 (8, 3.1)	22 (6, 1.3)	ip	150	1	14	16.5	4	+	Mientjes <i>et al.</i> (1996)
	4.6 (5, 0.3)	6.8 (2, 0.2)	ip	150	1	0	2.2	1.48	-	Mientjes <i>et al.</i> (1996)
	4.7 (6, 1.1)	14.1 (6, 1.2)	ip	250	1	10	9.4	3	+	Piegorsch <i>et al.</i> (1995)
	1.6 (3, 0.9)	7.8 (4, 1.2)	ip	80	1	10	6.2	4.88	+	Krebs and Favor (1997)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	7.8 (4, 2.6)	15.6 (5, 3.7)	ip	150	1	14	7.8	2	+	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	3.1 (2, 0.6)	6.6 (4, 1.3)	ip	160	1	3	3.5	2.13	+	Krebs and Favor (1997)
	5.2 (5, 1.6)	63.4 (5, 1.6)	ip	250	5	55	58.2	12.19	+	Douglas <i>et al.</i> (1996)
	1.6 (3, 0.9)	10.8 (3, 1)	ip	160	1	10	9.2	6.75	+	Krebs and Favor (1997)
	4.5 (5, 1)	19.7 (5, 1.1)	ip	100	1	30	15.2	4.38	+	Zimmer <i>et al.</i> (1999)
	2.7 (3, 1.2)	10.7 (4, 1.3)	ip	160	1	100	8	3.96	+	Krebs and Favor (1997)
	3.8 (2, 0.2)	67.2 (2, 0.2)	ip	250	5	9	63.4	17.68	+	Takahashi, Kubota and Sato (1998)
	3.2 (3, 2.2)	5.7 (2, 0.2)	ip	200	1	7	2.5	1.78	-	Suzuki <i>et al.</i> (1997a)
	5.8 (9, 3)	70.7 (5, 4.5)	ip	250	5	35	64.9	12.19	+	Douglas <i>et al.</i> (1996)
	5.8 (9, 3)	31.9 (5, 0.9)	ip	250	5	20	26.1	5.5	+	Douglas <i>et al.</i> (1996)
	5.8 (9, 3)	26.8 (5, 1.4)	ip	250	5	10	21	4.62	+	Douglas <i>et al.</i> (1996)
	6.4 (4, 1.4)	25.6 (5, 1.4)	ip	250	5	5	19.2	4	+	Douglas <i>et al.</i> (1996)
	2.7 (3, 1.2)	9.5 (4, 1.4)	ip	80	1	100	6.8	3.52	+	Krebs and Favor (1997)
	0.8 (2, 0.1)	22.8 (2, 0.1)	ip	250	5	7	22	28.5	+	Hoorn <i>et al.</i> (1993)
	2 (2, -)	14 (2, -)	ip	100	5	3	12	7	+	Myhr (1991)
	2.4 (5, 0.5)	13 (5, 0.5)	ip	250	1	14	10.6	5.42	+	Recio <i>et al.</i> (1992)
	0.8 (2, 0.1)	24.4 (2, 0.1)	ip	250	1	10	23.6	30.5	+	Hoorn <i>et al.</i> (1993)
	0.8 (2, 0.1)	6.1 (2, 0.1)	ip	250	1	7	5.3	7.63	+	Hoorn <i>et al.</i> (1993)
	0.8 (2, 0.1)	5.8 (2, 0.3)	ip	250	1	3	5	7.25	+	Hoorn <i>et al.</i> (1993)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	0.8 (2, 0.1)	3.3 (2, 0.1)	ip	100	1	10	2.5	4.13	+	Hoorn <i>et al.</i> (1993)
	0.8 (2, 0.1)	12.6 (2, 0.1)	ip	100	1	7	11.8	15.75	+	Hoorn <i>et al.</i> (1993)
	0.8 (2, 0.1)	9.8 (2, 0.1)	ip	100	1	3	9	12.25	+	Hoorn <i>et al.</i> (1993)
	6.4 (6, 1.7)	16.9 (6, 1.6)	ip	250	1	10	10.5	2.64	+	Piegorsch <i>et al.</i> (1995)
	3.1 (2, 0.6)	4.8 (4, 1.4)	ip	80	1	3	1.7	1.55	-	Krebs and Favor (1997)
	5.8 (9, 3)	69.5 (5, 4.2)	ip	250	5	45	63.7	11.98	+	Douglas <i>et al.</i> (1996)
	7.4 (6, 1.2)	17.1 (6, 1.2)	ip	250	1	10	9.7	2.31	+	Piegorsch <i>et al.</i> (1995)
	0.8 (2, 0.1)	6.6 (2, 0.1)	ip	250	5	3	5.8	8.25	+	Hoorn <i>et al.</i> (1993)
	0.8 (2, 0.1)	8.8 (1, 0)	ip	100	5	10	8	11	+	Hoorn <i>et al.</i> (1993)
	0.8 (2, 0.1)	12.2 (2, 0.1)	ip	100	5	7	11.4	15.25	+	Hoorn <i>et al.</i> (1993)
	0.8 (2, 0.1)	14.1 (2, 0.1)	ip	100	5	3	13.3	17.63	+	Hoorn <i>et al.</i> (1993)
	3.2 (3, 2.2)	3.2 (2, 2)	ip	100	1	7	0	1	-	Suzuki <i>et al.</i> (1993)
	2.8 (4, 0.5)	10.2 (2, 0.2)	ip	250	1	3	7.4	3.64	+	Monroe and Mitchell (1993)
	3.7 (2, 0.5)	3.7 (2, 0.5)	ip	100	1	7	0	1	-	Suzuki, Hayashi and Sofuni (1994)
	0.8 (2, 0.1)	20.3 (2, 0.1)	ip	250	5	10	19.5	25.38	+	Hoorn <i>et al.</i> (1993)
<i>N</i> -Hydroxy-2-acetylaminofluorene	2.6 (5, 1.1)	9.8 (5, 0.9)	ip	25	1	42	7.2	3.77	+	Chen <i>et al.</i> (2001a)
	2.6 (5, 1.1)	15.6 (5, 1)	ip	50	5	37	13	6	+	Chen <i>et al.</i> (2001a)
	2.6 (5, 1.1)	40.7 (5, 0.6)	ip	100	13	29	38.1	15.65	+	Chen <i>et al.</i> (2001a)
<i>N</i> -Nitrosopyrrolidine	0.55 (5, 2.976)	5.65 (5, 1.022)	drinking water	1 201.2	91	0	5.1	10.27	+	Kanki <i>et al.</i> (2005)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
<i>o</i> -Aminoazotoluene	9.9 (5, 0.7)	33.5 (5, 0.7)	ip	600	1	28	23.6	3.38	+	Ohsawa <i>et al.</i> (2000)
	4.1 (3, 1.1)	22.3 (3, 1.1)	ip	300	1	28	18.2	5.44	+	Kohara <i>et al.</i> (2001)
	9.9 (5, 0.7)	14.3 (5, 1)	ip	300	1	28	4.4	1.44	+	Ohsawa <i>et al.</i> (2000)
Oxazepam	14.4 (3, 0.9542)	15.1 (8, 1.829)	diet	193 500	516	0	0.7	1.05	-	Mirsalis <i>et al.</i> (2005)
	14.4 (3, 0.9542)	14.6 (8, 2.023)	diet	207 750	546	0	0.2	1.01	-	Mirsalis <i>et al.</i> (2005)
	7.1 (10, 4.5)	14.5 (4, 1.3)	diet	54 000	180	0	7.4	2.04	+	Singh <i>et al.</i> (2001)
	5 (9, 1.8)	8.2 (-, 2)	diet	54 000	180	0	3.2	1.64	+	Shane <i>et al.</i> (1999)
Phenobarbital	5 (9, 1.8)	6.9 (7, 2.1)	diet	54 000	180	0	1.9	1.38	-	Shane <i>et al.</i> (2000c)
	4.9 (3, 0.8588)	9.7 (2, 0.7418)	diet	31 920	190	0	4.8	1.98	+	Mirsalis <i>et al.</i> (2005)
	11 (4, 1.337)	9.8 (5, 1.2322)	diet	48 480	303	0	-1.2	0.89	-	Mirsalis <i>et al.</i> (2005)
	14.4 (3, 0.9542)	13.4 (5, 1.407)	diet	77 400	516	0	-1	0.93	-	Mirsalis <i>et al.</i> (2005)
	14.8 (5, 2.067)	7.4 (5, 1.682)	diet	97 150	670	0	-7.4	0.5	-	Mirsalis <i>et al.</i> (2005)
	7.1 (10, 4.5)	12.2 (4, 0.9)	diet	54 000	180	0	5.1	1.72	-	Singh <i>et al.</i> (2001)
	10 (3, 0.5)	10 (3, 0.3)	diet	7 200	120	0	0	1	-	Gunz, Shephard and Lutz (1993)
	4 (5, -)	4.4 (5, -)	diet	900	5	14	0.4	1.1	-	Tombolan <i>et al.</i> (1999a)
	6 (4, 1.2)	8.5 (4, 1.2)	drinking water	40 000	168	0	2.5	1.42	-	Styles <i>et al.</i> (2001)
	7.5 (4, 1.2)	10 (4, 1.2)	drinking water	18 500	84	0	2.5	1.33	-	Styles <i>et al.</i> (2001)
5.5 (4, 1.2)	5.5 (4, 1.2)	drinking water	3 100	14	0	0	1	-	Styles <i>et al.</i> (2001)	

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	10 (3, 0.5)	12 (3, 0.3)	diet	3 600	120	0	2	1.2	–	Gunz, Shephard and Lutz (1993)
Quinoline	5.6 (3, 1.5)	41.4 (4, 1.2)	ip	200	4	14	35.8	7.39	+	Suzuki <i>et al.</i> (2000)
	5.1 (5, 0.5)	22.5 (5, 0.8)	ip	200	4	14	17.4	4.41	+	Miyata <i>et al.</i> (1998)
	6.7 (3, 0.2)	34.3 (4, 0.2)	ip	200	4	14	27.6	5.12	+	Suzuki <i>et al.</i> (1998)
	4.6 (3, 0.3)	17.3 (4, 0.2)	ip	200	4	14	12.7	3.76	+	Suzuki <i>et al.</i> (1998)
Riddelliine	3.52 (3, 1.019)	3.75 (3, 1.374)	gavage	18	84	1	0.23	1.07	–	Mei <i>et al.</i> (2004a)
	3.95 (3, 1.054)	6.7 (3, 0.788)	gavage	18	84	1	2.75	1.7	+	Mei <i>et al.</i> (2004a)
	3 (6, 2.484)	4.7 (6, 2.111)	gavage	6	84	1	1.7	1.57	+	Mei <i>et al.</i> (2004b)
	3 (6, 2.484)	10.3 (6, 2.232)	gavage	60	84	1	7.3	3.43	+	Mei <i>et al.</i> (2004b)
	3 (6, 2.484)	5.5 (6, 2.294)	gavage	18	84	1	2.5	1.83	+	Mei <i>et al.</i> (2004b)
Streptozotocin	8.3 (3, 1.5)	7.3 (3, 1.6)	ip	75	1	14	–1	0.88	–	Schmezer, Eckert and Liegibel (1994)
	8.3 (3, 1.5)	16.4 (3, 1.5)	ip	100	1	14	8.1	1.98	+	Schmezer, Eckert and Liegibel (1994)
Tamoxifen	5.5 (4, 1.2)	19 (4, 1.2)	gavage	840	42	14	13.5	3.45	+	Styles <i>et al.</i> (2001)
	4 (4, 1.2)	15 (4, 1.2)	gavage	840	42	0	11	3.75	+	Styles <i>et al.</i> (2001)
	7.5 (4, 1.2)	35 (4, 1.2)	gavage	840	42	84	27.5	4.67	+	Styles <i>et al.</i> (2001)
	5 (5, –)	15 (5, –)	gavage	840	42	14	10	3	+	Davies <i>et al.</i> (1999)
	6 (5, –)	10 (5, –)	gavage	420	42	14	4	1.67	–	Davies <i>et al.</i> (1999)
	3 (3, 0.1)	11 (4, 0.1)	gavage	840	42	14	8	3.67	+	Davies <i>et al.</i> (1997)
	4.5 (5, 0.3)	12 (4, 0.3)	gavage	840	42	14	7.5	2.67	+	Davies <i>et al.</i> (1997)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
Trichloroethylene (TCE)	2 (5, 0.3)	7 (5, 0.3)	gavage	420	42	14	5	3.5	+	Davies <i>et al.</i> (1997)
	6 (4, 1.2)	30.5 (4, 1.2)	gavage	840	42	168	24.5	5.08	+	Styles <i>et al.</i> (2001)
	1 (6, 1.5)	3.2 (6, 1.3)	ip	420	21	28	2.2	3.2	+	da Costa <i>et al.</i> (2002)
	8 (6, 2.2)	11.2 (6, 2.2)	ip	420	21	0	3.2	1.4	+	Chen <i>et al.</i> (2002)
	1 (6, -)	2 (6, -)	ip	420	21	30	1	2	+	Chen <i>et al.</i> (2002)
	1.9 (6, 0.4)	0.8 (6, 0.5)	ip	420	21	28	-1.1	0.42	-	da Costa <i>et al.</i> (2002)
	6.6 (8, 2.3)	7.1 (9, 2.2)	inhalation	4 600	12	60	0.5	1.08	-	Douglas <i>et al.</i> (1999)
	6.6 (8, 2.3)	8.6 (9, 2.1)	inhalation	26 150	12	60	2	1.3	-	Douglas <i>et al.</i> (1999)
	7.8 (10, 3.2)	9.9 (5, 1.4)	inhalation	71 250	12	60	2.1	1.27	-	Douglas <i>et al.</i> (1999)
	7.8 (10, 3.2)	10.9 (9, 2.3)	inhalation	26 150	12	60	3.1	1.4	-	Douglas <i>et al.</i> (1999)
Tris-(2,3-dibromopropyl)phosphate	7.8 (10, 3.2)	7.4 (10, 3.1)	inhalation	4 600	12	60	-0.4	0.95	-	Douglas <i>et al.</i> (1999)
	6.6 (8, 2.3)	7.1 (8, 1.7)	inhalation	71 250	12	60	0.5	1.08	-	Douglas <i>et al.</i> (1999)
	3.9 (6, 1.3)	5.1 (5, 1)	gavage	2 400	4	14	1.2	1.31	-	Provost <i>et al.</i> (1996)
	3.2 (6, -)	3.7 (5, -)	gavage	300	2	14	0.5	1.16	-	de Boer <i>et al.</i> (1996)
	3.2 (6, -)	4.2 (5, -)	gavage	1 200	4	14	1	1.31	-	de Boer <i>et al.</i> (1996)
	3.2 (6, -)	4.9 (5, -)	gavage	2 400	4	14	1.7	1.53	-	de Boer <i>et al.</i> (1996)
	3.9 (6, 1.3)	4.1 (5, 1.2)	gavage	300	2	14	0.2	1.05	-	Provost <i>et al.</i> (1996)
Urethane	3.9 (6, 1.3)	4.9 (5, 1.1)	gavage	1 200	4	14	1	1.26	-	Provost <i>et al.</i> (1996)
	11 (4, 1.337)	93 (7, 1.926)	drinking water	64 260	210	0	82	8.45	+	Mirsalis <i>et al.</i> (2005)
	4.54 (5, 0.805)	4.94 (6, 1.67)	gavage	700	7	3	0.4	1.09	-	Singer (2006)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	11 (4, 1.337)	110.9 (4, 1.312)	drinking water	69 678	237	0	99.9	10.08	+	Mirsalis <i>et al.</i> (2005)
	4.9 (3, 0.8588)	92.2 (6, 0.896)	drinking water	59 660	190	0	87.3	18.82	+	Mirsalis <i>et al.</i> (2005)
	6.21 (6, 1.85)	9.91 (7, 2.09)	gavage	700	28	28	3.7	1.6	-	Singer (2006)
	4.3 (6, 2.9)	8.4 (7, 2.6)	ip	900	1	14	4.1	1.95	+	Williams <i>et al.</i> (1998)
	6.2 (5, 1.5)	10.2 (3, 1.1)	ip	900	1	16	4	1.65	+	Williams <i>et al.</i> (1998)
	8 (2, 0.8)	40 (2, 0.4)	diet	13 650	105	0	32	5	+	Shephard, Gunz and Schlatter (1995)
	7.5 (7, 1.8)	7.9 (7, 2)	gavage	1 400	28	28	0.4	1.05	-	Chang <i>et al.</i> (2003)
	6 (7, 1.6)	8.1 (7, 1.8)	gavage	1 400	28	28	2.1	1.35	-	Chang <i>et al.</i> (2003)
	7.88 (6, 0.979)	13.1 (7, 1.43)	gavage	2 800	56	3	5.22	1.66	-	Singer (2006)
	7.88 (6, 0.979)	18.5 (7, 1.12)	gavage	5 600	56	3	10.62	2.35	+	Singer (2006)
	6.21 (6, 1.85)	14.1 (6, 1.24)	gavage	2 800	28	28	7.89	2.27	+	Singer (2006)
	4.26 (6, 1.61)	10.1 (5, 1.52)	gavage	2 800	28	3	5.84	2.37	+	Singer (2006)
	4.26 (6, 1.61)	6.61 (5, 1.38)	gavage	700	28	3	2.35	1.55	-	Singer (2006)
	6.23 (5, 1.72)	7.23 (5, 1.41)	gavage	700	7	28	1	1.16	-	Singer (2006)
	6.23 (5, 1.72)	5.81 (5, 1.59)	gavage	175	7	28	-0.42	0.93	-	Singer (2006)
	4.54 (5, 0.805)	3.88 (5, 1.03)	gavage	175	7	3	-0.66	0.85	-	Singer (2006)
	7.88 (6, 0.979)	11.3 (6, 0.75)	gavage	700	56	3	3.42	1.43	-	Singer (2006)
Wyeth 14,643	6.69 (4, -)	10.6 (4, -)	nd	1 200	14	21	3.91	1.58	+	Boerrigter (2004)
	7.1 (10, 4.5)	18.2 (6, 3.6)	diet	10 800	180	0	11.1	2.56	+	Singh <i>et al.</i> (2001)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	6.37 (4, -)	10.7 (4, -)	nd	1 200	14	21	4.33	1.68	+	Boerrigter (2004)
	3.7 (2, 0.3)	5.2 (2, 0.3)	diet	651 g/kg	21	0	1.5	1.41	-	Trapp, Schwarz and Epe (2007)
X-rays	6.62 (4, 2.2)	13.57 (4, 1.3)	whole-body irradiation	2.5 Gy	1	21	6.95	2.05	+	Kind <i>et al.</i> (2001)
	6.7 (4, -)	71.6 (3, -)	whole-body irradiation	200 Gy	1	4	64.9	10.69	+	Ono <i>et al.</i> (1999)
	8.5 (4, 2.3)	17.1 (3, 0.8)	whole-body irradiation	2.5 Gy	5	3	8.6	2.01	+	Gossen <i>et al.</i> (1995)
	8.5 (4, 2.3)	19.1 (3, 1)	whole-body irradiation	2.5 Gy	5	10	10.6	2.25	+	Gossen <i>et al.</i> (1995)
	8.5 (4, 2.3)	15 (3, 1.4)	whole-body irradiation	2.5 Gy	5	21	6.5	1.76	equiv.	Gossen <i>et al.</i> (1995)
	10.7 (3, 3.7)	17.4 (-, 2.9)	whole-body irradiation	11.7 Gy	182	112	6.7	1.63	-	Ono <i>et al.</i> (1997)
	6.7 (4, 12.1)	17 (4, 7.4)	whole-body irradiation	8 Gy	1	7	10.3	2.54	+	Ono <i>et al.</i> (1997)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	7.6 (4, 7.2)	12.8 (-, 7.8)	whole-body irradiation	4 Gy	1	112	5.2	1.68	+	Ono <i>et al.</i> (1997)
	0.23 (3, -)	0.49 (3, -)	whole-body irradiation	10 Gy	1	2	0.26	2.1	+	Masumura <i>et al.</i> (2002)
	6.62 (4, 2.2)	10.33 (4, 1.3)	whole-body irradiation	2.5 Gy	1	21	3.71	1.56	+	Kind <i>et al.</i> (2001)
	0.22 (3, -)	0.48 (3, -)	whole-body irradiation	10 Gy	1	2	0.26	2.2	-	Masumura <i>et al.</i> (2002)
	6.62 (4, 2.2)	17.09 (4, 1.3)	whole-body irradiation	2.5 Gy	1	21	10.47	2.58	+	Kind <i>et al.</i> (2001)
	6.62 (4, 2.2)	12.63 (4, 0.9)	whole-body irradiation	2.5 Gy	1	21	6.01	1.91	+	Kind <i>et al.</i> (2001)
	6.62 (4, 2.2)	13.38 (4, 1.2)	whole-body irradiation	2.5 Gy	1	21	6.76	2.02	+	Kind <i>et al.</i> (2001)
	6.62 (4, 2.2)	9.81 (4, 2.2)	whole-body irradiation	2.5 Gy	1	21	3.19	1.48	+	Kind <i>et al.</i> (2001)

Table C.1 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	6.62 (4, 2.2)	11.89 (4, 0.6)	whole-body irradiation	2.5 Gy	1	21	5.27	1.8	+	Kind <i>et al.</i> (2001)
	6.62 (4, 2.2)	11.85 (4, 0.7)	whole-body irradiation	2.5 Gy	1	21	5.23	1.79	+	Kind <i>et al.</i> (2001)
	6.62 (4, 2.2)	10.33 (4, 1.3)	whole-body irradiation	2.5 Gy	1	21	3.71	1.56	+	Kind <i>et al.</i> (2001)
	6.62 (4, 2.2)	14.07 (4, 0.8)	whole-body irradiation	2.5 Gy	1	21	7.45	2.13	+	Kind <i>et al.</i> (2001)
	6.62 (4, 2.2)	13.38 (4, 1.2)	whole-body irradiation	2.5 Gy	1	21	6.76	2.02	+	Kind <i>et al.</i> (2001)

+, positive; -, negative; ?pos, positive but not definitive; equiv., equivocal; IMF, induced mutant frequency; ip, intraperitoneal; MF, mutant frequency; nd, no data; tp, transplacental

^a MF and IMF are expressed $\times 10^{-5}$. Numbers in parentheses indicate number of animals per group and number of plaques or plasmids $\times 10^6$ per group, respectively.

