Table 8. Final body weight and organ weights data in F344 female rats given ferulic acid for 52 weeks

Item		Dose level (%)			
		0	0.5	1.0	2.0
Body weight	(g)	226.5 ± 18.0	240.1 ± 11.4	239.4 ± 23.4	216.6 ±11.9
Absolute	(g)				
Brain		2.12 ± 0.04	2.15 ± 0.06	2.12 ± 0.06	2.11 ± 0.07
Lungs		1.47 ± 0.20	1.41 ± 0.12	1.40 ± 0.10	1.37 ± 0.15
Heart		0.709 ± 0.053	0.768 ± 0.069	0.748 ± 0.037	0.734 ± 0.070
Spleen		0.45 ± 0.04	0.47 ± 0.04	0.45 ± 0.04	0.43 ± 0.03
Pancreas		0.43 ± 0.13	0.43 ± 0.09	0.45 ± 0.07	0.42 ± 0.11
Liver		6.96 ± 0.62	7.37 ± 0.48	7.65 ± 0.59	7.68 ± 0.66
Adrenals		0.048 ± 0.003	0.053 ± 0.006	0.048 ± 0.004	0.040 ± 0.004[b]
Kidneys		1.54 ± 0.16	1.64 ± 0.12	1.65 ± 0.10	1.51 ± 0.10
Ovaries		0.095 ± 0.015	0.100 ± 0.022	0.097 ± 0.008	0.084 ± 0.012
Uterus		1.43 ± 0.24	1.37 ± 0.21	1.22 ± 0.20	1.23 ± 0.20

[a] Means ± SD.

Significantly different from control group by one-way ANOVA, Bonferroni multiple comparison test ([b] P<0.01).

Table 9. Relative organ weights data in F344 female rats given ferulic acid for 52 weeks

Item		Dose level (%)			
		0	0.5	1.0	2.0
Relative	(g/100g B.W.)				
Brain		0.94 ± 0.02	0.90 ± 0.02^{b}	0.89 ± 0.03^{c}	0.97 ± 0.03
Lungs		0.65 ± 0.09	0.59 ± 0.05	0.58 ± 0.04	0.63 ± 0.07
Heart		0.31 ± 0.02	0.32 ± 0.03	0.31 ± 0.02	0.34 ± 0.03
Spleen		0.20 ± 0.02	0.20 ± 0.02	0.17 ± 0.02^{b}	0.20 ± 0.01
Pancreas		0.19 ± 0.06	0.18 ± 0.04	0.19 ± 0.03	0.19 ± 0.05
Liver		3.07 ± 0.27	3.07 ± 0.20	3.20 ± 0