^b Unless otherwise noted.

^c "Unpublished" refers to data provided by members of the IWGT working group.

Table C.2. Summary of TGR assays performed in lung for known lung carcinogens

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
1,2-Dibromoethane	10.7 (6, 2.3)	10.9 (6, 2.5)	inhalation	30	1	14	0.2	1.02	-	Schmezer <i>et al.</i> (1998b)
	10.7 (6, 2.3)	10.4 (6, 2.2)	inhalation	300	10	14	-0.3	0.97	-	Schmezer <i>et al.</i> (1998b)
1,3-Butadiene	4.4 (5, 0.6)	9.1 (5, 0.5)	inhalation	2 400	5	14	4.7	2.07	+	Recio <i>et al.</i> (1992)
1,6-Dinitropyrene	0.5 (3, 1.913)	0.04 (3, 2.038)	intratracheal	1	1	14	-0.46	0.08	-	Hashimoto <i>et al.</i> (2006)
	0.5 (3, 1.913)	0.89 (3, 2.49)	intratracheal	4	1	14	0.39	1.78	-	Hashimoto <i>et al.</i> (2006)
	0.5 (3, 1.913)	1.92 (3, 1.834)	intratracheal	2	1	14	1.42	3.84	+	Hashimoto <i>et al.</i> (2006)
2-Amino-3,8-dimethylimidazo(4,5-f)quinoxaline (MeIQx)	1.59 (5, 0.771)	2.71 (5, 0.791)	diet	474.8	112	0	1.12	1.7	-	Hoshi <i>et al.</i> (2004)
3-Chloro-4-(dichloromethyl)-5-hydroxy-2(5H)-furanone (MX)	0.11 (5, 4.617)	0.081 (5, 5.154)	drinking water	361	84	0	-0.03	0.74	-	Nishikawa <i>et al.</i> (2006)
	0.188 (5, 3.027)	0.205 (5, 4.052)	drinking water	1 210	84	0	0.02	1.09	-	Nishikawa <i>et al.</i> (2006)
	0.188 (5, 3.027)	0.182 (5, 4.511)	drinking water	361	84	0	-0.01	0.97	-	Nishikawa <i>et al.</i> (2006)
	0.11 (5, 4.617)	0.125 (5, 4.926)	drinking water	1 210	84	0	0.02	1.14	-	Nishikawa <i>et al.</i> (2006)
	0.188 (5, 3.027)	0.25 (5, 3.908)	drinking water	118	84	0	0.06	1.33	-	Nishikawa <i>et al.</i> (2006)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	0.11 (5, 4.617)	0.084 (5, 2.202)	drinking water	118	84	0	-0.03	0.76	-	Nishikawa <i>et al.</i> (2006)
3-Nitrobenzanthrone	3.81 (5, 0.43)	3.85 (5, 0.54)	ip	25	1	3	0.04	1.01	-	Arlt <i>et al.</i> (2004)
4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK)	3.3 (6, -)	15.8 (5, -)	drinking water	615	5	14	12.5	4.79	+	von Pressentin, Chen and Guttenplan (2001)
	3.1 (5, -)	15 (5, -)	drinking water	588	28	14	11.9	4.84	+	von Pressentin, Kosinska and Guttenplan (1999)
	0.64 (-, -)	6.22 (-, -)	ip	100	1	18	5.58	9.72	+	Miyazaki <i>et al.</i> (2005)
	0.411 (6, 18.25)	0.515 (6, 8.155)	ip	400	4	0	0.104	1.25	-	Ikeda <i>et al.</i> (2007)
	3.83 (4, 1.673)	14.05 (4, 1.196)	ip	1 000	28	0	10.22	3.67	+	Hashimoto, Ohsawa and Kimura (2004)
	3.83 (4, 1.673)	8.2 (4, 1.378)	ip	500	28	0	4.37	2.14	+	Hashimoto, Ohsawa and Kimura (2004)
	8.34 (4, 1.463)	26.1 (4, 1.345)	ip	1 000	28	0	17.76	3.13	+	Hashimoto, Ohsawa and Kimura (2004)
	8.34 (4, 1.463)	15.65 (4, 1.144)	ip	500	28	0	7.31	1.88	+	Hashimoto, Ohsawa and Kimura (2004)
	0.423 (6, 8.274)	1.426 (6, 4.698)	ip	400	4	0	1.003	3.37	+	Ikeda <i>et al.</i> (2007)

Table C.2 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
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Table C.2 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
4-Nitroquinoline-1-oxide (4-NQO)	15.1 (4, 1.5)	29.4 (6, 1.6)	gavage	200	1	28	14.3	1.95	+	Nakajima <i>et al.</i> (1999)
	4.8 (4, 1.5)	12.8 (6, 1.6)	ip	7.5	1	14	8	2.67	+	Nakajima <i>et al.</i> (1999)
	7.2 (4, 1)	27.5 (5, 1.2)	gavage	200	1	7	20.3	3.82	+	Nakajima <i>et al.</i> (1999)
	3.9 (–, –)	3.3 (6, 2.5)	drinking water	62	14	14	–0.6	0.85	–	von Pressentin, El Bayoumy and Guttenplan (2000)
	4.8 (4, 1.5)	7.6 (5, 2)	ip	7.5	1	7	2.8	1.58	+	Nakajima <i>et al.</i> (1999)
	4.7 (4, 1.3)	11.9 (6, 2.4)	ip	7.5	1	28	7.2	2.53	+	Nakajima <i>et al.</i> (1999)
	7.2 (4, 1)	37.1 (5, 1.2)	gavage	200	1	14	29.9	5.15	+	Nakajima <i>et al.</i> (1999)
	4.8 (4, 1.5)	12.3 (2, 0.1)	ip	15	1	7	7.5	2.56	–	Nakajima <i>et al.</i> (1999)
7,12-Dimethylbenzanthracene (7,12-DMBA)	8.2 (5, 1)	4 (5, 0.8)	ip	20	1	14	–4.2	0.49	–	Ohsawa <i>et al.</i> (2000)
	8.34 (4, 1.463)	28.97 (3, 1.115)	ip	20	28	0	20.63	3.47	+	Hashimoto, Ohsawa and Kimura (2004)
	3.83 (4, 1.673)	17.44 (3, 0.631)	ip	20	28	0	13.61	4.55	+	Hashimoto, Ohsawa and Kimura (2004)
Amosite asbestos	3.11 (5, 1.644)	3.93 (5, 1.484)	intratracheal	4	1	28	0.82	1.26	–	Loli <i>et al.</i> (2004)
	3.36 (5, 1.654)	6.11 (5, 1.641)	intratracheal	8	1	112	2.75	1.82	+	Topinka <i>et al.</i> (2004a)
	3.77 (5, 1.925)	4.9 (5, 1.651)	intratracheal	32	28	28	1.13	1.3	–	Loli <i>et al.</i> (2004)
	3.11 (5, 1.644)	3.93 (5, 1.484)	intratracheal	4	1	28	0.82	1.26	–	Topinka <i>et al.</i> (2004a)
	3.51 (5, 1.292)	5.76 (5, 1.516)	intratracheal	32	28	112	2.25	1.64	+	Loli <i>et al.</i> (2004)
	3.36 (5, 1.654)	6.11 (5, 1.641)	intratracheal	8	1	112	2.75	1.82	+	Loli <i>et al.</i> (2004)
	3.36 (5, 1.654)	3.93 (5, 1.622)	intratracheal	4	1	112	0.57	1.17	–	Loli <i>et al.</i> (2004)
	3.77 (5, 1.925)	4.9 (5, 1.651)	intratracheal	32	28	28	1.13	1.3	–	Loli <i>et al.</i> (2004)

Table C.2 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	3.11 (5, 1.644)	3.69 (5, 1.556)	intratracheal	8	1	28	0.58	1.19	-	Loli <i>et al.</i> (2004)
	3.11 (5, 1.644)	3.93 (5, 1.484)	intratracheal	4	1	28	0.82	1.26	-	Loli <i>et al.</i> (2004)
	3.11 (5, 1.644)	3.69 (5, 1.556)	intratracheal	8	1	28	0.58	1.19	-	Loli <i>et al.</i> (2004)
	3.36 (5, 1.654)	3.93 (5, 1.622)	intratracheal	4	1	112	0.57	1.17	-	Topinka <i>et al.</i> (2004a)
	3.51 (5, 1.292)	5.76 (5, 1.516)	intratracheal	32	28	112	2.25	1.64	+	Topinka <i>et al.</i> (2004a)
	3.11 (5, 1.644)	3.69 (5, 1.556)	intratracheal	8	1	28	0.58	1.19	-	Topinka <i>et al.</i> (2004a)
	3.77 (5, 1.619)	4.9 (5, 1.651)	intratracheal	32	28	28	1.13	1.3	-	Topinka <i>et al.</i> (2004a)
Aristolochic acid	4.4 (4, 1.4)	7.2 (4, 9.6)	i.g. injection	60	22	7	2.8	1.64	-	Kohara <i>et al.</i> (2002a)
	6.9 (4, 6.24)	11.9 (4, 7)	i.g. injection	60	22	7	5	1.72	+	Kohara <i>et al.</i> (2002a)
Arsenite trioxide	5.7 (5, 3)	5.7 (5, 2.1)	ip	38	5	14	0	1	-	Noda <i>et al.</i> (2002)
	6.8 (5, 1.7)	5.3 (5, 12)	ip	38	5	14	-1.5	0.78	-	Noda <i>et al.</i> (2002)
Benzene	6.4 (8, 3.7)	10.6 (8, 3.8)	inhalation	113 400	84	0	4.2	1.66	+	Mullin <i>et al.</i> (1995)
	4 (4, 1.5)	3.5 (4, 1.4)	gavage	1 000	5	14	-0.5	0.88	-	Provost <i>et al.</i> (1996)
	4 (4, 1.5)	5.4 (4, 1.5)	gavage	2 000	5	14	1.4	1.35	-	Provost <i>et al.</i> (1996)
	4 (4, 1.5)	3.6 (3, 1.1)	gavage	3 750	5	14	-0.4	0.9	-	Provost <i>et al.</i> (1996)
Chlorambucil	0.35 (3, 2.8)	3.14 (5, 4.6)	ip	20	1	28	2.79	8.97	+	unpublished
	0.26 (4, 7.2)	0.48 (4, 8.3)	ip	20	1	3	0.22	1.85	-	unpublished
	0.37 (1, 2.4)	0.197 (2, 4.1)	ip	10	1	28	-0.17 3	0.53	-	unpublished
	0.37 (1, 2.4)	0.36 (3, 4.4)	ip	20	1	28	-0.01	0.97	-	unpublished
	0.35 (3, 2.8)	2.17 (4, 3.8)	ip	10	1	28	1.82	6.2	+	unpublished
Chrysene	3.28 (4, 4.085)	6.97 (4, 6.464)	ip	800	28	7	3.69	2.13	-	Yamada <i>et al.</i> (2005)

Table C.2 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
Crocidolite asbestos	6.91 (4, 2.673)	19.56 (4, 4.531)	ip	800	28	7	12.65	2.83	+	Yamada <i>et al.</i> (2005)
	6.9 (3, 1.059)	13.5 (3, 1.003)	inhalation	5.75 mg/m ³	28	0	6.6	1.96	+	Rihn <i>et al.</i> (2000a)
	8.6 (3, 1.055)	11 (3, 1.032)	inhalation	5.75 mg/m ³	84	0	2.4	1.28	+	Rihn <i>et al.</i> (2000a)
Cyclophosphamide	8.7 (3, 1.356)	8.1 (3, 1.124)	inhalation	5.75 mg/m ³	7	0	-0.6	0.93	-	Rihn <i>et al.</i> (2000a)
	3.1 (5, 0.6)	10.6 (5, 0.7)	ip	100	1	42	7.5	3.42	+	Gorelick <i>et al.</i> (1999)
	6 (8, 0.9)	9.7 (8, 1)	ip	100	1	42	3.7	1.62	-	Gorelick <i>et al.</i> (1999)
	20.6 (3, 1.7)	75.1 (2, 1.2)	ip	500	5	3	54.5	3.65	+	unpublished
	20.6 (3, 1.7)	54 (2, 2.2)	ip	500	5	7	33.4	2.62	+	unpublished
	20.6 (3, 1.7)	47.4 (2, 2.2)	ip	500	5	21	26.8	2.3	+	unpublished
	20.6 (3, 1.7)	37.8 (3, 2.4)	ip	500	5	62	17.2	1.83	+	unpublished
	8.1 (5, 1.5)	40.7 (7, 5.3)	ip	500	5	3	32.6	5.02	+	unpublished
	3.1 (5, 0.6)	4.5 (5, 0.6)	ip	25	1	42	1	1.32	-	Gorelick <i>et al.</i> (1999)
	8.1 (5, 1.5)	38.2 (8, 2.8)	ip	500	5	21	30.1	4.72	+	unpublished
	6.8 (8, 6.9)	28.2 (6, 5.3)	ip	500	5	3	21.4	4.15	+	unpublished
	6.8 (8, 6.9)	42 (7, 2.8)	ip	500	5	21	35.2	6.18	+	unpublished
	6.8 (8, 6.9)	29 (8, 3.1)	ip	500	5	7	22.2	4.26	+	unpublished
8.1 (5, 1.5)	35.1 (8, 3.1)	ip	500	5	7	27	4.33	+	unpublished	
Diesel exhaust	3.51 (7, 8.692)	2.37 (6, 16.213)	inhalation	20 mg/m ³	1	28	-1.14	0.68	-	Dybdahl <i>et al.</i> (2004)
	0.9 (4, 1)	4.2 (5, 1.1)	inhalation	6 800	28	3	3.3	4.67	+	Sato <i>et al.</i> (2000)

Table C.2 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	5.04 (7, 6.391)	5.79 (6, 7.089)	inhalation	80 mg/m ³	4	28	0.75	1.15	–	Dybdahl <i>et al.</i> (2004)
	0.9 (4, 1)	1 (5, 1.2)	inhalation	1 130	28	3	0.1	1.11	–	Sato <i>et al.</i> (2000)
	0.66 (3, 2.377)	1.28 (3, 2.947)	intratracheal	0.1 mg	1	14	0.62	1.94	+	Hashimoto <i>et al.</i> (2007)
	3.51 (7, 8.692)	4.32 (5, 7.36)	inhalation	80 mg/m ³	1	28	0.81	1.23	–	Dybdahl <i>et al.</i> (2004)
	5.04 (7, 6.391)	6.38 (6, 6.82)	inhalation	20 mg/m ³	4	28	1.34	1.27	–	Dybdahl <i>et al.</i> (2004)
	0.66 (3, 2.377)	0.97 (3, 3.632)	intratracheal	0.05 mg	1	14	0.31	1.47	–	Hashimoto <i>et al.</i> (2007)
	0.66 (3, 2.377)	1.78 (3, 2.254)	intratracheal	0.2 mg	1	14	1.12	2.7	+	Hashimoto <i>et al.</i> (2007)
	0.66 (3, 2.377)	1.4 (3, 3.587)	intratracheal	0.25 mg	1	14	0.74	2.12	+	Hashimoto <i>et al.</i> (2007)
	0.66 (3, 2.377)	1.16 (3, 3.371)	intratracheal	0.125 mg	1	14	0.5	1.76	+	Hashimoto <i>et al.</i> (2007)
	0.82 (3, 3.528)	2.11 (3, 1.754)	inhalation	3 mg/m ³	168	3	1.29	2.57	+	Hashimoto <i>et al.</i> (2007)
	0.59 (4, 1.95)	1.9 (5, 3.039)	inhalation	3 mg/m ³	84	3	1.31	3.22	+	Hashimoto <i>et al.</i> (2007)
	0.59 (4, 1.95)	1.84 (4, 1.906)	inhalation	1 mg/m ³	84	3	1.25	3.12	+	Hashimoto <i>et al.</i> (2007)
	0.61 (4, 3.406)	1.06 (5, 6.611)	inhalation	3 mg/m ³	28	3	0.45	1.74	+	Hashimoto <i>et al.</i> (2007)
	3.77 (6, 2.464)	2.54 (6, 2.574)	diet	363	21	0	–1.23	0.67	–	Muller <i>et al.</i> (2004)
	3.77 (6, 2.464)	3.39 (6, 1.542)	diet	153	21	0	–0.38	0.9	–	Muller <i>et al.</i> (2004)

Table C.2 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	3.77 (6, 2.464)	2.67 (6, 1.853)	diet	36	21	0	-1.1	0.71	-	Muller <i>et al.</i> (2004)
	3.77 (6, 2.464)	2.28 (6, 2.094)	diet	15	21	0	-1.49	0.6	-	Muller <i>et al.</i> (2004)
	3.77 (6, 2.464)	2.53 (6, 2.69)	diet	4	21	0	-1.24	0.67	-	Muller <i>et al.</i> (2004)
	0.66 (3, 2.377)	1.97 (3, 2.411)	intratracheal	0.5 mg	1	14	1.31	2.98	+	Hashimoto <i>et al.</i> (2007)
	3.77 (6, 2.464)	4.67 (6, 1.739)	diet	1 484	21	0	0.9	1.24	-	Muller <i>et al.</i> (2004)
Diethylnitrosamine (DEN)	0.19 (1, 1.6)	0.183 (2, 4.4)	ip	80	1	28	-0.007	0.96	-	unpublished
	0.62 (3, 7.7)	3.4 (5, 5.3)	ip	80	1	28	2.78	5.48	+	unpublished
	11.4 (3, 0.962)	54.3 (4, 0.847)	ip	45	5	298	42.9	4.76	+	Mirsalis <i>et al.</i> (2005)
	14.2 (4, 0.717)	70.6 (2, 0.617)	ip	45	5	511	56.4	4.97	+	Mirsalis <i>et al.</i> (2005)
Dimethylarsinic acid	5.7 (5, 3)	7.6 (5, 2.5)	ip	53	5	14	1.9	1.33	-	Noda <i>et al.</i> (2002)
	6.8 (5, 1.7)	7.8 (5, 8)	ip	53	5	14	1	1.15	-	Noda <i>et al.</i> (2002)
Dimethylnitrosamine (DMN)	6.3 (4, -)	5.6 (4, -)	ip	5	1	28	-0.7	0.89	-	Souliotis <i>et al.</i> (1998)
	5.4 (4, -)	6.4 (4, -)	ip	10	10	28	1	1.19	-	Souliotis <i>et al.</i> (1998)
	5.4 (4, -)	5.8 (4, -)	ip	10	10	14	0.4	1.07	-	Souliotis <i>et al.</i> (1998)
	5.4 (4, -)	5.6 (4, -)	ip	10	1	28	0.2	1.04	-	Souliotis <i>et al.</i> (1998)
	5 (2, -)	11.5 (2, -)	ip	4	4	14	6.5	2.3	+	Suzuki <i>et al.</i> (1998)
	6.3 (4, -)	7.1 (4, -)	ip	5	1	49	0.8	1.13	-	Souliotis <i>et al.</i> (1998)
	6.3 (4, -)	5.6 (4, -)	ip	5	1	14	-0.7	0.89	-	Souliotis <i>et al.</i> (1998)
	6.3 (4, -)	6.1 (4, -)	ip	5	1	7	-0.2	0.97	-	Souliotis <i>et al.</i> (1998)
	1.3 (3, 1.4)	2.9 (3, 1.5)	ip	5	5	7	1.6	2.23	+	Suzuki <i>et al.</i> (1996b)

Table C.2 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	5.4 (4, -)	6.1 (4, -)	ip	10	1	14	0.7	1.13	-	Souliotis <i>et al.</i> (1998)
	7 (2, 1.1)	9 (2, 0.8)	diet	31.5	105	0	2	1.29	-	Shephard, Gunz and Schlatter (1995)
Dipropylnitrosamine (DPN)	5.9 (8, 4.3)	22 (4, 2.4)	ip	250	1	14	16.1	3.73	+	Itoh <i>et al.</i> (1999)
	5.9 (8, 4.3)	22.2 (4, 1.5)	ip	250	1	28	16.3	3.76	+	Itoh <i>et al.</i> (1999)
	5.9 (8, 4.3)	10.8 (4, 2.2)	ip	250	1	7	4.9	1.83	+	Itoh <i>et al.</i> (1999)
Ethylene oxide	6.2 (4, 1.8)	9.1 (4, 1.3)	inhalation	2 500	28	42	2.9	1.47	+	Sisk <i>et al.</i> (1997)
Gamma rays	0.423 (6, 8.274)	0.206 (6, 8.252)	irradiation	0.68 Gy	31	0	-0.21 7	0.49	-	Ikeda <i>et al.</i> (2007)
	0.423 (6, 8.274)	0.273 (6, 9.89)	irradiation	1.02 Gy	31	0	-0.15	0.65	-	Ikeda <i>et al.</i> (2007)
	0.411 (6, 18.25)	0.506 (6, 11.86)	irradiation	0.34 Gy	31	0	0.095	1.23	-	Ikeda <i>et al.</i> (2007)
	0.423 (6, 8.274)	0.469 (6, 6.823)	irradiation	0.34 Gy	31	0	0.046	1.11	-	Ikeda <i>et al.</i> (2007)
	0.411 (6, 18.25)	0.409 (6, 14.67)	irradiation	0.68 Gy	31	0	-0.00 2	1	-	Ikeda <i>et al.</i> (2007)
Hexavalent chromium	3.4 (3, 0.319)	14.6 (3, 0.316)	intratracheal	6.75	1	28	11.2	4.29	+	Cheng <i>et al.</i> (2000)
	2.6 (4, 0.5)	12.5 (4, 0.4)	intratracheal	6.8	1	28	9.9	4.81	+	Cheng, Liu and Dixon (1998)
	2.6 (4, 0.5)	7.7 (4, 0.4)	intratracheal	3.4	1	28	5.1	2.96	+	Cheng, Liu and Dixon (1998)
	2.6 (4, 0.5)	4.1 (4, 0.5)	intratracheal	1.7	1	28	1.5	1.58	-	Cheng, Liu and Dixon (1998)
	3.4 (3, 0.319)	4.6 (3, 0.263)	intratracheal	6.75	1	7	1.2	1.35	-	Cheng <i>et al.</i> (2000)
	3.4 (3, 0.319)	8.8 (3, 0.453)	intratracheal	6.75	1	14	5.4	2.59	+	Cheng <i>et al.</i> (2000)

Table C.2 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
Hydrazine sulphate	2.6 (4, 0.492)	12.45 (4, 0.361)	intratracheal	6.75	1	28	9.85	4.79	+	Cheng <i>et al.</i> (2000)
	13.4 (5, 2.1)	13.4 (4, 2)	gavage	270	1	56	0	1	-	Douglas, Gingerich and Soper (1995)
	10.3 (5, 2.8)	15 (5, 2.3)	gavage	270	1	14	4.7	1.46	-	Douglas, Gingerich and Soper (1995)
	10.3 (5, 2.8)	14 (5, 2.2)	gavage	350	1	14	3.7	1.36	-	Douglas, Gingerich and Soper (1995)
	13.4 (5, 2.1)	14.6 (4, 1.9)	gavage	135	1	56	1.2	1.09	-	Douglas, Gingerich and Soper (1995)
	13.4 (5, 2.1)	17.3 (5, 2.6)	gavage	350	1	56	3.9	1.29	-	Douglas, Gingerich and Soper (1995)
	13.4 (5, 2.1)	11.9 (4, 3.1)	gavage	400	1	56	-1.5	0.89	-	Douglas, Gingerich and Soper (1995)
	10.3 (5, 2.8)	9.8 (4, 1.7)	gavage	400	1	14	-0.5	0.95	-	Douglas, Gingerich and Soper (1995)
	10.3 (5, 2.8)	11.3 (5, 1.9)	gavage	135	1	14	1	1.1	-	Douglas, Gingerich and Soper (1995)
<i>N</i> -Ethyl- <i>N</i> -nitrosourea (ENU)	0.64 (-, -)	5.5 (-, -)	ip	100	1	18	4.86	8.59	+	Miyazaki <i>et al.</i> (2005)
	10.72 (2, 0.4)	61.4 (8, 0.9)	ip	240	8	29	50.68	5.73	+	unpublished
	5.8 (5, 1.1)	22.8 (5, 1.2)	ip	100	1	30	17	3.93	+	Zimmer <i>et al.</i> (1999)
	4.4 (5, 0.6)	16 (5, 0.5)	ip	250	1	14	11.6	3.64	+	Recio <i>et al.</i> (1992)

Table C.2 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	8.2 (3, 0.6)	18 (3, 0.6)	ip	150	1	14	9.8	2.2	+	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	6.6 (4, 2.4)	7.4 (4, 3.5)	ip	150	1	3	0.8	1.12	-	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	3.4 (5, 1)	19.2 (5, 1)	ip	100	1	30	15.8	5.65	+	Zimmer <i>et al.</i> (1999)
Nickel subsulphide	7.4 (4, 1.4)	8.2 (4, 1.4)	inhalation	6	2	14	0.8	1.11	-	Mayer <i>et al.</i> (1998)
	3.7 (7, 2.6)	4.8 (6, 2.5)	inhalation	10	1	14	1.1	1.3	-	Mayer <i>et al.</i> (1998)
<i>N</i> -Methyl- <i>N</i> -nitrosourea (MNU)	0.14 (3, 0.5)	3.2 (3, 0.3)	ip	500	5	12	3.06	22.86	+	Provost <i>et al.</i> (1993)
	0.14 (3, 0.5)	3.2 (3, 0.3)	ip	500	5	6	3.06	22.86	+	Provost <i>et al.</i> (1993)
	0.14 (3, 0.5)	1.7 (2, 0.3)	ip	500	5	3	1.56	12.14	+	Provost <i>et al.</i> (1993)
	7 (2, 1.1)	9 (2, 0.7)	diet	241.5	105	0	2	1.29	-	Shephard, Gunz and Schlatter (1995)
	0.14 (3, 0.5)	2.5 (3, 0.3)	ip	500	5	1	2.36	17.86	+	Provost <i>et al.</i> (1993)
<i>N</i> -Nitrosornicotine (NNN)	3.3 (6, -)	8.9 (5, -)	drinking water	615	5	14	5.6	2.7	+	von Pressentin, Chen and Guttenplan (2001)
<i>o</i> -Aminoazotoluene	8.2 (5, 1)	4.7 (5, 1.1)	ip	300	1	28	-3.5	0.57	-	Ohsawa <i>et al.</i> (2000)
	8.2 (5, 1)	10.1 (5, 0.2)	ip	600	1	28	1.9	1.23	-	Ohsawa <i>et al.</i> (2000)
Procarbazine	3.7 (4, 2.5)	3.5 (4, 2)	ip	50	1	28	-0.2	0.95	-	Suzuki <i>et al.</i> (1999b)

Table C.2 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
hydrochloride	4.5 (2, 1.7)	34.9 (3, 2.4)	ip	750	5	14	30.4	7.76	+	Suzuki <i>et al.</i> (1999b)
	4.5 (2, 1.7)	26.9 (2, 1)	ip	750	5	28	22.4	5.98	+	Suzuki <i>et al.</i> (1999b)
Trichloroethylene (TCE)	10.7 (8, 2.2)	7.1 (8, 1.9)	inhalation	71 250	12	60	-3.6	0.66	-	Douglas <i>et al.</i> (1999)
	9.1 (10, 2.8)	7.1 (9, 2.5)	inhalation	26 150	12	60	-2	0.78	-	Douglas <i>et al.</i> (1999)
	9.1 (10, 2.8)	6 (5, 1.6)	inhalation	71 250	12	60	-3.1	0.66	-	Douglas <i>et al.</i> (1999)
	10.7 (8, 2.2)	8.8 (9, 2.4)	inhalation	26 150	12	60	-1.9	0.82	-	Douglas <i>et al.</i> (1999)
	10.7 (8, 2.2)	10.4 (9, 2.5)	inhalation	4 600	12	60	-0.3	0.97	-	Douglas <i>et al.</i> (1999)
	9.1 (10, 2.8)	6.3 (10, 3.1)	inhalation	4 600	12	60	-2.8	0.69	-	Douglas <i>et al.</i> (1999)
Urethane	5.5 (7, 1.3)	9.2 (7, 1.5)	gavage	1 400	28	28	3.7	1.67	-	Chang <i>et al.</i> (2003)
	2.9 (12, -)	3 (11, -)	ip	60	1	28	0.1	1.03	-	Hernandez and Forkert (2007a)
	2.9 (12, -)	2.3 (5, -)	ip	250	1	28	-0.6	0.79	-	Hernandez and Forkert (2007a)
	2.9 (12, -)	9.2 (7, -)	ip	1 000	1	28	6.3	3.17	+	Hernandez and Forkert (2007a)
	11.4 (3, 0.962)	144.3 (2, 0.52)	drinking water	59 660	190	0	132.9	12.66	+	Mirsalis <i>et al.</i> (2005)
	5.7 (7, 1.7)	12 (7, 1.4)	gavage	1 400	28	28	6.3	2.1	+	Chang <i>et al.</i> (2003)
	7 (2, 1.1)	52 (2, 0.6)	diet	13 650	105	0	45	7.43	+	Shephard, Gunz and Schlatter (1995)
	6.8 (5, 2.7)	14.8 (3, 1.3)	ip	900	1	16	8	2.18	+	Williams <i>et al.</i> (1998)
5.1 (6, 2.5)	10.6 (7, 3.3)	ip	900	1	14	5.5	2.08	+	Williams <i>et al.</i> (1998)	

Table C.2 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
Vinyl carbamate	2.9 (12, -)	4.3 (6, -)	ip	500	1	28	1.4	1.48	+	Hernandez and Forkert (2007a)
	2 (5, -)	4.5 (6, -)	ip	30	1	28	2.5	2.25	-	Hernandez and Forkert (2007a)
	2 (5, -)	9.4 (3, -)	ip	75	1	28	7.4	4.7	+	Hernandez and Forkert (2007a)
	2 (5, -)	9.1 (9, -)	ip	60	1	28	7.1	4.55	+	Hernandez and Forkert (2007a)
	2 (5, -)	7.1 (6, -)	ip	45	1	28	5.1	3.55	+	Hernandez and Forkert (2007a)
	2 (5, -)	3.2 (6, -)	ip	15	1	28	1.2	1.6	-	Hernandez and Forkert (2007a)
	4.1 (7, -)	16 (8, -)	ip	60	1	28	11.9	3.9	+	Hernandez and Forkert (2007a)
	5.3 (8, -)	15.6 (9, -)	ip	60	1	21	10.3	2.94	+	Hernandez and Forkert (2007a)
	1.9 (4, -)	9.4 (4, -)	ip	60	1	14	7.5	4.95	-	Hernandez and Forkert (2007a)
	2.3 (6, -)	11.4 (6, -)	ip	60	1	28	9.1	4.96	+	Hernandez and Forkert (2007b)
X-rays	1 (4, -)	3.5 (6, -)	ip	60	1	7	2.5	3.5	-	Hernandez and Forkert (2007a)
	9.8 (4, 0.8)	21.9 (3, 1)	whole-body irradiation	2.5 Gy	5	21	12.1	2.23	+	Gossen <i>et al.</i> (1995)

Table C.2 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	9.8 (4, 0.8)	38.7 (3, 1.5)	whole-body irradiation	2.5 Gy	5	10	28.9	3.95	+	Gossen <i>et al.</i> (1995)
	9.8 (4, 0.8)	43.2 (3, 1.2)	whole-body irradiation	2.5 Gy	5	3	33.4	4.41	+	Gossen <i>et al.</i> (1995)
	6.6 (3, –)	15.1 (3, –)	whole-body irradiation	4 Gy	1	60	8.5	2.29	+	Martus <i>et al.</i> (1999)

+, positive; –, negative; i.g., intragastric; IMF, induced mutant frequency; ip, intraperitoneal; MF, mutant frequency

^a MF and IMF are expressed $\times 10^{-5}$. Numbers in parentheses indicate number of animals per group and number of plaques or plasmids $\times 10^6$ per group, respectively.

^b Unless otherwise noted.

^c “Unpublished” refers to data provided by members of the IWGT working group.

Table C.3. Summary of TGR assays performed in haematopoietic (bone marrow, lymphocytes and T-cells) tissues for known haematopoietic carcinogens

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
1,3-Butadiene	3.8 (3, 1.6)	17.5 (3, 1.6)	inhalation	9 750	28	14	13.7	4.61	+	Recio <i>et al.</i> (1993)
	3.8 (3, 2.5)	7.2 (3, 1.5)	inhalation	960	28	14	3.4	1.89	+	Recio and Goldsworthy (1995)
	2.1 (4, 0.8)	12.6 (5, 0.8)	inhalation	2 400	5	14	10.5	6	+	Recio <i>et al.</i> (1996)
	3.8 (3, 1.6)	14.6 (5, 1.3)	inhalation	19 500	28	14	10.8	3.84	+	Recio <i>et al.</i> (1993)
	3.8 (3, 1.6)	7.2 (3, 1.5)	inhalation	975	28	14	3.4	1.89	+	Recio <i>et al.</i> (1993)
	3 (5, 0.1)	1.9 (5, 0.1)	inhalation	2 400	5	14	-1.1	0.63	-	Recio <i>et al.</i> (1993)
	3.8 (3, 2.5)	13.4 (3, 1.6)	inhalation	19 200	20	14	9.6	3.53	+	Sisk <i>et al.</i> (1994)
	3.8 (3, 2.5)	15.3 (3, 2.2)	inhalation	9 600	20	14	11.5	4.03	+	Sisk <i>et al.</i> (1994)
	3.8 (3, 2.5)	7.2 (3, 1.5)	inhalation	960	20	14	3.4	1.89	+	Sisk <i>et al.</i> (1994)
	3.8 (3, 2.5)	13.4 (3, 1.6)	inhalation	19 200	28	14	9.6	3.53	+	Recio and Goldsworthy (1995)
	3.8 (3, 2.5)	15.3 (3, 2.2)	inhalation	9 600	28	14	11.5	4.03	+	Recio and Goldsworthy (1995)
1,8-Dinitropyrene	3 (5, 0.1)	1.9 (5, 0.1)	inhalation	2 400	5	14	-1.1	0.63	-	Recio <i>et al.</i> (1992)
	4.06 (4, 1.1)	3.42 (5, 1.9)	ip	0.3	56	29	-0.64	0.84	-	unpublished
	4.06 (4, 1.1)	6.94 (6, 2.1)	ip	0.9	56	29	2.88	1.71	-	unpublished
	4.06 (4, 1.1)	7.59 (6, 2.1)	ip	2.8	56	29	3.53	1.87	+	unpublished
2-Amino-1-methyl-6-phenylimidazo(4,5-	8.49 (8, 3.3)	8.05 (10, 3.3)	ip	5	8	29	-0.44	0.95	-	unpublished
	0.2 (3, -)	0.5 (3, -)	diet	4 368	91	14	0.3	2.5	-	Masumura <i>et al.</i> (1999a)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
b)pyridine (PhIP)	0.3 (3, -)	1 (3, -)	diet	4 368	91	14	0.7	3.33	-	Masumura <i>et al.</i> (1999a)
Azathioprine	7.3 (10, 6.4)	15.2 (3, 4.6)	gavage	250	5	25	7.9	2.08	+	Smith <i>et al.</i> (1999)
	7.3 (10, 6.4)	14.8 (5, 4.6)	gavage	500	5	25	7.5	2.03	+	Smith <i>et al.</i> (1999)
	7.3 (10, 6.4)	8 (2, 3)	gavage	50	5	25	0.7	1.1	-	Smith <i>et al.</i> (1999)
Benzene	2.2 (4, 1.6)	3.7 (4, 1.4)	gavage	2 000	5	14	1.5	1.68	-	Provost <i>et al.</i> (1996)
	2.2 (4, 1.6)	2.6 (3, 1.1)	gavage	3 750	5	14	0.4	1.18	-	Provost <i>et al.</i> (1996)
	2.2 (4, 1.6)	3.7 (4, 1.2)	gavage	1 000	5	14	1.5	1.68	+	Provost <i>et al.</i> (1996)
Chlorambucil	3.2 (3, 0.2)	5.7 (2, 0.1)	ip	10	1	14	2.5	1.78	-	Hoorn <i>et al.</i> (1993)
	2.6 (2, 0.7)	5.5 (2, 0.2)	ip	10	1	7	2.9	2.12	+	Myhr (1991)
	3.2 (3, 0.2)	6.8 (2, 0.1)	ip	25	1	10	3.6	2.13	+	Hoorn <i>et al.</i> (1993)

Table C.3 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
Cyclophosphamide	3.2 (3, 0.2)	5.8 (2, 0.2)	ip	25	1	7	2.6	1.81	-	Hoorn <i>et al.</i> (1993)
	3.2 (3, 0.2)	3.5 (2, 0.2)	ip	10	1	21	0.3	1.09	-	Hoorn <i>et al.</i> (1993)
	3.2 (3, 0.2)	5.6 (2, 0.1)	ip	10	1	10	2.4	1.75	-	Hoorn <i>et al.</i> (1993)
	3.2 (3, 0.2)	5.5 (2, 0.2)	ip	10	1	7	2.3	1.72	-	Hoorn <i>et al.</i> (1993)
	3.2 (3, 0.2)	10.6 (2, 0.1)	ip	10	1	3	7.4	3.31	+	Hoorn <i>et al.</i> (1993)
	7.3 (10, 6.4)	15.5 (3, 3.4)	ip	75	5	25	8.2	2.12	+	Smith <i>et al.</i> (1999)
	3.2 (3, 0.2)	7.1 (2, 0.1)	ip	25	1	3	3.9	2.22	+	Hoorn <i>et al.</i> (1993)
	2.5 (4, 1.54)	2.74 (3, 2)	ip	500	5	3	0.24	1.1	-	unpublished
	2.2 (5, 0.5)	3.3 (5, 0.5)	ip	100	1	42	1.1	1.5	-	Gorelick <i>et al.</i> (1999)

Table C.3 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
Diethylnitrosamine (DEN)	2.5 (4, 1.54)	10.1 (4, 2.7)	ip	500	5	21	7.6	4.04	+	unpublished
	2.5 (4, 1.54)	5.23 (4, 3)	ip	500	5	7	2.73	2.09	+	unpublished
	2.6 (2, 0.7)	8.2 (2, 0.1)	ip	500	5	7	5.6	3.15	+	Myhr (1991)
	2.2 (5, 0.5)	3.4 (5, 0.6)	ip	25	1	42	1.2	1.55	-	Gorelick <i>et al.</i> (1999)
	1.5 (2, 0.2)	1.9 (2, 0.2)	ip	500	5	10	0.4	1.27	-	Hoorn <i>et al.</i> (1993)
	1.5 (2, 0.2)	9.5 (2, 0.1)	ip	500	5	3	8	6.33	+	Hoorn <i>et al.</i> (1993)
	1.5 (2, 0.2)	8.2 (2, 0.1)	ip	500	5	7	6.7	5.47	+	Hoorn <i>et al.</i> (1993)
	3.9 (5, 0.39)	2.6 (6, 0.39)	ip	175	5	5	-1.3	0.67	-	unpublished
	4.1 (8, 1.2)	4.2 (4, 1.3)	ip	66	1	1	0.1	1.02	-	Mientjes <i>et al.</i> (1998)
	4.1 (8, 1.2)	3.7 (2, 0.9)	ip	66	1	3	-0.4	0.9	-	Mientjes <i>et al.</i> (1998)
	4.1 (8, 1.2)	4.4 (4, 0.1)	ip	66	1	14	0.3	1.07	-	Mientjes <i>et al.</i> (1998)
	3.7 (2, 0.3)	3.4 (1, 0.3)	ip	100	1	7	-0.3	0.92	-	Suzuki, Hayashi and Sofuni (1994)
	0.1 (4, 4.4)	0.13 (5, 8.2)	ip	80	1	3	0.03	1.3	-	unpublished
	3.8 (8, 0.71)	4.7 (6, 0.42)	ip	175	5	15	0.9	1.24	-	unpublished
	3.8 (8, 0.71)	5.3 (6, 0.49)	ip	175	5	25	1.5	1.39	-	unpublished
	3.8 (8, 0.71)	5 (6, 0.38)	ip	175	5	35	1.2	1.32	-	unpublished
3.6 (5, 0.32)	3.3 (7, 0.5)	ip	175	5	55	-0.3	0.92	-	unpublished	
0.17 (5, 3.4)	0.115 (5, 7.4)	ip	80	1	3	-0.05	0.68	-	unpublished	
Ethylene oxide	4.1 (8, 1.2)	4.4 (4, 0.6)	ip	66	1	0	0.3	1.07	-	Mientjes <i>et al.</i> (1998)
	6.6 (6, 1)	8.2 (6, 1)	inhalation	180 mg/m ³	168	3	1.6	1.24	-	Recio <i>et al.</i> (2004)

Table C.3 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	6.9 (6, 1)	25.3 (6, 1)	inhalation	360 mg/m ³	336	3	18.4	3.67	+	Recio <i>et al.</i> (2004)
	2.5 (4, 1.1)	4.7 (4, 1)	inhalation	2 500	28	42	2.2	1.88	-	Sisk <i>et al.</i> (1997)
	3 (4, 1.2)	4.4 (4, 1.2)	inhalation	2 500	28	14	1.4	1.47	-	Sisk <i>et al.</i> (1997)
	7.3 (6, 1)	14.1 (6, 1)	inhalation	180 mg/m ³	336	3	6.8	1.93	+	Recio <i>et al.</i> (2004)
	7.3 (6, 1)	9.3 (6, 1)	inhalation	90 mg/m ³	336	3	2	1.27	-	Recio <i>et al.</i> (2004)
	6.6 (6, 1)	10.5 (5, 1)	inhalation	360 mg/m ³	168	3	3.9	1.59	-	Recio <i>et al.</i> (2004)
	6.6 (6, 1)	7.2 (5, 1)	inhalation	90 mg/m ³	168	3	0.6	1.09	-	Recio <i>et al.</i> (2004)
	6.6 (6, 1)	8.1 (4, 1)	inhalation	45 mg/m ³	168	3	1.5	1.23	-	Recio <i>et al.</i> (2004)
	5 (5, 1)	7.4 (5, 1)	inhalation	360 mg/m ³	84	3	2.4	1.48	-	Recio <i>et al.</i> (2004)
	5 (5, 1)	4.5 (5, 1)	inhalation	180 mg/m ³	84	3	-0.5	0.9	-	Recio <i>et al.</i> (2004)
	5 (5, 1)	8.7 (4, 1)	inhalation	90 mg/m ³	84	3	3.7	1.74	-	Recio <i>et al.</i> (2004)
	5 (5, 1)	4.1 (5, 1)	inhalation	45 mg/m ³	84	3	-0.9	0.82	-	Recio <i>et al.</i> (2004)
	7.3 (6, 1)	11.3 (6, 1)	inhalation	45 mg/m ³	336	3	4	1.55	-	Recio <i>et al.</i> (2004)
Gamma rays	3.8 (2, 0.3)	8.5 (2, 0.3)	whole-body irradiation	7.5 Gy	5	9	4.7	2.24	+	Takahashi, Kubota and Sato (1998)
	2.4 (43, -)	4.3 (5, -)	whole-body irradiation of male parents	4	1		1.9	1.79	+	Luke, Riches and Bryant (1997)

Table C.3 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	2.4 (43, -)	2.8 (12, -)	whole-body irradiation of male parents	2	1		0.4	1.17	-	Luke, Riches and Bryant (1997)
	2.4 (43, -)	2.2 (15, -)	whole-body irradiation of male parents	0.1	1		-0.2	0.92	-	Luke, Riches and Bryant (1997)
	2.4 (43, -)	2.9 (19, -)	whole-body irradiation of male parents	1	1		0.5	1.21	+	Luke, Riches and Bryant (1997)
Methylmethanesulphonate (MMS)	2.9 (6, 2.7)	4.4 (5, 1.2)	ip	100	1	14	1.5	1.52	+	Tinwell, Lefevre and Ashby (1998)
	2.9 (6, 2.6)	3.9 (6, 2)	ip	100	5	14	1	1.34	-	Tinwell, Lefevre and Ashby (1998)
<i>N</i> -Ethyl- <i>N</i> -nitrosourea (ENU)	2.5 (3, 0.2)	52.3 (1, 0)	ip	100	5	10	49.8	20.92	+	Hoorn <i>et al.</i> (1993)
	7.3 (9, 3.7)	285.6 (5, 3.3)	ip	250	5	35	278.3	39.12	+	Douglas <i>et al.</i> (1996)
	7.3 (9, 3.7)	279.8 (4, 1.9)	ip	250	5	45	272.5	38.33	+	Douglas <i>et al.</i> (1996)
	7.4 (5, 1.8)	224.1 (5, 2.2)	ip	250	5	55	216.7	30.28	+	Douglas <i>et al.</i> (1996)
	3.7 (2, 0.5)	25.6 (2, 0.5)	ip	100	1	7	21.9	6.92	+	Suzuki, Hayashi and Sofuni (1994)
	3.7 (3, 3.1)	22.8 (2, 0.5)	ip	100	1	7	19.1	6.16	+	Suzuki <i>et al.</i> (1993)
	2.5 (3, 0.2)	13 (2, 0)	ip	100	5	7	10.5	5.2	+	Hoorn <i>et al.</i> (1993)
	7.3 (9, 3.7)	254.4 (5, 0.4)	ip	250	5	10	247.1	34.85	+	Douglas <i>et al.</i> (1996)
	3 (5, 0.1)	73 (5, 0.1)	ip	250	1	14	70	24.33	+	Recio <i>et al.</i> (1992)
	2.5 (3, 0.2)	37.9 (2, 0)	ip	250	5	3	35.4	15.16	+	Hoorn <i>et al.</i> (1993)
	2.5 (3, 0.2)	62.4 (2, 0.1)	ip	250	5	7	59.9	24.96	+	Hoorn <i>et al.</i> (1993)

Table C.3 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	2.5 (3, 0.2)	101.6 (2, 0)	ip	250	5	10	99.1	40.64	+	Hoorn <i>et al.</i> (1993)
	2.5 (3, 0.2)	10.8 (2, 0)	ip	100	5	3	8.3	4.32	+	Hoorn <i>et al.</i> (1993)
	7.3 (9, 3.7)	267.9 (5, 1.1)	ip	250	5	15	260.6	36.7	+	Douglas <i>et al.</i> (1996)
	7.2 (4, 1.9)	233.4 (5, 0.8)	ip	250	5	5	226.2	32.42	+	Douglas <i>et al.</i> (1996)
	4.1 (3, 1)	78 (4, 1.6)	ip	150	1	14	73.9	19.02	+	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	9.6 (3, 3.2)	61.5 (4, 4.2)	ip	150	1	3	51.9	6.41	+	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	5.7 (2, 1.9)	22.2 (3, 3.9)	ip	150	1	7	16.5	3.89	+	Nohmi <i>et al.</i> (1996)
	2.9 (3, 1)	182 (2, 0.2)	ip	200	2	7	179.1	62.76	+	Itoh and Shimada (1997)
	3.7 (3, 3.2)	34.2 (2, 0.4)	ip	200	1	7	30.5	9.24	+	Suzuki <i>et al.</i> (1997a)
	3.7 (3, 3.2)	22.3 (2, 0.5)	ip	100	1	7	18.6	6.03	+	Suzuki <i>et al.</i> (1997a)
	3.7 (3, 3.2)	13.3 (2, 1)	ip	50	1	7	9.6	3.59	+	Suzuki <i>et al.</i> (1997a)
	3.8 (2, 0.3)	58 (2, 0.2)	ip	250	5	9	54.2	15.26	+	Takahashi, Kubota and Sato (1998)
	2.6 (5, 3)	135 (5, 2.7)	ip	100	1	10	132.4	51.92	+	Itoh, Miura and Shimada (1998)
	2.5 (3, 0.2)	6 (2, 0.3)	ip	100	1	3	3.5	2.4	+	Hoorn <i>et al.</i> (1993)

Table C.3 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	7.3 (9, 3.7)	264 (5, 3.4)	ip	250	5	25	256.7	36.16	+	Douglas <i>et al.</i> (1996)
	6 (6, 4.057)	80.9 (2, 1.372)	ip	80	1	16	74.9	13.48	+	Yauk <i>et al.</i> (2005)
	3.4 (6, 1.903)	19 (4, 1.333)	ip	120	1	120	15.6	5.59	+	Wang <i>et al.</i> (2004)
	4.4 (4, 2.964)	88.8 (4, 2.004)	ip	80	1	4	84.4	20.18	+	Yauk <i>et al.</i> (2005)
	4.4 (4, 2.964)	90 (4, 2.54)	ip	80	1	3	85.6	20.45	+	Yauk <i>et al.</i> (2005)
	4.4 (4, 2.964)	77.7 (4, 2.383)	ip	80	1	2	73.3	17.66	+	Yauk <i>et al.</i> (2005)
	4.4 (4, 2.964)	50.1 (4, 2.154)	ip	80	1	1	45.7	11.39	+	Yauk <i>et al.</i> (2005)
	4.4 (4, 2.964)	71.1 (4, 1.908)	ip	80	1	12	66.7	16.16	+	Yauk <i>et al.</i> (2005)
	6.4 (6, 3.609)	98.7 (4, 1.686)	ip	80	1	4	92.3	15.42	+	Yauk <i>et al.</i> (2005)
	6.4 (6, 3.609)	115.6 (4, 1.312)	ip	80	1	3	109.2	18.06	+	Yauk <i>et al.</i> (2005)
	6.4 (6, 3.609)	86.8 (5, 2.121)	ip	80	1	2	80.4	13.56	+	Yauk <i>et al.</i> (2005)
	6.4 (6, 3.609)	43 (4, 1.723)	ip	80	1	1	36.6	6.72	+	Yauk <i>et al.</i> (2005)
	4.5 (4, 2.934)	75 (3, 0.737)	ip	100	1	2	70.5	16.67	+	Yauk <i>et al.</i> (2005)

Table C.3 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	4.4 (4, 2.964)	80.8 (3, 1.552)	ip	80	1	5	76.4	18.36	+	Yauk <i>et al.</i> (2005)
	6 (6, 4.057)	74.8 (4, 2.653)	ip	80	1	20	68.8	12.47	+	Yauk <i>et al.</i> (2005)
	4.4 (4, 2.964)	82.9 (3, 1.053)	ip	80	1	8	78.5	18.84	+	Yauk <i>et al.</i> (2005)
	2.5 (3, 0.2)	61.5 (2, 0)	ip	100	1	7	59	24.6	+	Hoorn <i>et al.</i> (1993)
	6 (6, 4.057)	79.8 (4, 2.258)	ip	80	1	12	73.8	13.3	+	Yauk <i>et al.</i> (2005)
	3 (5, 0.1)	73 (5, 0.1)	ip	250	1	14	70	24.33	+	Recio <i>et al.</i> (1993)
	6 (6, 4.057)	82.5 (4, 2.125)	ip	80	1	8	76.5	13.75	+	Yauk <i>et al.</i> (2005)
	6 (6, 4.057)	84.3 (3, 1.989)	ip	80	1	5	78.3	14.05	+	Yauk <i>et al.</i> (2005)
	6 (6, 4.057)	118 (4, 2.834)	ip	80	1	3	112	19.67	+	Yauk <i>et al.</i> (2005)
	6 (6, 4.057)	46.1 (4, 3.067)	ip	80	1	1	40.1	7.68	+	Yauk <i>et al.</i> (2005)
	3.4 (6, 1.903)	25.3 (3, 0.673)	ip	120	1	1	21.9	7.44	+	Wang <i>et al.</i> (2004)
	3.4 (6, 1.903)	37.4 (4, 1.107)	ip	120	1	3	34	11	+	Wang <i>et al.</i> (2004)
	3.4 (6, 1.903)	27.8 (4, 1.238)	ip	120	1	7	24.4	8.18	+	Wang <i>et al.</i> (2004)
	3.4 (6, 1.903)	23.6 (3, 1.109)	ip	120	1	15	20.2	6.94	+	Wang <i>et al.</i> (2004)

Table C.3 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	3.4 (6, 1.903)	23.8 (3, 0.9)	ip	120	1	30	20.4	7	+	Wang <i>et al.</i> (2004)
	4.5 (4, 2.934)	55 (3, 1.785)	ip	50	1	2	50.5	12.22	+	Yauk <i>et al.</i> (2005)
	3 (2, -)	100 (2, -)	ip	250	5	10	97	33.33	+	Myhr (1991)
	2.5 (3, 0.2)	8.7 (2, 0.1)	ip	100	1	10	6.2	3.48	+	Hoorn <i>et al.</i> (1993)
	2.5 (3, 0.2)	8.6 (2, 0.1)	ip	250	1	3	6.1	3.44	+	Hoorn <i>et al.</i> (1993)
	2.5 (3, 0.2)	16.4 (3, 0.1)	ip	250	1	7	13.9	6.56	+	Hoorn <i>et al.</i> (1993)
	2.5 (3, 0.2)	29.3 (2, 0.2)	ip	250	1	10	26.8	11.72	+	Hoorn <i>et al.</i> (1993)
	3.8 (3, 1.6)	76.5 (5, -)	ip	250	1	14	72.7	20.13	+	Recio <i>et al.</i> (1993)
	4.5 (4, 2.934)	108.1 (2, 0.396)	ip	150	1	2	103.6	24.02	+	Yauk <i>et al.</i> (2005)
	2.6 (2, 0.7)	16.4 (2, 0.2)	ip	250	1	7	13.8	6.31	+	Myhr (1991)
	2.6 (2, 0.7)	62.4 (2, 0.1)	ip	250	5	7	59.8	24	+	Myhr (1991)
	3 (2, -)	10 (2, -)	ip	100	5	3	7	3.33	+	Myhr (1991)
	3 (2, -)	11.4 (2, -)	ip	100	5	7	8.4	3.8	+	Myhr (1991)
	3 (2, -)	50 (2, -)	ip	100	5	10	47	16.67	+	Myhr (1991)
	3 (2, -)	57.1 (2, -)	ip	250	5	7	54.1	19.03	+	Myhr (1991)
	3 (2, -)	5.7 (2, -)	ip	100	1	3	2.7	1.9	+	Myhr (1991)
	3 (2, -)	8.6 (2, -)	ip	100	1	10	5.6	2.87	+	Myhr (1991)
	3 (2, -)	7.1 (2, -)	ip	250	1	3	4.1	2.37	+	Myhr (1991)
	3 (2, -)	14.3 (2, -)	ip	250	1	7	11.3	4.77	+	Myhr (1991)
	3 (2, -)	27.1 (2, -)	ip	250	1	10	24.1	9.03	+	Myhr (1991)
	2.1 (4, 0.8)	71.4 (3, 0.6)	ip	250	1	14	69.3	34	+	Recio <i>et al.</i> (1996)

Table C.3 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c	
<i>N</i> -Methyl- <i>N</i> -nitrosourea (MNU)	4.1 (8, 1.2)	6.4 (4, 1)	ip	150	1	0	2.3	1.56	–	Mientjes <i>et al.</i> (1998)	
	4.1 (8, 1.2)	40 (2, 0.1)	ip	150	1	1	35.9	9.76	+	Mientjes <i>et al.</i> (1998)	
	4.1 (8, 1.2)	95.1 (4, 1)	ip	150	1	3	91	23.2	+	Mientjes <i>et al.</i> (1998)	
	4.1 (8, 1.2)	56.9 (4, 0.6)	ip	150	1	14	52.8	13.88	+	Mientjes <i>et al.</i> (1998)	
	8.49 (8, 3.5)	171.3 (10, 3.5)	ip	240	8	29	162.8	20.18	+	unpublished	
	3 (2, –)	34.3 (2, –)	ip	250	5	3	31.3	11.43	+	Myhr (1991)	
	1.3 (9, 4.5)	6.5 (6, 2.2)	ip	50	1	35	5.2	5	+	Shima, Swiger and Heddle (2000)	
	6.1 (8, 2.6)	20.1 (7, 2.4)	ip	50	1	35	14	3.3	+	Shima, Swiger and Heddle (2000)	
	<i>N</i> -Propyl- <i>N</i> -nitrosourea (PNU)	0.73 (5, 4)	4.96 (4, 3.9)	ip	250	1	14	4.23	6.79	+	unpublished
		0.22 (4, 6.7)	0.28 (5, 14.6)	ip	250	1	28	0.06	1.27	–	unpublished
0.11 (5, 16)		0.52 (5, 14.8)	ip	250	1	14	0.41	4.73	+	unpublished	
0.43 (5, 3.8)		4.03 (5, 5.1)	ip	250	1	28	3.6	9.37	+	unpublished	
0.35 (5, 6.3)		3.76 (4, 5.2)	ip	250	1	7	3.41	10.74	+	unpublished	
3.9 (8, 3)		19 (6, 3.4)	ip	250	1	28	15.1	4.87	+	Hara <i>et al.</i> (1999a)	
3.9 (8, 3)		31.4 (6, 5)	ip	250	1	14	27.5	8.05	+	Hara <i>et al.</i> (1999a)	
3.9 (8, 3)		45.4 (6, 3.3)	ip	250	1	7	41.5	11.64	+	Hara <i>et al.</i> (1999a)	
Procarbazine hydrochloride	0.11 (5, 16)	0.43 (5, 17.8)	ip	250	1	7	0.32	3.91	+	unpublished	
	3.8 (4, 1.5)	4.2 (5, 1.8)	ip	50	1	28	0.4	1.11	–	Suzuki <i>et al.</i> (1999b)	
	2.6 (2, 0.7)	77.2 (2, 0.1)	ip	1 000	5	7	74.6	29.69	+	Myhr (1991)	
	1.5 (2, 0.2)	51.5 (2, 0.1)	ip	1 000	5	10	50	34.33	+	Hoorn <i>et al.</i> (1993)	
	1.5 (2, 0.2)	77.2 (2, 0.1)	ip	1 000	5	7	75.7	51.47	+	Hoorn <i>et al.</i> (1993)	

Table C.3 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
Urethane	3.8 (4, 1.5)	29.3 (2, 1)	ip	750	5	28	25.5	7.71	+	Suzuki <i>et al.</i> (1999b)
	3.1 (7, 3.7)	3.7 (4, 2.1)	ip	50	1	14	0.6	1.19	-	Suzuki <i>et al.</i> (1999b)
	2.5 (3, 2.2)	4.3 (5, 2.2)	ip	50	1	7	1.8	1.72	-	Suzuki <i>et al.</i> (1999b)
	4.1 (3, 2.3)	20.3 (2, 0.6)	ip	200	10	10	16.2	4.95	+	Pletsa <i>et al.</i> (1997)
	4.1 (3, 2.3)	65 (3, 1.1)	ip	1 000	5	10	60.9	15.85	+	Pletsa <i>et al.</i> (1997)
	1.5 (2, 0.2)	136.7 (2, 0.1)	ip	1 000	5	3	135.2	91.13	+	Hoorn <i>et al.</i> (1993)
	5.65 (6, 1.38)	15.7 (7, 1.69)	gavage	5 600	56	3	10.05	2.78	+	Singer (2006)
	5.65 (6, 1.38)	11 (7, 1.98)	gavage	2 800	56	3	5.35	1.95	+	Singer (2006)
	5.65 (6, 1.38)	6.3 (6, 2.04)	gavage	700	56	3	0.65	1.12	-	Singer (2006)
	4.74 (6, 2.11)	10.5 (6, 2.02)	gavage	2 800	28	28	5.76	2.22	+	Singer (2006)
	4.74 (6, 2.11)	5.98 (7, 1.97)	gavage	700	28	28	1.24	1.26	-	Singer (2006)
	5.41 (6, 2.38)	8.95 (5, 1.87)	gavage	2 800	28	3	3.54	1.65	+	Singer (2006)
	5.41 (6, 2.38)	6.09 (5, 1.83)	gavage	700	28	3	0.68	1.13	-	Singer (2006)
4.37 (5, 2.06)	7.82 (5, 1.69)	gavage	700	7	28	3.45	1.79	+	Singer (2006)	
4.37 (5, 2.06)	5.09 (5, 1.81)	gavage	175	7	28	0.72	1.16	-	Singer (2006)	

Table C.3 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^c
	3.53 (5, 1.17)	3.44 (5, 1.98)	gavage	175	7	3	-9.00 E-02	0.97	-	Singer (2006)
	4.6 (6, 2.7)	8.1 (7, 2.8)	ip	900	1	14	3.5	1.76	+	Williams <i>et al.</i> (1998)
	3.53 (5, 1.17)	4.54 (6, 1.74)	gavage	700	7	3	1.01	1.29	-	Singer (2006)

+, positive; -, negative; IMF, induced mutant frequency; ip, intraperitoneal; MF, mutant frequency

^a MF and IMF are expressed $\times 10^{-5}$. Numbers in parentheses indicate number of animals per group and number of plaques or plasmids $\times 10^6$ per group, respectively.

^b Unless otherwise noted.

^c "Unpublished" refers to data provided by members of the IWGT working group.

Table C.4. Summary of TGR assays performed in kidney for known kidney carcinogens

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^b
Aflatoxin B1	6.5 (4, 1.6)	11.9 (4, 1.5)	gavage	32	4	21	5.4	1.83	+	Autrup, Jorgensen and Jensen (1996)
Aristolochic acid	8.1 (4, 2.8)	85.1 (4, 3)	i.g. injection	60	22	7	77	10.51	+	Kohara <i>et al.</i> (2002a)
	4.5 (4, 4.3)	46.7 (4, 3.6)	i.g. injection	60	22	7	42.2	10.38	+	Kohara <i>et al.</i> (2002a)
	2.9 (6, -)	7.8 (6, -)	gavage	6	84	1	4.9	2.69	+	Chen <i>et al.</i> (2006)
	2.9 (6, -)	24.2 (6, -)	gavage	60	84	1	21.3	8.34	+	Chen <i>et al.</i> (2006)
	2.9 (6, -)	131.9 (6, -)	gavage	600	84	1	129	45.48	+	Chen <i>et al.</i> (2006)
Bleomycin	4.3 (6, -)	15.8 (6, -)	ip	80	12	21	11.5	3.67	+	Guttenplan <i>et al.</i> (2004a)
Dimethylnitrosamine (DMN)	6.5 (2, -)	5 (2, -)	ip	4	4	14	-1.5	0.77	-	Suzuki <i>et al.</i> (1998)
	1.9 (3, 0.7)	4.6 (3, 0.7)	ip	5	5	7	2.7	2.42	+	Suzuki <i>et al.</i> (1996b)
Dipropylnitrosamine (DPN)	6.3 (8, 4.3)	4.8 (6, 3.5)	ip	250	1	7	-1.5	0.76	-	Itoh <i>et al.</i> (1999)
	6.3 (8, 4.3)	8.3 (6, 4.7)	ip	250	1	14	2	1.32	+	Itoh <i>et al.</i> (1999)
	6.3 (8, 4.3)	9 (6, 2.8)	ip	250	1	28	2.7	1.43	+	Itoh <i>et al.</i> (1999)
d-Limonene	1.78 (9, 2)	2.17 (10, 2.4)	diet	nd	10	14	0.39	1.22	-	Turner <i>et al.</i> (2001)
Ferric nitritotriacetate	5.6 (3, -)	13.7 (3, -)	ip	19	7	2	8.1	2.45	+	Jiang <i>et al.</i> (2006)
	5.6 (3, -)	7.9 (3, -)	ip	44	14	2	2.3	1.41	-	Jiang <i>et al.</i> (2006)
	5.6 (3, -)	6.2 (3, -)	ip	69	21	2	0.6	1.11	-	Jiang <i>et al.</i> (2006)
	7.5 (3, -)	13.5 (3, -)	ip	19	7	2	6	1.8	+	Jiang <i>et al.</i> (2006)
	7.5 (3, -)	9.1 (3, -)	ip	44	14	2	1.6	1.21	-	Jiang <i>et al.</i> (2006)
	7.5 (3, -)	9.6 (3, -)	ip	69	21	2	2.1	1.28	-	Jiang <i>et al.</i> (2006)
Hexachlorobutadiene	7.2 (8, 5.8)	10.5 (8, 7.1)	gavage	60	5	10	3.3	1.46	-	unpublished

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^b
	7.2 (8, 5.8)	9.4 (6, 5.5)	gavage	100	5	10	2.2	1.31	-	unpublished
	6.6 (7, 7.1)	8.4 (9, 7.2)	gavage	60	5	20	1.8	1.27	-	unpublished
	6.6 (7, 7.1)	7.9 (6, 4.4)	gavage	100	5	20	1.3	1.2	-	unpublished
	8 (7, 6.1)	8.8 (9, 6.2)	gavage	60	5	55	0.8	1.1	-	unpublished
	8 (7, 6.1)	8.2 (7, 5.3)	gavage	100	5	55	0.2	1.03	-	unpublished
	4.3 (8, 3.4)	11.7 (8, 3.9)	gavage	60	5	5	7.4	2.72	+	unpublished
	4.3 (8, 3.4)	11.7 (9, 3.8)	gavage	100	5	5	7.4	2.72	+	unpublished
	6.6 (9, 3.8)	11.6 (10, 3.5)	gavage	60	5	10	5	1.76	-	unpublished

Table C.4 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^b
	6.6 (9, 3.8)	12.1 (9, 3.5)	gavage	100	5	10	5.5	1.83	-	unpublished
	6.6 (10, 4.4)	11.4 (10, 4.1)	gavage	60	5	17	4.8	1.73	-	unpublished
	6.6 (10, 4.4)	7.9 (9, 3.4)	gavage	100	5	17	1.3	1.2	-	unpublished
<i>N</i> -Ethyl- <i>N</i> -nitrosourea (ENU)	6.3 (3, 0.5)	12.2 (4, 1.2)	ip	150	1	3	5.9	1.94	-	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	4.1 (3, 4)	9.6 (3, 3.7)	ip	150	1	14	5.5	2.34	+	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)

Table C.4 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^b
	2.8 (3, 1.1)	12.6 (4, 1.8)	ip	100	1	7	9.8	4.5	+	Lynch, Gooderham and Boobis (1996)
Nitrofurantoin	5.12 (5, 1.441)	10.54 (5, 0.902)	gavage	835	5	20	5.42	2.06	+	Quillardet <i>et al.</i> (2006)
<i>N</i> -Methyl- <i>N</i> -nitrosourea (MNU)	5 (2, 0.5)	5 (2, 0.2)	diet	241.5	105	0	0	1	-	Shephard, Gunz and Schlatter (1995)
Potassium bromate	0.93 (5, -)	0.79 (5, -)	drinking water	510	91	0	-0.14	0.85	-	Umemura <i>et al.</i> (2006)
	0.93 (5, -)	0.77 (5, -)	drinking water	1 056	91	0	-0.16	0.83	-	Umemura <i>et al.</i> (2006)
	0.93 (5, -)	1.3 (5, -)	drinking water	2 120	91	0	0.37	1.4	-	Umemura <i>et al.</i> (2006)
	0.93 (5, -)	1.6 (5, -)	drinking water	4 232	91	0	0.67	1.72	-	Umemura <i>et al.</i> (2006)
	0.83 (5, -)	0.54 (5, -)	drinking water	585	7	0	-0.29	0.65	-	Umemura <i>et al.</i> (2006)
	0.83 (5, -)	0.73 (5, -)	drinking water	2 258	35	0	-0.1	0.88	-	Umemura <i>et al.</i> (2006)
	0.83 (5, -)	0.76 (5, -)	drinking water	3 339	63	0	-0.07	0.92	-	Umemura <i>et al.</i> (2006)
	0.83 (5, -)	0.79 (5, -)	drinking water	4 232	91	0	-0.04	0.95	-	Umemura <i>et al.</i> (2006)
	0.27 (5, -)	0.17 (5, -)	drinking water	510	91	0	-0.1	0.63	-	Umemura <i>et al.</i> (2006)
	0.27 (5, -)	0.31 (5, -)	drinking water	1 056	91	0	0.04	1.15	-	Umemura <i>et al.</i> (2006)
	0.27 (5, -)	0.31 (5, -)	drinking water	2 120	91	0	0.04	1.15	-	Umemura <i>et al.</i> (2006)
	0.27 (5, -)	0.62 (5, -)	drinking water	4 232	91	0	0.35	2.3	+	Umemura <i>et al.</i> (2006)
	0.28 (5, -)	0.35 (5, -)	drinking water	585	7	0	0.07	1.25	-	Umemura <i>et al.</i> (2006)
	0.28 (5, -)	0.38 (5, -)	drinking water	2 258	35	0	0.1	1.36	-	Umemura <i>et al.</i> (2006)
	0.28 (5, -)	0.99 (5, -)	drinking water	3 339	63	0	0.71	3.54	+	Umemura <i>et al.</i> (2006)
	0.28 (5, -)	0.61 (5, -)	drinking water	4 232	91	0	0.33	2.18	+	Umemura <i>et al.</i> (2006)

Table C.4 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/k g bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference ^b
Streptozotocin	1.5 (3, 1.6)	3.1 (3, 2.1)	ip	75	1	14	1.6	2.07	–	Schmezer, Eckert and Liegibel (1994)
	1.5 (3, 1.6)	8.8 (3, 1.5)	ip	100	1	14	7.3	5.87	+	Schmezer, Eckert and Liegibel (1994)
Tris-(2,3-dibromopropyl)phosphate	2.4 (6, 0.5)	5.9 (5, 1.7)	diet	540	45	0	3.5	2.46	+	de Boer <i>et al.</i> (2000)
	2.4 (6, 0.5)	15.2 (4, 1.8)	diet	10 800	45	0	12.8	6.33	+	de Boer <i>et al.</i> (2000)
	2.6 (6, 0.3)	4.3 (5, 1.8)	diet	540	45	0	1.7	1.65	–	de Boer <i>et al.</i> (2000)
	2.6 (6, 0.3)	9.5 (4, 1.7)	diet	10 800	45	0	6.9	3.65	+	de Boer <i>et al.</i> (2000)
	1.8 (6, 0.3)	2.1 (5, 1.7)	diet	540	45	0	0.3	1.17	–	de Boer <i>et al.</i> (2000)
	1.8 (6, 0.3)	3.9 (4, 1.8)	diet	10 800	45	0	2.1	2.17	+	de Boer <i>et al.</i> (2000)
	2.8 (6, –)	3.4 (5, –)	gavage	300	2	14	0.6	1.21	–	de Boer <i>et al.</i> (1996)
	2.8 (6, –)	5.5 (5, –)	gavage	1 200	4	14	2.7	1.96	+	de Boer <i>et al.</i> (1996)
	2.8 (6, –)	4.9 (5, –)	gavage	2 400	4	14	2.1	1.75	–	de Boer <i>et al.</i> (1996)
	3.7 (6, 2.2)	3.7 (5, 1.6)	gavage	300	2	14	0	1	–	Provost <i>et al.</i> (1996)
3.7 (6, 2.2)	6 (5, 1.7)	gavage	1 200	4	14	2.3	1.62	+	Provost <i>et al.</i> (1996)	
3.7 (6, 2.2)	5.3 (5, 1.8)	gavage	2 400	4	14	1.6	1.43	+	Provost <i>et al.</i> (1996)	

+, positive; –, negative; i.g., intragastric; IMF, induced mutant frequency; ip, intraperitoneal; MF, mutant frequency; nd, no data

^a MF and IMF are expressed $\times 10^{-5}$. Numbers in parentheses indicate number of animals per group and number of plaques or plasmids $\times 10^6$ per group, respectively.

^b “Unpublished” refers to data provided by members of the IWGT working group.

Table C.5. Summary of TGR assays performed in stomach (glandular stomach, forestomach, stomach) for known stomach carcinogens

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
2-Amino-3,8-dimethylimidazo(4,5-f)quinoxaline (MeIQ)	3.3 (8, 0.5)	2.5 (8, 0.6)	diet	252	7	0	-0.8	0.76	-	Suzuki <i>et al.</i> (1996a)
	3.6 (24, 1.1)	3.2 (8, 0.5)	diet	1 008	28	0	-0.4	0.89	-	Suzuki <i>et al.</i> (1996a)
	3.8 (16, 0.6)	9.8 (16, 0.4)	diet	3 024	84	0	6	2.58	+	Suzuki <i>et al.</i> (1996a)
Aristolochic acid	4.5 (4, 2.6)	14.1 (4, 3.2)	i.g. injection	60	22	7	9.6	3.13	+	Kohara <i>et al.</i> (2002a)
	3.3 (4, 3.8)	112.9 (4, 1.9)	i.g. injection	60	22	7	109.6	34.21	+	Kohara <i>et al.</i> (2002a)
	4.1 (4, 6.6)	66.3 (4, 7.8)	i.g. injection	60	22	7	62.2	16.17	+	Kohara <i>et al.</i> (2002a)
	3.2 (4, 5)	5.5 (4, 4.9)	i.g. injection	60	22	7	2.3	1.72	-	Kohara <i>et al.</i> (2002a)
Benzo(a)pyrene	8.6 (2, 0.2)	328 (4, 0.2)	gavage	625	5	182	319.4	38.14	+	Hakura <i>et al.</i> (1999)
	7.9 (3, 0.8)	44.9 (4, 0.5)	gavage	625	5	182	37	5.68	+	Hakura <i>et al.</i> (1999)
	10 (1, 0)	147 (3, 0.9)	gavage	625	5	14	137	14.7	+	Hakura <i>et al.</i> (1998)
	6.1 (3, 1.6)	56 (2, 1.1)	gavage	625	5	14	49.9	9.18	+	Hakura <i>et al.</i> (1998)
	3.8 (5, 4.1)	13.4 (5, 3.1)	gavage	625	5	14	9.6	3.5	+	Yamada <i>et al.</i> (2002)
	3.9 (4, 1.5)	69.9 (5, 1.6)	gavage	625	5	14	66.1	17.9	+	Yamada <i>et al.</i> (2002)
	7.6 (5, 2.2)	50 (5, 1.6)	gavage	625	5	14	42.4	6.6	+	Yamada <i>et al.</i> (2002)
	8.5 (4, 1.3)	280.6 (5, 1)	gavage	625	5	14	272.1	33	+	Yamada <i>et al.</i> (2002)
beta-Propiolactone	3.9 (5, 1.3)	9.3 (5, 1.2)	gavage	25	1	3	5.4	2.38	+	Brault <i>et al.</i> (1999)
	3.7 (5, 1.4)	9.6 (5, 1.4)	gavage	25	1	14	5.9	2.59	+	Brault <i>et al.</i> (1999)
	3.9 (5, 1.3)	19.2 (5, 1.6)	gavage	150	1	3	15.3	4.92	+	Brault <i>et al.</i> (1999)
	3.9 (5, -)	32.9 (5, 1.1)	gavage	150	1	7	29	8.44	+	Brault <i>et al.</i> (1999)
	3.7 (5, 1.4)	41.4 (5, 1.6)	gavage	150	1	14	37.7	11.19	+	Brault <i>et al.</i> (1999)
	3.7 (5, 1.4)	38.2 (5, 1.5)	gavage	150	1	28	34.5	10.32	+	Brault <i>et al.</i> (1999)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
	6.7 (5, 1.3)	27.7 (5, 1.2)	gavage	150	1	50	21	4.13	+	Brault <i>et al.</i> (1999)
	3.6 (6, 2.1)	22.7 (4, 1.3)	gavage	150	1	7	19.1	6.31	+	Brault <i>et al.</i> (1996)
Methyl bromide	6.6 (2, 0.6)	4.6 (3, 0.8)	gavage	250	10	14	-2	0.7	-	Pletsa <i>et al.</i> (1999)
<i>N</i> -Methyl- <i>N'</i> -nitro- <i>N</i> -nitrosoguanidine (MNNG)	3.9 (5, 1.3)	9.4 (5, 1.3)	gavage	20	1	3	5.5	2.41	+	Brault <i>et al.</i> (1999)
	3.7 (5, 1.4)	13.2 (5, 1.2)	gavage	20	1	14	9.5	3.57	+	Brault <i>et al.</i> (1999)
	3.9 (5, 1.3)	31.1 (5, 1.6)	gavage	100	1	3	27.2	7.97	+	Brault <i>et al.</i> (1999)
	3.9 (5, 1.3)	50.6 (5, 1.2)	gavage	100	1	7	46.7	12.97	+	Brault <i>et al.</i> (1999)
	3.9 (5, 1.4)	51.9 (5, 1.4)	gavage	100	1	14	48	13.31	+	Brault <i>et al.</i> (1999)

Table C.5 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
	3.9 (5, 1.4)	70.8 (5, 1.7)	gavage	100	1	28	66.9	18.15	+	Brault <i>et al.</i> (1999)
	6.7 (5, 1.3)	52 (5, 1.4)	gavage	100	1	50	45.3	7.76	+	Brault <i>et al.</i> (1999)
	10 (2, 0.3)	27 (2, 0.3)	gavage	50	1	3	17	2.7	+	Brooks and Dean (1996)
	10 (2, 0.3)	75.2 (1, 0.1)	gavage	50	1	7	65.2	7.52	+	Brooks and Dean (1996)
	7.1 (2, 0.4)	44.1 (2, 0.4)	gavage	50	1	10	37	6.21	+	Brooks and Dean (1996)
	10 (2, 0.3)	37.7 (2, 0.2)	gavage	100	1	3	27.7	3.77	+	Brooks and Dean (1996)

Table C.5 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
<i>N</i> -Methyl- <i>N</i> -nitrosourea (MNU)	10 (2, 0.3)	41.8 (2, 0.7)	gavage	100	1	7	31.8	4.18	+	Brooks and Dean (1996)
	7.1 (2, 0.4)	92.3 (2, 0.2)	gavage	100	1	10	85.2	13	+	Brooks and Dean (1996)
	2.5 (1, 0.1)	3.8 (2, 0.2)	topical	500 µg	1	7	1.3	1.52	-	Brooks and Dean (1996)
	2.5 (1, 0.1)	5.4 (2, 0.1)	topical	500 µg	1	14	2.9	2.16	+	Brooks and Dean (1996)
	2.6 (2, 0.1)	6.85 (2, 0.2)	topical	500 µg	1	21	4.25	2.63	+	Brooks and Dean (1996)
	3.6 (6, 2.1)	33.4 (4, 1.3)	gavage	100	1	7	29.8	9.28	+	Brault <i>et al.</i> (1996)
	8 (2, 0.7)	10 (2, 0.5)	diet	241.5	105	0	2	1.25	-	Shephard, Gunz and Schlatter (1995)
	10 (2, 0.7)	13 (2, 1.2)	diet	241.5	105	0	3	1.3	-	Shephard, Gunz and Schlatter (1995)
	Tris-(2,3-dibromopropyl)phosphate	3.4 (6, -)	3.6 (5, -)	gavage	300	2	14	0.2	1.06	-
3.4 (6, -)		3.7 (5, -)	gavage	1 200	4	14	0.3	1.09	-	de Boer <i>et al.</i> (1996)
3.4 (6, -)		3.5 (5, -)	gavage	2 400	4	14	0.1	1.03	-	de Boer <i>et al.</i> (1996)
3.9 (6, 1.4)		4.5 (5, 1.2)	gavage	300	2	14	0.6	1.15	-	Provost <i>et al.</i> (1996)
3.9 (6, 1.4)		4.4 (5, 1.2)	gavage	1 200	4	14	0.5	1.13	-	Provost <i>et al.</i> (1996)
3.9 (6, 1.4)		4.1 (5, 1.3)	gavage	2 400	4	14	0.2	1.05	-	Provost <i>et al.</i> (1996)

+, positive; -, negative; i.g., intragastric; IMF, induced mutant frequency; MF, mutant frequency

^a MF and IMF are expressed $\times 10^{-5}$. Numbers in parentheses indicate number of animals per group and number of plaques or plasmids $\times 10^6$ per group, respectively. ^b Unless otherwise noted.

Table C.6. Summary of TGR assays performed in bladder for known bladder carcinogens

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
2-Acetylaminofluorene	6.4 (8, -)	132.2 (8, -)	diet	3 024	84	0	125.8	20.66	+	van Steeg (2001)
	8.7 (8, -)	133.5 (8, -)	diet	3 024	84	0	124.8	15.34	+	van Steeg (2001)
	8.7 (8, -)	214.2 (8, -)	diet	3 024	84	0	205.5	24.62	+	van Steeg (2001)
4-Aminobiphenyl	4.1 (4, 0.9)	27.5 (2, 0.2)	gavage	75	1	14	23.4	6.71	+	Fletcher, Tinwell and Ashby (1998)
	4.1 (4, 0.9)	54.9 (4, 0.5)	gavage	200	10	14	50.8	13.39	+	Fletcher, Tinwell and Ashby (1998)
	1.76 (-, 0.05)	7.2 (-, 0.05)	gavage	200	10	14	5.44	4.09	-	Turner <i>et al.</i> (2001)
Dimethylarsinic acid	2.4 (3, 0.8)	5 (3, 1.1)	ip	53	5	14	2.6	2.08	-	Noda <i>et al.</i> (2002)
<i>N</i> -Ethyl- <i>N</i> -nitrosourea (ENU)	6.7 (2, 1.5)	4.3 (3, 2)	ip	150	1	3	-2.4	0.64	-	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
	3.6 (1, 0.1)	40.8 (4, 1.2)	ip	150	1	14	37.2	11.33	+	Collaborative Study Group for the Transgenic Mouse Mutation Assay (1996)
<i>o</i> -Anisidine	2.7 (3, 1.8)	4.5 (3, 1.5)	gavage	750	1	7	1.8	1.67	-	Ashby <i>et al.</i> (1994)
	2.7 (3, 1.8)	4.4 (5, 2)	gavage	2 250	3	7	1.7	1.63	-	Ashby <i>et al.</i> (1994)
	2.3 (3, 2.2)	3.3 (3, 1.5)	gavage	750	1	14	1	1.43	-	Ashby <i>et al.</i> (1994)
	2.3 (3, 2.2)	5 (5, 3.6)	gavage	2 250	3	14	2.7	2.17	+	Ashby <i>et al.</i> (1994)
	3.8 (5, 1.8)	4.8 (6, 2.2)	gavage	2 250	3	14	1	1.26	-	Ashby <i>et al.</i> (1994)
	2.8 (4, 1.3)	5.8 (5, 2)	gavage	7 500	10	14	3	2.07	+	Ashby <i>et al.</i> (1994)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
<i>p</i> -Cresidine	14.2 (-, -)	327 (3, -)	diet	54 000	180	0	312.8	23.03	+	Jakubczak <i>et al.</i> (1996)
	14.2 (-, -)	490 (3, -)	diet	108 000	180	0	475.8	34.51	+	Jakubczak <i>et al.</i> (1996)
	19.8 (-, -)	436 (3, -)	diet	54 000	180	0	416.2	22.02	+	Jakubczak <i>et al.</i> (1996)
	19.8 (-, -)	74.5 (3, -)	diet	108 000	180	0	54.7	3.76	+	Jakubczak <i>et al.</i> (1996)
Sodium saccharin	1.76 (-, 0.05)	0 (-, 0.05)	diet		10	14	-1.76	0	-	Turner <i>et al.</i> (2001)
Uracil	0.3 (3, 0.6)	0.4 (3, 0.4)	diet	50 400	14	0	0.1	1.33	-	Takahashi <i>et al.</i> (2000)
	0.3 (3, 0.4)	1.4 (3, 0.4)	diet	252 000	70	0	1.1	4.67	-	Takahashi <i>et al.</i> (2000)
	0.5 (3, 0.7)	1.4 (3, 0.4)	diet	504 000	140	0	0.9	2.8	-	Takahashi <i>et al.</i> (2000)
	0.3 (3, 0.7)	1.3 (3, 0.8)	diet	1 260 000	350	1	1	4.33	+	Takahashi <i>et al.</i> (2000)

+, positive; -, negative; IMF, induced mutant frequency; ip, intraperitoneal; MF, mutant frequency

^a MF and IMF are expressed $\times 10^{-5}$. Numbers in parentheses indicate number of animals per group and number of plaques or plasmids $\times 10^6$ per group, respectively.

Table C.7. Summary of TGR assays performed in oral tissue (tongue, oesophagus, oral cavity, oral tissue) for known oral tissue carcinogens

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
4-Nitroquinoline-1-oxide (4-NQO)	3.8 (6, -)	144 (4, -)	drinking water	250	28	14	140.2	37.89	+	von Pressentin, Kosinska and Guttenplan (1999)
	3.2 (6, -)	77.8 (5, -)	drinking water	250	28	14	74.6	24.31	+	von Pressentin, Kosinska and Guttenplan (1999)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/k g bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
Benzo(a)pyrene	3.2 (-, -)	47.2 (6, 3.5)	drinking water	62	14	14	44	14.75	+	von Pressentin, El Bayoumy and Guttenplan (2000)
	3.5 (-, -)	117 (6, 5)	drinking water	62	14	14	113.5	33.43	+	von Pressentin, El Bayoumy and Guttenplan (2000)
	2.9 (-, -)	72.7 (6, 3.4)	drinking water	62	14	14	69.8	25.07	+	von Pressentin, El Bayoumy and Guttenplan (2000)
	4.2 (8, -)	184 (8, -)	drinking water	44	49	0	179.8	43.81	+	Guttenplan <i>et al.</i> (2007)
	4.2 (8, -)	237 (8, -)	drinking water	63	70	14	232.8	56.43	+	Guttenplan <i>et al.</i> (2007)
	4.2 (8, -)	329 (8, -)	drinking water	63	70	91	324.8	78.33	+	Guttenplan <i>et al.</i> (2007)
	3.7 (8, -)	144 (8, -)	drinking water	90	28	14	140.3	38.92	+	Guttenplan <i>et al.</i> (2002)
	2.9 (8, -)	130 (8, -)	drinking water	90	28	14	127.1	44.83	+	Guttenplan <i>et al.</i> (2002)
	2.4 (8, -)	61 (8, -)	drinking water	90	28	14	58.6	25.42	+	Guttenplan <i>et al.</i> (2002)
	3.8 (5, -)	25.7 (5, -)	gavage	27.5	11	14	21.9	6.76	+	von Pressentin, Kosinska and Guttenplan (1999)
	3.2 (6, -)	33.2 (5, -)	gavage	27.5	11	14	30	10.38	+	von Pressentin, Kosinska and Guttenplan (1999)
	3.5 (4, -)	8 (4, -)	gavage + drinking water	273	12	14	4.5	2.29	+	Kosinska, von Pressentin and Guttenplan (1999)
	3.5 (4, -)	9 (4, -)	gavage + drinking water	273	12	14	5.5	2.57	+	Kosinska, von Pressentin and Guttenplan (1999)
	4 (6, -)	20.5 (11, 2.395)	gavage	125	11	14	16.5	5.13	+	Guttenplan <i>et al.</i> (2004b)
	3.7 (6, -)	32.1 (11, 1.797)	gavage	125	11	14	28.4	8.68	+	Guttenplan <i>et al.</i> (2004b)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
	3.3 (6, -)	28.1 (9, 1.601)	gavage	125	11	14	24.8	8.52	+	Guttenplan <i>et al.</i> (2004b)
<i>N</i> -Nitrosomethylbenzylamine	7 (5, -)	43.2 (6, -)	subcutaneous	4	6	14	36.2	6.17	+	de Boer <i>et al.</i> (2004)
	6.5 (5, -)	25.8 (5, -)	subcutaneous	4	6	14	19.3	3.97	+	de Boer <i>et al.</i> (2004)
	5.1 (4, -)	24.3 (4, -)	subcutaneous	4	6	14	19.2	4.76	+	de Boer <i>et al.</i> (2004)

Table C.7 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
<i>N</i> -Nitrosornicotine (NNN)	3.2 (6, -)	9.2 (5, -)	drinking water	588	28	14	6	2.88	+	von Pressentin, Kosinska and Guttenplan (1999)
	3.7 (5, -)	9.8 (5, -)	drinking water	588	28	14	6.1	2.65	+	von Pressentin, Kosinska and Guttenplan (1999)
	3.8 (5, -)	7.5 (5, -)	drinking water	588	28	14	3.7	1.97	+	von Pressentin, Kosinska and Guttenplan (1999)
	3.3 (6, -)	10 (5, -)	drinking water	615	5	14	6.7	3.03	+	von Pressentin, Chen and Guttenplan (2001)
	3.6 (6, -)	10.3 (5, -)	drinking water	615	5	14	6.7	2.86	+	von Pressentin, Chen and Guttenplan (2001)
	3.6 (6, -)	9.4 (5, -)	drinking water	615	5	14	5.8	2.61	-	von Pressentin, Chen and Guttenplan (2001)

+, positive; -, negative; IMF, induced mutant frequency; MF, mutant frequency

^a MF and IMF are expressed $\times 10^{-5}$. Numbers in parentheses indicate number of animals per group and number of plaques or plasmids $\times 10^6$ per group, respectively.

Table C.8. Summary of TGR assays performed in colon (distal colon, proximal colon, large intestine) for known colon carcinogens

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
2-Amino-1-methyl-6-phenylimidazo(4,5-b)pyridine (PhIP)	2.3 (5, 0.7)	60 (5, 0.6)	diet	2 880	60	7	57.7	26.09	+	Stuart <i>et al.</i> (2000c)
	2.3 (5, 0.6)	60 (5, 0.5)	diet	2 880	60	7	57.7	26.09	+	Stuart <i>et al.</i> (2000c)
	2.3 (3, 0.6)	60 (5, 0.3)	diet	2 880	60	7	57.7	26.09	+	Stuart <i>et al.</i> (2000c)
	2.3 (3, 0.8)	60 (3, 0.1)	diet	2 880	60	7	57.7	26.09	+	Stuart <i>et al.</i> (2000c)
	0.5 (3, -)	11 (3, -)	diet	4 368	91	14	10.5	22	+	Masumura <i>et al.</i> (1999a)
	1 (3, -)	12 (3, -)	diet	4 368	91	14	11	12	+	Masumura <i>et al.</i> (1999a)
	0.4 (3, -)	4.5 (3, -)	diet	4 368	91	14	4.1	11.25	+	Masumura <i>et al.</i> (1999a)
	0.1 (3, -)	3 (3, -)	diet	4 368	91	14	2.9	30	+	Masumura <i>et al.</i> (1999a)
	3.2 (5, 0.7)	66.1 (5, 0.6)	diet	2 880	60	7	62.9	20.66	+	Okonogi <i>et al.</i> (1997a)
	2.9 (5, 0.6)	71.8 (5, 0.5)	diet	2 880	60	7	68.9	24.76	+	Okonogi <i>et al.</i> (1997a)
	1.5 (3, 1)	9 (3, 0.1)	gavage	80	4	7	7.5	6	+	Lynch, Gooderham and Boobis (1996)
	1.5 (3, 1)	1.5 (3, 0.6)	gavage	0.8	4	7	0	1	-	Lynch, Gooderham and Boobis (1996)
	1.5 (3, 1)	2.1 (3, 0.4)	gavage	8	4	7	0.6	1.4	-	Lynch, Gooderham and Boobis (1996)
	7 (2, 0.1)	7.5 (6, 0.1)	diet	360	30	7	0.5	1.07	-	Zhang <i>et al.</i> (1996a)
	7 (2, 0.1)	13 (6, 0.1)	diet	900	30	7	6	1.86	-	Zhang <i>et al.</i> (1996a)
	7 (2, 0.1)	37 (6, 0.1)	diet	1 440	30	7	30	5.29	+	Zhang <i>et al.</i> (1996a)
5.6 (3, 0.1)	28 (5, 0.1)	diet	720	60	7	22.4	5	+	Zhang <i>et al.</i> (1996a)	
5.6 (3, 0.1)	69 (6, 0.3)	diet	2 880	60	7	63.4	12.32	+	Zhang <i>et al.</i> (1996a)	

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
	2.2 (4, 0.1)	35 (6, 0.1)	diet	1 080	90	7	32.8	15.91	+	Zhang <i>et al.</i> (1996a)
	2.2 (4, 0.1)	133 (5, 0.1)	diet	4 320	90	7	130.8	60.45	+	Zhang <i>et al.</i> (1996a)
	4.9 (5, 1.4)	108.3 (15, 3.2)	diet	1 464	61	7	103.4	22.1	+	Stuart <i>et al.</i> (2001)
	6.1 (5, 1.6)	119.3 (15, 3.3)	diet	1 464	61	7	113.2	19.56	+	Stuart <i>et al.</i> (2001)
	6.6 (5, 1.5)	100.1 (15, 3)	diet	1 464	61	7	93.5	15.17	+	Stuart <i>et al.</i> (2001)
	6.1 (5, 1.5)	126.4 (15, 2.9)	diet	1 464	61	7	120.3	20.72	+	Stuart <i>et al.</i> (2001)
	5.3 (3, 3.7)	14 (5, 5.5)	ip	200	21	84	8.7	2.64	+	Zhang <i>et al.</i> (2001)
	6.8 (4, 3.9)	12.6 (3, 2.4)	ip	200	21	84	5.8	1.85	+	Zhang <i>et al.</i> (2001)
	44 (4, 3.9)	70.6 (5, 4.1)	ip	200	21	84	26.6	1.6	+	Zhang <i>et al.</i> (2001)

Table C.8 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
	4.9 (5, 1.4)	97.5 (5, -)	diet	1 464	61	7	92.6	19.9	+	Yang <i>et al.</i> (2001)
	6.1 (5, 1.6)	104.3 (5, -)	diet	1 464	61	7	98.2	17.1	+	Yang <i>et al.</i> (2001)
	5.3 (6, 2.1)	39.9 (9, 3.1)	diet	564	47	7	34.6	7.53	+	Yang, Glickman and de Boer (2002)
	11.4 (7, -)	55.1 (7, -)	gavage	100	5	14	43.7	4.83	+	Itoh <i>et al.</i> (2003)
	3.9 (3, -)	38.5 (3, -)	gavage	840	30	0	34.6	9.87	+	Nakai, Nelson and De Marzo (2007)

Table C.8 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
	3.5 (3, -)	83.8 (3, -)	gavage	1 680	60	0	80.3	23.94	+	Nakai, Nelson and De Marzo (2007)
2-Amino-3,4-dimethylimidazo(4,5-f)quinoline (MeIQ)	1.3 (3, 0.7)	15.5 (3, 0.5)	diet	252	7	0	14.2	11.92	+	Suzuki <i>et al.</i> (1996a)
	2.1 (6, 1.3)	28.9 (3, 0.6)	diet	1 008	28	0	26.8	13.76	+	Suzuki <i>et al.</i> (1996a)
	2.9 (3, 0.6)	110.5 (3, 0.4)	diet	3 024	84	0	107.6	38.1	+	Suzuki <i>et al.</i> (1996a)
2-Amino-3-methylimidazo(4,5-f)quinoline (IQ)	5.94 (4-5, -)	11.81 (4-5, -)	gavage	100	5	14	5.87	1.99	+	Itoh <i>et al.</i> (2003)
	2.7 (4, 1.3)	7.4 (4, 1.3)	gavage	100	5	14	4.7	2.74	+	Bol <i>et al.</i> (2000)
	2.7 (4, 1.3)	5.6 (4, 1.2)	gavage	20	1	14	2.9	2.07	-	Bol <i>et al.</i> (2000)
	2.6 (6, -)	4 (6, -)	diet	420 mg/kg feed	21	0	1.4	1.5	-	Moller <i>et al.</i> (2002)
	2.6 (6, -)	7 (6, -)	diet	4 200 mg/kg feed	21	0	4.4	2.7	+	Moller <i>et al.</i> (2002)
	2.6 (6, -)	5.5 (6, -)	diet	1 470 mg/kg feed	21	0	2.9	2.1	+	Moller <i>et al.</i> (2002)
Aflatoxin B1	2.91 (6, 2.635)	5.4 (6, 1.776)	diet	177	21	0	2.49	1.86	+	Dybdahl <i>et al.</i> (2003)
	3.3 (9, 1.4)	5.3 (8, -)	diet	123	21	0	2	1.61	-	Hansen <i>et al.</i> (2004)
	5.94 (4-5, -)	9.59 (4-5, -)	gavage	100	5	14	3.65	1.61	-	Itoh <i>et al.</i> (2003)
	11 (4, 1.3)	11.7 (4, 1.3)	gavage	32	4	21	0.7	1.06	-	Astrup, Jorgensen and Jensen (1996)
Aminophenylnorharm	0.62 (5, 3.6)	1.7 (5, 3.6)	diet	143	84	14	1.08	2.74	+	Masumura <i>et al.</i> (2003b)
	0.62 (5, 3.6)	2.9 (5, 3.6)	diet	286	84	14	2.28	4.68	+	Masumura <i>et al.</i> (2003b)

Table C.8 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
High-fat diet	5.8 (9, 0.826)	3.9 (5, 0.644)	diet		42	0	-1.9	0.67	-	Hernandez and Heddle (2005)
	2.8 (11, 4.207)	6.4 (8, 0.871)	diet		84	0	3.6	2.29	-	Hernandez and Heddle (2005)
	3 (7, 1.707)	5 (8, 1.99)	diet		133	0	2	1.67	-	Hernandez and Heddle (2005)

+, positive; -, negative; IMF, induced mutant frequency; ip, intraperitoneal; MF, mutant frequency

^a MF and IMF are expressed $\times 10^{-5}$. Numbers in parentheses indicate number of animals per group and number of plaques or plasmids $\times 10^6$ per group, respectively.

^b Unless otherwise noted.

Table C.9. Summary of TGR assays performed in breast and mammary gland for known breast and mammary gland carcinogens

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
17 β -Oestradiol	2.95 (5, -)	3.95 (5, -)	diet	49	112	0	1	1.34	-	Manjanatha <i>et al.</i> (2006a)
2-Amino-1-methyl-6-phenylimidazo(4,5-b)pyridine (PhIP)	2.5 (5, 1.6)	32.3 (6, 0.7)	gavage	650	10	420	29.8	12.92	+	Okochi <i>et al.</i> (1999)
	1.69 (-, -)	19.6 (-, -)	gavage	900	12	42	17.91	11.6	+	Shan <i>et al.</i> (2004)
6-Nitrochrysene	2.8 (-, -)	22.2 (-, -)	gavage	900	12	42	19.4	7.93	+	Shan <i>et al.</i> (2004)
	0.95 (8, -)	2.2 (14, -)	gavage	800 $\mu\text{mol/rat}$	56	224	1.25	2.32	+	Boyiri <i>et al.</i> (2004)
7,12-Dimethylbenzanthracene (7,12-DMBA)	0.95 (8, -)	2.6 (9, -)	gavage	1 600 $\mu\text{mol/rat}$	56	224	1.65	2.74	+	Boyiri <i>et al.</i> (2004)
	0.8 (5, 0.7)	1.1 (5, 0.7)	gavage	20	1	14	0.3	1.38	-	Manjanatha <i>et al.</i> (2000)
	1.5 (5, 0.8)	5.8 (5, 0.7)	gavage	20	1	42	4.3	3.87	-	Manjanatha <i>et al.</i> (2000)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
<i>N</i> -Ethyl- <i>N</i> -nitrosourea (ENU)	1.8 (5, 1)	5.5 (5, 1.1)	gavage	20	1	70	3.7	3.06	-	Manjanatha <i>et al.</i> (2000)
	1.6 (5, 1)	4 (4, 0.8)	gavage	20	1	98	2.4	2.5	-	Manjanatha <i>et al.</i> (2000)
	1.4 (5, 0.9)	3.1 (5, 0.7)	gavage	20	1	126	1.7	2.21	-	Manjanatha <i>et al.</i> (2000)
	0.8 (5, 0.7)	5.1 (4, 0.6)	gavage	130	1	14	4.3	6.38	+	Manjanatha <i>et al.</i> (2000)
	1.5 (5, 0.8)	14.2 (4, 0.8)	gavage	130	1	42	12.7	9.47	+	Manjanatha <i>et al.</i> (2000)
	1.8 (5, 1)	25.6 (3, 0.9)	gavage	130	1	70	23.8	14.22	+	Manjanatha <i>et al.</i> (2000)
	1.6 (5, 1)	18.6 (5, 0.7)	gavage	130	1	98	17	11.63	+	Manjanatha <i>et al.</i> (2000)
	2.95 (5, -)	26.35 (5, -)	gavage	80	1	112	23.4	8.93	+	Manjanatha <i>et al.</i> (2006a)
	8.3 (4, 0.4)	18 (3, 0.8)	ip	250	5	7	9.7	2.17	+	Sun, Shima and Heddle (1999)
	8.3 (4, 0.4)	39 (3, 0.4)	ip	250	5	14	30.7	4.7	+	Sun, Shima and Heddle (1999)
	1.3 (3, 0.1)	69 (6, 0.2)	ip	250	5	28	67.7	53.08	+	Sun, Shima and Heddle (1999)
	1.3 (3, 0.1)	66 (8, 0.3)	ip	250	5	42	64.7	50.77	+	Sun, Shima and Heddle (1999)
	1.3 (3, 0.1)	59 (5, 0.1)	ip	250	5	63	57.7	45.38	+	Sun, Shima and Heddle (1999)
5.6 (5, 0.3)	69 (5, 0.2)	ip	250	5	84	63.4	12.32	+	Sun, Shima and Heddle (1999)	
9 (3, 0.1)	52 (4, 0.2)	ip	250	1	70	43	5.78	+	Sun, Shima and Heddle (1999)	

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw) ^b	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
	9 (3, 0.1)	62 (4, 0.1)	ip	250	1	70	53	6.89	+	Sun, Shima and Heddle (1999)
<i>N</i> -Methyl- <i>N</i> -nitrosourea (MNU)	3.4 (5, 0.2)	22.4 (7, 0.7)	ip	50	1	35	19	6.59	+	Shima, Swiger and Heddle (2000)
	0.5 (7, 0.7)	21.9 (6, 0.5)	ip	50	1	35	21.4	43.8	+	Shima, Swiger and Heddle (2000)

+, positive; -, negative; IMF, induced mutant frequency; ip, intraperitoneal; MF, mutant frequency

^a MF and IMF are expressed $\times 10^{-5}$. Numbers in parentheses indicate number of animals per group and number of plaques or plasmids $\times 10^6$ per group, respectively.

^b Unless otherwise noted.

Table C.10. Summary of TGR assays performed in small intestine for known small intestine carcinogens

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
2-Amino-1-methyl-6-phenylimidazo(4,5-b)pyridine (PhIP)	2 (3, 2.1)	8.4 (3, 0.9)	gavage	80	4	7	6.4	4.2	+	Lynch, Gooderham and Boobis (1996)
	9 (-, -)	12 (4, -)	diet	21	7	0	3	1.33	-	Klein <i>et al.</i> (2001)
	9 (-, -)	19 (4, -)	diet	42	14	0	10	2.11	+	Klein <i>et al.</i> (2001)
	9 (-, -)	23 (4, -)	diet	168	56	0	14	2.56	+	Klein <i>et al.</i> (2001)
	9 (-, -)	21 (4, -)	diet	273	91	0	12	2.33	+	Klein <i>et al.</i> (2001)
	9 (-, -)	36 (4, -)	diet	67.2	14	0	27	4	+	Klein <i>et al.</i> (2001)
	9 (-, -)	40 (4, -)	diet	268.8	56	0	31	4.44	+	Klein <i>et al.</i> (2001)
	9 (-, -)	50 (4, -)	diet	436.8	91	0	41	5.56	+	Klein <i>et al.</i> (2001)
	9 (-, -)	21 (4, -)	diet	84	7	0	12	2.33	+	Klein <i>et al.</i> (2001)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
	9 (-, -)	34 (4, -)	diet	168	14	0	25	3.78	+	Klein <i>et al.</i> (2001)
	9 (-, -)	11 (4, -)	diet	21	7	0	2	1.22	-	Klein <i>et al.</i> (2001)
	9 (-, -)	15 (4, -)	diet	42	14	0	6	1.67	-	Klein <i>et al.</i> (2001)
	9 (-, -)	11 (4, -)	diet	168	56	0	2	1.22	-	Klein <i>et al.</i> (2001)
	9 (-, -)	18 (4, -)	diet	273	91	0	9	2	+	Klein <i>et al.</i> (2001)
	9 (-, -)	10 (4, -)	diet	33.6	7	0	1	1.11	-	Klein <i>et al.</i> (2001)
	9 (-, -)	11 (4, -)	diet	67.2	14	0	2	1.22	-	Klein <i>et al.</i> (2001)
	9 (-, -)	20 (4, -)	diet	268.8	56	0	11	2.22	+	Klein <i>et al.</i> (2001)
	9 (-, -)	19 (4, -)	diet	436.8	91	0	10	2.11	+	Klein <i>et al.</i> (2001)
	9 (-, -)	13 (4, -)	diet	84	7	0	4	1.44	-	Klein <i>et al.</i> (2001)
	9 (-, -)	18 (4, -)	diet	168	14	0	9	2	+	Klein <i>et al.</i> (2001)
	9 (-, -)	20 (4, -)	diet	672	56	0	11	2.22	+	Klein <i>et al.</i> (2001)
	9 (-, -)	18 (4, -)	diet	1 092	91	0	9	2	+	Klein <i>et al.</i> (2001)
	11.23 (7, 1.909)	67.2 (7, 1.007)	gavage	100	5	14	55.97	5.98	+	Itoh <i>et al.</i> (2003)
	4.96 (6, 1.603)	19.94 (5, 0.736)	gavage	100	5	14	14.98	4.02	+	Itoh <i>et al.</i> (2003)
3-Amino-1-methyl-5H-pyrido(4,3-b)indole (Trp-P-2)	8.83 (4-5, -)	8.7 (4-5, -)	gavage	100	5	14	-0.13	0.99	-	Itoh <i>et al.</i> (2003)
<i>N</i> -Ethyl- <i>N</i> -nitrosourea (ENU)	5 (6, -)	140 (6, -)	ip	250	1	10	135	28	+	Swiger <i>et al.</i> (1999)
	5 (6, -)	130 (6, -)	ip	250	1	70	125	26	+	Swiger <i>et al.</i> (1999)

Table C.10 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
	5 (6, -)	150 (6, -)	ip	250	1	10	145	30	+	Swiger <i>et al.</i> (1999)
	5 (6, -)	120 (6, -)	ip	250	1	70	115	24	+	Swiger <i>et al.</i> (1999)
	5 (6, -)	30 (6, -)	ip	50	1	10	25	6	+	Swiger <i>et al.</i> (1999)
	5 (6, -)	82 (6, -)	ip	150	1	10	77	16.4	+	Swiger <i>et al.</i> (1999)
	5 (6, -)	150 (6, -)	ip	250	1	10	145	30	+	Swiger <i>et al.</i> (1999)
	5 (6, -)	22 (6, -)	ip	50	1	10	17	4.4	+	Swiger <i>et al.</i> (1999)
	5 (6, -)	50 (6, -)	ip	150	1	10	45	10	+	Swiger <i>et al.</i> (1999)
	5 (6, -)	125 (6, -)	ip	250	1	10	120	25	+	Swiger <i>et al.</i> (1999)
	5 (3, 0.4)	141 (6, 0.6)	ip	250	1	10	136	28.2	+	Cosentino and Heddle (1996)
	10 (4, 0.7)	172 (6, 1)	ip	250	1	35	162	17.2	+	Cosentino and Heddle (1996)
	9 (5, 1.2)	132 (6, 1)	ip	250	1	70	123	14.67	+	Cosentino and Heddle (1996)
	8 (4, -)	240 (6, -)	drinking water	210	10	10	232	30	+	Cosentino and Heddle (2000)
	8 (4, -)	370 (6, -)	drinking water	415	20	10	362	46.25	+	Cosentino and Heddle (2000)
	8 (4, -)	490 (6, -)	drinking water	620	30	10	482	61.25	+	Cosentino and Heddle (2000)
	8 (4, 1)	1050 (6, 1.5)	drinking water	1 250	60	10	1 042	131.25	+	Cosentino and Heddle (1999b)

Table C.10 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
	8 (4, 1)	1150 (6, 1.5)	drinking water	1 850	90	10	1 142	143.75	+	Cosentino and Heddle (1999b)
	17 (4, 1)	15 (6, 1.5)	drinking water	7.5	120	10	-2	0.88	-	Cosentino and Heddle (1999b)
	26 (4, 1)	14 (6, 1.5)	drinking water	15	240	10	-12	0.54	-	Cosentino and Heddle (1999b)
	26 (4, 1)	20 (6, 1.5)	drinking water	30	480	10	-6	0.77	-	Cosentino and Heddle (1999b)
	17 (4, 1)	8 (6, 1.5)	drinking water	25	120	10	-9	0.47	-	Cosentino and Heddle (1999b)
	26 (4, 1)	12 (6, 1.5)	drinking water	50	240	10	-14	0.46	-	Cosentino and Heddle (1999b)
	26 (4, 1)	28 (6, 1.5)	drinking water	100	480	10	2	1.08	-	Cosentino and Heddle (1999b)
	17 (4, 1)	10 (6, 1.5)	drinking water	75	120	10	-7	0.59	-	Cosentino and Heddle (1999b)
	26 (4, 1)	23 (6, 1.5)	drinking water	150	240	10	-3	0.88	-	Cosentino and Heddle (1999b)
	26 (4, 1)	46 (6, 1.5)	drinking water	300	480	10	20	1.77	-	Cosentino and Heddle (1999b)
	8 (4, 1)	100 (6, 1.5)	ip	250	1	10	92	12.5	+	Cosentino and Heddle (1999b)
	17 (4, 1)	110 (6, 1.5)	ip	250	1	120	93	6.47	+	Cosentino and Heddle (1999b)

Table C.10 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
	26 (4, 1)	120 (6, 1.5)	ip	250	1	240	94	4.62	+	Cosentino and Heddle (1999b)
	32 (4, 1)	115 (6, 1.5)	ip	250	1	360	83	3.59	+	Cosentino and Heddle (1999b)
	2 (3, 2.1)	12.5 (4, 1.9)	ip	100	1	7	10.5	6.25	+	Lynch, Gooderham and Boobis (1996)
	5 (3, 0.2)	220 (3, 0.2)	ip	250	1	7	215	44	+	Tao, Urlando and Heddle (1993a)
	5 (3, 0.2)	210 (3, 0.2)	ip	250	1	14	205	42	+	Tao, Urlando and Heddle (1993a)
	5 (3, 0.2)	370 (3, 0.2)	ip	250	1	21	365	74	+	Tao, Urlando and Heddle (1993a)
	5 (3, 0.2)	260 (3, 0.2)	ip	250	1	28	255	52	+	Tao, Urlando and Heddle (1993a)
	5 (3, 0.2)	240 (3, 0.2)	ip	250	1	42	235	48	+	Tao, Urlando and Heddle (1993a)
	5 (3, 0.2)	250 (3, 0.2)	ip	250	1	56	245	50	+	Tao, Urlando and Heddle (1993a)
	5 (3, 0.2)	45 (3, 0.2)	ip	63	1		40	9	+	Tao, Urlando and Heddle (1993a)
	5 (3, 0.2)	90 (3, 0.2)	ip	125	1		85	18	+	Tao, Urlando and Heddle (1993a)
	5 (3, 0.2)	250 (3, 0.2)	ip	250	1		245	50	+	Tao, Urlando and Heddle (1993a)

Table C.10 (continued)

Chemical	MF control ^a	MF treatment ^a	Route of administration	Total dose (mg/kg bw)	Application time (days)	Sampling time (days)	IMF ^a	Fold increase	Result	Reference
	5 (3, 0.2)	55 (3, 0.2)	ip	63	1		50	11	+	Tao, Urlando and Heddle (1993a)
	5 (3, 0.2)	100 (3, 0.2)	ip	125	1		95	20	+	Tao, Urlando and Heddle (1993a)
	5 (3, 0.2)	260 (3, 0.2)	ip	250	1		255	52	+	Tao, Urlando and Heddle (1993a)
	7 (7, 0.7)	138 (4, 0.3)	ip	250	5	28	131	19.71	+	Sun, Shima and Heddle (1999)
	7 (7, 0.7)	133 (4, 0.8)	ip	250	5	42	126	19	+	Sun, Shima and Heddle (1999)
	7 (7, 0.7)	144 (5, 0.7)	ip	250	5	63	137	20.57	+	Sun, Shima and Heddle (1999)
	2.5 (5, 0.5)	125 (5, 0.4)	ip	250	1	14	122.5	50	+	Swiger <i>et al.</i> (2001)
	2.5 (5, 0.5)	130 (5, 0.4)	ip	250	1	28	127.5	52	+	Swiger <i>et al.</i> (2001)
	2.5 (5, 0.5)	41 (5, 0.3)	ip	50	1	10	38.5	16.4	+	Swiger <i>et al.</i> (2001)
	2.5 (5, 0.5)	75 (5, 0.2)	ip	150	1	10	72.5	30	+	Swiger <i>et al.</i> (2001)
	2.5 (5, 0.5)	130 (5, 0.4)	ip	250	1	10	127.5	52	+	Swiger <i>et al.</i> (2001)
	2.5 (5, 0.5)	12 (4, 0.1)	ip	0.94	10	14	9.5	4.8	+	Swiger <i>et al.</i> (2001)
	2.5 (5, 0.5)	40 (5, 0.1)	ip	2.82	30	14	37.5	16	+	Swiger <i>et al.</i> (2001)

+, positive; -, negative; IMF, induced mutant frequency; ip, intraperitoneal; MF, mutant frequency

^a MF and IMF are expressed $\times 10^{-5}$. Numbers in parentheses indicate number of animals per group and number of plaques or plasmids $\times 10^6$ per group, respectively.

APPENDIX D: DNA SEQUENCE CONFIRMATION OF PHENOTYPIC MUTANT DATA

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutations	Size change mutations	Comments
Allay, Veigl and Gerson (1999)	nd	nd		0	28	100.0	nd	+	-	No control data
				0	18	100.0	nd	+	-	No control data
Arlt <i>et al.</i> (2004)	0	32	100.0	0	41	100.0	+	+	-	
Arrault <i>et al.</i> (2002)	0	35	100.0	0	58	100.0	+	+	-	Sequence analysis of pooled samples
Astrup, Jorgensen and Jensen (1996)	nd	nd		7	23	76.7	-	+	-	No control data
Bottin <i>et al.</i> (2006)	22	124	84.9	42	172	80.4	-	+	-	
				32	218	87.2	-	+	-	
Boyiri <i>et al.</i> (2004)	0	10	100.0	0	29	100.0	+	+	-	Sequence analysis of pooled treatment groups from ID 2405-2406
Chen <i>et al.</i> (1998)	nd	nd		0	74	100.0	+	+	-	No control data

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutations	Size change mutations	Comments			
Chen <i>et al.</i> (2001a)	1	30	96.8	1	108	99.1	+	+	-	Includes some historical control data			
Chen <i>et al.</i> (2002)	8	100	92.6	10	71	87.7	+	+	-				
	58	256	81.5	0	94	100.0	+	+	-	Control data from Harbach <i>et al.</i> (1999)			
				10	51	83.6	+	+	-	Control data from Harbach <i>et al.</i> (1999); treatment data from Davies <i>et al.</i> (1999)			
Chen <i>et al.</i> (2005a)	58	256	81.5	2	31	93.9	0	54	100.0	+	+	-	Control data from Chen <i>et al.</i> (2001b)
				0	37	100.0	+	+	-	Control data from Chen <i>et al.</i> (2001b); treatment data from Davies <i>et al.</i> (1996)			
Chen <i>et al.</i> (2006)	0	48	100.0	0	85	100.0	+	+	-	Control data from Harbach <i>et al.</i> (1999)			
				0	67	100.0	+	+	-	Control data from Harbach <i>et al.</i> (1999)			

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutations	Size change mutations	Comments
Cheng <i>et al.</i> (2000)	0	17	100.0	0	50	100.0	nd	+	-	Pooled data
				0	15	100.0	nd	+	-	
				0	13	100.0	nd	+	-	
Davies <i>et al.</i> (1996)	0	33	100.0	0	38	100.0	nd	+	-	
Davies <i>et al.</i> (1997)	5	33	86.8	1	54	98.2	+	+	-	
Davies <i>et al.</i> (1999)	6	53	89.8	10	51	83.6	+	+	-	
de Boer, Mirsalis and Glickman (1999)	0	80	100.0	0	100	100.0	-	+	-	
				0	47	100.0	0	65	100.0	-
de Boer <i>et al.</i> (1996)	0	51	100.0	1	66	98.5	nd	+	-	
				1	48	98.0	nd	+	-	
				0	49	100.0	nd	+	-	
				0	50	98.0	nd	+	-	
				0	77	100.0	nd	+	-	
				0	79	100.0	nd	+	-	
	0	81	100.0	1	85	98.8	+	+	-	
				0	100	100.0	+	+	-	
				1	96	99.0	+	+	-	
DeMarini <i>et al.</i> (2000)	0	25	100.0	0	40	100.0	nd	+	-	
Douglas <i>et al.</i> (1995)	0	24	100.0	0	31	100.0	+	+	-	
Douglas <i>et al.</i> (1996)	0	33	100.0	0	28	100.0	nd	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
				0	30	100.0	nd	+	-	
	0	56	100.0	0	30	100.0	nd	+	-	
				0	30	100.0	nd	+	-	
Dycaico <i>et al.</i> (1996)	0	44	100.0	0	45	100.0	+	+	-	
	0	77	100.0	0	42	100.0	-	+	-	
Frijhoff <i>et al.</i> (1997)	0	17	100.0	0	27	100.0	nd	+	-	
Gorelick <i>et al.</i> (1995)	0	39	100.0	0	47	100.0	+	+	-	
Gorelick <i>et al.</i> (1999)	2	19	90.5	4	25	86.2	-	+	-	
				10	75	88.2	+	+	-	
	0	35	100.0	2	63	96.9	+	+	-	
Gossen <i>et al.</i> (1995)	39	45	53.6	57	43	43.0	nd	-	+	Spectra data for fixation times of 10 and 21 days pooled
	21	22	51.2	25	28	52.8	nd	-	+	Spectra data for fixation times of 10 and 21 days pooled
	16	13	44.8	23	20	46.5	nd	-	+	Spectra data for fixation times of 10 and 21 days pooled

Appendix D
 (continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
Guttenplan <i>et al.</i> (2004a)	0	27	100.0	1	47	97.9	+	+	-	
Guttenplan <i>et al.</i> (2007)	nd	nd		0	18	100.0	nd	+	-	
				0	9	100.0	nd	+	-	
				0	9	100.0	nd	+	-	
Hakura <i>et al.</i> (2000)	nd	nd		0	18	100.0	+	+	-	No control spectrum
				0	15	100.0	+	+	-	No control spectrum
				0	21	100.0	+	+	-	No control spectrum
				0	16	100.0	+	+	-	No control spectrum
Hansen <i>et al.</i> (2004)	0	46	100.0	0	49	100.0	-	+	-	Sequence analysis of treatment mutants from Dragsted <i>et al.</i> (2002)
				0	50	100.0	-	+	-	
				0	48	100.0	-	+	-	Sequence analysis of treatment mutants from Dragsted <i>et al.</i> (2002)
Hashimoto, Ohsawa and Kimura (2004)	0	46	100.0	0	40	100.0	+	+	-	
				0	46	100.0	+	+	-	
				0	30	100.0	+	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectru m reported	Base change mutatio ns	Size change mutatio ns	Comments
	0	19	100.0	0	44	100.0	+	+	-	
				0	47	100.0	+	+	-	
				0	28	100.0	+	+	-	
Hashimoto <i>et al.</i> (2005)	0	13	100.0	0	13	100.0	-	+	-	
				0	42	100.0	+	+	-	
				0	63	100.0	-	+	-	
Hashimoto <i>et al.</i> (2006)	0	22	100.0	0	28	100.0	-	+	-	
				0	28	100.0	-	+	-	
				0	21	100.0	-	+	-	
Hashimoto <i>et al.</i> (2007)	0	21	100.0	0	63	100.0	-	+	-	
	0	9	100.0	0	37	100.0	-	+	-	
	0	25	100.0	0	26	100.0	+	+	-	
	0	16	100.0	0	39	100.0	nd	+	-	
				0	47	100.0	nd	+	-	
				0	41	100.0	nd	+	-	
				0	33	100.0	nd	+	-	
				0	34	100.0	nd	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
				0	34	100.0	nd	+	-	
Hernandez and Forkert (2007a)	0	37	100.0	0	85	100.0	-	+	-	
				0	95	100.0	-	+	-	
	0	31	100.0	0	67	100.0	-	+	-	
Hernandez and Forkert (2007b)	0	37	100.0	0	35	100.0	-	+	-	
				0	85	100.0	-	+	-	
				0	77	100.0	-	+	-	
	0	45	100.0	0	73	100.0	-	+	-	
				0	73	100.0	-	+	-	
				0	85	100.0	-	+	-	
Horiguchi <i>et al.</i> (1999)	0	11	100.0	0	106	100.0	+	+	-	Irradiated dose groups pooled for sequencing (ID 2284-2288)
Horiguchi <i>et al.</i> (2001)	0	11	100.0	0	30	100.0	nd	-	+	
				0	37	100.0	nd	-	+	
				0	33	100.0	nd	-	+	
				0	18	100.0	nd	-	+	
				0	12	100.0	nd	-	+	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectru m reported	Base change mutatio ns	Size change mutatio ns	Comments
Hoshi <i>et al.</i> (2004)	0	2	100.0	0	150	100.0	nd	+	-	
Ikeda <i>et al.</i> (2007)	0	35	100.0	0	67	100.0	nd	+	-	
				0	32	100.0	nd	+	-	
				0	17	100.0	nd	+	-	
				0	27	100.0	nd	+	-	
				0	116	100.0	nd	+	-	
				0	83	100.0	nd	+	-	
				0	109	100.0	nd	+	-	
				0	42	100.0	nd	-	+	
				0	48	100.0	nd	-	+	
				0	43	100.0	nd	-	+	
				0	45	100.0	nd	-	+	
				0	60	100.0	nd	-	+	
				0	60	100.0	nd	-	+	
				0	61	100.0	nd	-	+	
Itoh <i>et al.</i> (2003)	0	31	100.0	0	33	100.0	+	+	-	
Jiang <i>et al.</i> (2006)	0	10	100.0	0	28	100.0	nd	+	-	
				0	23	100.0	nd	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
				0	18	100.0	nd	+	-	
Jiao <i>et al.</i> (1997)	0	56	100.0	0	51	100.0	+	+	-	Historical control data
				0	30	100.0	+	+	-	Historical control data
Kanki <i>et al.</i> (2005)	0	21	100.0	0	109	100.0	+	+	-	
				0	67	100.0	+	+	-	
				0	11	100.0	-	+	-	
				0	23	100.0	-	+	-	
Kohara <i>et al.</i> (2001)	0	42	100.0	0	33	100.0	-	-	+	
	0	31	100.0	0	38	100.0	+	+	-	
				0	39	100.0	+	+	-	
	0	50	100.0	0	36	100.0	+	+	-	
Kohara <i>et al.</i> (2002b)	0	33	100.0	0	37	100.0	+	+	-	Sequence analysis of pooled samples from ID 1054-1055
Kohler <i>et al.</i> (1991b)	0	21	100.0	0	11	100.0	nd	+	-	
				0	15	100.0	nd	+	-	
				0	9	100.0	+	+	-	
Larsen <i>et al.</i> (2006)	0	28	100.0	0	45	100.0	-	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
Leavitt <i>et al.</i> (1997)	0	47	100.0	0	61	100.0	nd	+	-	
Lehmann <i>et al.</i> (2007)	1	16	94.1	9	47	83.9	-	+	-	
				5	24	82.8	-	+	-	
				5	29	85.3	-	+	-	
Louro, Silva and Boavida (2002)	0	41	100.0	0	69	100.0	+	+	-	
	0	55	100.0	0	72	100.0	+	+	-	
	0	13	100.0	0	34	100.0	nd	-	+	
	0	34	100.0	0	46	100.0	nd	-	+	
Lynch <i>et al.</i> (1998)	0	18	100.0	3	40	93.0	nd	+	-	Small and large intestine data pooled
Manjanatha <i>et al.</i> (2000)	0	39	100.0	0	41	100.0	+	+	-	
Manjanatha <i>et al.</i> (2004)	3	43	93.5	17	63	78.8	-	+	-	
Manjanatha <i>et al.</i> (2005)	0	19	100.0	0	36	100.0	-	+	-	
				0	55	100.0	+	+	-	
				0	54	100.0	+	+	-	
Manjanatha <i>et al.</i>	0	26	100.0	0	29	100.0	+	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectru m reported	Base change mutatio ns	Size change mutatio ns	Comments
(2006b)				0	29	100.0	+	+	-	
	0	27	100.0	0	29	100.0	+	+	-	
				0	46	100.0	+	+	-	
Masumura <i>et al.</i> (2000)	0	71	100.0	0	99	100.0	nd	+	-	
Masumura <i>et al.</i> (2002)	0	26	100.0	0	20	100.0	+	+	-	
				0	19	100.0	-	+	-	
				0	18	100.0	+	+	-	
	0	11	100.0	0	14	100.0	nd	-	+	
				0	28	100.0	nd	-	+	
				0	16	100.0	nd	-	+	
Masumura <i>et al.</i> (2003a)	0	49	100.0	0	49	100.0	-	+	-	
				0	50	100.0	+	+	-	
				0	62	100.0	+	+	-	
	0	29	100.0	0	37	100.0	+	+	-	
Masumura <i>et al.</i> (2003b)	0	51	100.0	0	73	100.0	+	+	-	
	0	11	100.0	0	40	100.0	+	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutations	Size change mutations	Comments
Mei <i>et al.</i> (2004a)				0	47	100.0	–	+	–	Control data from Mei <i>et al.</i> (2004b)
Mei <i>et al.</i> (2004b)	0	63	100.0	0	92	100.0	+	+	–	
Mei <i>et al.</i> (2005a)	0	46	100.0	0	200	100.0	+	+	–	
Mei <i>et al.</i> (2005b)	0	56	100.0	0	90	100.0	+	+	–	Sequence analysis of pooled treatment groups
	0	32	100.0	0	47	100.0	+	+	–	
Mei <i>et al.</i> (2006a)				0	137	100.0	+	+	–	Control data from Mei <i>et al.</i> (2004b)
Mei <i>et al.</i> (2006b)				0	106	100.0	+	+	–	Control data from Mei <i>et al.</i> (2005a)
Micillino <i>et al.</i> (2002)	2	59	96.7	9	45	83.3	–	+	–	
Mientjes <i>et al.</i> (1998)	nd	nd		0	24	100.0	nd	+	–	Control mutants not sequenced
				0	23	100.0	nd	+	–	Control mutants not sequenced
Miller <i>et al.</i> (2000)	nd	nd		0	24	100.0	+	+	–	No control data
Mirsalis <i>et al.</i> (1993)	0	10	100.0	0	10	100.0	+	+	–	
Mittelstaedt <i>et al.</i>	nd	nd		0	50	100.0	nd	+	–	No control spectrum

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
(1998)				0	28	100.0	nd	+	-	
				0	31	100.0	nd	+	-	
Mittelstaedt <i>et al.</i> (2004)	0	80	100.0	0	99	100.0	-	+	-	
				0	112	100.0	+	+	-	
	0	64	100.0	0	86	100.0	-	+	-	
Moller <i>et al.</i> (2002)	0	48	100.0	0	40	100.0	-	+	-	
Monroe and Mitchell (1993)	0	11	100.0	0	20	100.0	+	+	-	
				0	21	100.0	+	+	-	
Monroe <i>et al.</i> (1998)	12	14	53.8	16	25	61.0	+	+	-	Spectrum change evaluated visually
				29	34	54.0	+	+	-	Spectrum change evaluated visually
	2	14	87.5	9	25	73.5	+	+	-	Spectrum change evaluated visually
				6	34	85.0	+	+	-	Spectrum change evaluated visually

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
	51	170	76.9	25	81	76.4	+	+	-	Spectrum change evaluated visually
	161	170	51.4	69	81	54.0	+	+	-	Spectrum change evaluated visually
Moore <i>et al.</i> (1999)	0	41	100.0	0	47	100.0	-	+	-	
	0	44	100.0	0	39	100.0	+	+	-	
	0	36	100.0	0	48	100.0	-	+	-	
	0	49	100.0	0	47	100.0	-	+	-	
	0	40	100.0	0	42	100.0	-	+	-	
Noda <i>et al.</i> (2002)	0	18	100.0	0	26	100.0	-	+	-	
Nohmi <i>et al.</i> (1996)	0	26	100.0	0	60	100.0	+	+	-	
Okada <i>et al.</i> (1999)	0	14	100.0	1	17	94.4	nd	-	+	
				0	13	100.0	nd	-	+	
				0	26	100.0	nd	-	+	
				2	43	95.6	nd	-	+	
Okochi <i>et al.</i> (1999)	0	40	100.0	0	177	100.0	nd	+	-	
Okonogi <i>et al.</i> (1997a)	1	14	93.3	0	113	100.0	nd	+	-	
	0	15	100.0	4	114	96.6	nd	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
Okonogi <i>et al.</i> (1997b)	0	30	100.0	0	90	100.0	+	+	-	
				0	115	100.0	+	+	-	
				0	105	100.0	+	+	-	
Ono <i>et al.</i> (1999)	0	24	100.0	0	27	100.0	+	+	-	
	0	21	100.0	0	32	100.0	+	+	-	
	0	18	100.0	0	5	100.0	+	+	-	
Ono <i>et al.</i> (2003)	0	59	100.0	0	51	100.0	+	+	-	
	0	58	100.0	1	56	98.2	+	+	-	
Ono <i>et al.</i> (2004)				1	38	97.4	+	+	-	
				1	37	97.4	-	+	-	Not reported whether sequenced mutants were from treatment or control group
				0	15	100.0	-	+	-	Not reported whether sequenced mutants were from treatment or control group

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
				0	20	100.0	-	+	-	Not reported whether sequenced mutants were from treatment or control group
				0	20	100.0	-	+	-	Not reported whether sequenced mutants were from treatment or control group
Quillardet <i>et al.</i> (2000)	0	39	100.0	0	47	100.0	+	+	-	
Quillardet <i>et al.</i> (2006)	0	41	100.0	0	52	100.0	+	+	-	
Provost and Short (1994)	0	13	100.0	0	23	100.0	+	+	-	
				0	26	100.0	+	+	-	
Provost <i>et al.</i> (1993)	nd	nd		0	62	100.0	nd	+	-	Control mutants not sequenced; two animals sequenced
				0	37	100.0	nd	+	-	Control mutants not sequenced; one animal sequenced
Recio and Goldsworthy (1995)	0	56	100.0	0	54	100.0	nd	+	-	
				0	74	100.0	nd	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
Recio, Pluta and Meyer (1998)	6	41	87.2	11	57	83.8	+	+	-	
Recio <i>et al.</i> (1993)	0	13	100.0	1	18	94.7	+	+	-	
Recio <i>et al.</i> (1996)	0	56	100.0	0	128	100.0	+	+	-	
Recio <i>et al.</i> (2001)	0	56	100.0	0	54	100.0	+	+	-	
				0	49	100.0	nd	+	-	
				0	54	100.0	nd	+	-	
				0	49	100.0	nd	+	-	
	0	47	100.0	0	68	100.0	nd	+	-	
				0	68	100.0	nd	+	-	
	0	41	100.0	0	57	100.0	nd	+	-	
				0	57	100.0	nd	+	-	
	0	59	100.0	0	54	100.0	nd	+	-	
Recio <i>et al.</i> (2004)	0	75	100.0	0	66	100.0	+	+	-	
	0	60	100.0	0	103	100.0	-	+	-	Sequence analysis of pooled treatment groups from ID 2682-2683
Rihn <i>et al.</i> (2000b)	0	41	100.0	0	48	100.0	+	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectru m reported	Base change mutatio ns	Size change mutatio ns	Comments
Ross and Leavitt (1998)	0	50	100.0	0	51	100.0	+	+	-	Pooled data
Ryu <i>et al.</i> (1999a)	0	16	100.0	0	16	100.0	nd	+	-	
Saranko <i>et al.</i> (2001)	1	64	98.5	4	62	93.9	+	+	-	
Sato <i>et al.</i> (2000)	0	10	100.0	1	17	94.4	+	+	-	
				1	69	98.6	+	+	-	
Shane <i>et al.</i> (1999)	0	282	100.0	2	130	98.5	+	+	-	Historical control data
Shane <i>et al.</i> (2000a)	0	287	100.0	0	72	100.0	-	+	-	Historical control data
				0	66	100.0	-	+	-	Historical control data
Shane <i>et al.</i> (2000b)	nd	nd		13	74	85.1	nd	+	-	
	3	72	96.0	9	156	94.5	nd	+	-	
Shane <i>et al.</i> (2000c)	0	282	100.0	3	119	97.5	+	+	-	
Shelton, Cherry and Manjanatha (2000)	0	29	100.0	0	57	100.0	+	+	-	
Shima, Swiger and Heddle (2000)	1	16	94.1	0	16	100.0	+	+	-	
				1	15	93.8	+	+	-	
Singh <i>et al.</i> (2001)	16	164	91.1	23	108	82.4	-	+	-	
				10	95	90.5	+	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectru m reported	Base change mutatio ns	Size change mutatio ns	Comments
				11	108	90.8	-	+	-	
Sisk <i>et al.</i> (1994)	11	45	80.4	28	26	48.1	+	+	-	
Sisk <i>et al.</i> (1997)	0	22	100.0	0	45	100.0	+	+	-	
Slikker, Mei and Chen (2004)	0	38	100.0	0	51	100.0	+	+	-	
				0	51	100.0	+	+	-	
				0	41	100.0	-	+	-	
S. Sommer (pers. comm.)	9	2 126	99.5				nd	+	-	
Souliotis <i>et al.</i> (1998)	0	47	100.0	0	47	100.0	+	+	-	
Staedtler <i>et al.</i> (1999)	0	27	100.0	0	29	100.0	nd	+	-	
				0	32	100.0	nd	+	-	
Stuart <i>et al.</i> (1996)	0	23	100.0	0	62	100.0	+	+	-	
Stuart <i>et al.</i> (2000a)	1	11	91.7	4	174	97.8	nd	+	-	
Stuart <i>et al.</i> (2000c)	1	30	96.8	1	114	99.1	+	+	-	
				4	117	96.7	+	+	-	
	35	105	75.0	37	138	78.9	+	+	-	
				0	63	100.0	+	+	-	
Stuart <i>et al.</i> (2001)	1	34	97.1	4	132	97.1	+	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
	3	38	92.7	4	100	96.2	+	+	-	
	2	50	96.2	1	141	99.3	+	+	-	
	4	31	88.6	2	136	98.6	+	+	-	
	1	38	97.4	0	145	100.0	+	+	-	
	3	33	91.7	3	119	97.5	+	+	-	
Suter <i>et al.</i> (1998)	0	18	100.0	0	30	100.0	nd	+	-	
				0	30	100.0	nd	+	-	
	0	32	100.0	0	30	100.0	nd	+	-	
				0	30	100.0	nd	+	-	
Suzuki <i>et al.</i> (1997a)	nd	nd		0	12	100.0	+	+	-	No control data
				1	19	95.0	+	+	-	No control data
Suzuki <i>et al.</i> (2000)	0	46	100.0	0	34	100.0	+	+	-	
Takahashi <i>et al.</i> (2002)	1	55	98.2	0	59	100.0	-	+	-	Two- and four-week treatment groups pooled
				0	85	100.0	-	+	-	Two- and four-week treatment groups pooled
Takeiri <i>et al.</i> (2003)	0	29	100.0	0	30	100.0	+	+	-	
	0	14	100.0	0	33	100.0	+	-	+	

Appendix D
 (continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
Thein <i>et al.</i> (2000)	0	21	100.0	5	35	87.5	nd	+	-	
Thornton <i>et al.</i> (2001)	0	45	100.0	0	51	100.0	-	+	-	
	0	34	100.0	0	69	100.0	-	+	-	
Umemura <i>et al.</i> (2007)	0	20	100.0	0	21	100.0	-	+	-	
				0	104	100.0	+	+	-	
Unfried, Schurkes and Abel (2002)	0	21	100.0	0	34	100.0	+	+	-	Sequence analysis of pooled samples
				0	31	100.0	+	+	-	Sequence analysis of pooled samples
Ushijima <i>et al.</i> (1994)	0	13	100.0	0	59	100.0	nd	+	-	
	0	28	100.0	0	80	100.0	nd	+	-	
Walker <i>et al.</i> (1996)	3	26	89.7	2	44	95.7	+	+	-	
Walker <i>et al.</i> (1999a)	7	86	92.5	12	134	91.8	-	+	-	
				7	140	95.2	-	+	-	
Wang <i>et al.</i> (1998)	nd	nd		0	20	100.0	nd	+	-	No control spectrum
				0	19	100.0	nd	+	-	No control spectrum
				0	61	100.0	nd	+	-	No control spectrum
	0	22	100.0	0	44	100.0	nd	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutatio ns	Size change mutatio ns	Comments
White <i>et al.</i> (2001)	4	21	84.0	3	20	87.0	+	+	-	Values approximated from graph
Wickliffe <i>et al.</i> (2003)	1	10	90.9	3	12	80.0	-	+	-	
Winegar <i>et al.</i> (1994)	nd	nd		1	8	88.9	nd	+	-	No control data
				0	10	100.0	nd	+	-	No control data
				3	12	80.0	nd	+	-	No control data
Yamada <i>et al.</i> (2002)	0	37	100.0	0	49	100.0	-	+	-	
				0	37	100.0	+	+	-	
Yamada <i>et al.</i> (2004)				0	36	100.0	-	+	-	Control data from Yamada <i>et al.</i> (2002)
				0	37	100.0	-	+	-	Control data from Yamada <i>et al.</i> (2002)
				0	43	100.0	+	+	-	Control data from Yamada <i>et al.</i> (2002)
Yamada <i>et al.</i> (2005)	0	36	100.0	0	40	100.0	+	+	-	
				0	40	100.0	+	+	-	
				0	37	100.0	+	+	-	
	0	38	100.0	0	43	100.0	+	+	-	
				0	42	100.0	+	+	-	

Appendix D
(continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectrum reported	Base change mutations	Size change mutations	Comments
				0	39	100.0	+	+	-	
Yang, Glickman and de Boer (2002)	0	81	100.0	0	38	100.0	-	+	-	
				0	222	100.0	+	+	-	
				0	208	100.0	-	+	-	
				0	43	100.0	0	40	100.0	-
Yang <i>et al.</i> (2001)				0	73	100.0	+	+	-	
				0	79	100.0	-	+	-	
				0	222	100.0	+	+	-	Control values from Stuart <i>et al.</i> (2001)
				0	106	100.0	+	+	-	Control values from Stuart <i>et al.</i> (2001)
				0	246	100.0	+	+	-	Control values from Stuart <i>et al.</i> (2001)
				0	23	100.0	+	+	-	Control values from Stuart <i>et al.</i> (2001)
				0	63	100.0	+	+	-	Control values from Stuart <i>et al.</i> (2001)
0	60	100.0	+	+	-	Control values from Stuart <i>et al.</i> (2001)				

Appendix D
 (continued)

Reference	Control no. of mutants with reported null sequence change	Control no. of confirmed mutants	Control % of confirmed mutants	Treatment no. of mutants with reported null sequence change	Treatment no. of confirmed mutants	Treatment % of confirmed mutants	Unique spectru m reported	Base change mutatio ns	Size change mutatio ns	Comments
				0	24	100.0	+	+	-	Control values from Stuart <i>et al.</i> (2001)
				0	13	100.0	+	+	-	Control values from Stuart <i>et al.</i> (2001)
				0	58	100.0	+	+	-	Control values from Stuart <i>et al.</i> (2001)
Yang <i>et al.</i> (2003)	0	43	100.0	0	41	100.0	-	+	-	
				0	142	100.0	+	+	-	
				0	97	100.0	+	+	-	
Yu <i>et al.</i> (2002)	nd	nd		0	69	100.0	+	+	-	
				0	56	100.0	+	+	-	
Zhang <i>et al.</i> (2001)	0	163	100.0	0	285	100.0	nd	+	-	
	0	137	100.0	0	81	100.0	nd	+	-	
	0	239	100.0	0	294	100.0	nd	+	-	
Total	617	11 811	94.8	675	19 578	96.6				

+, positive; -, negative; nd, not determined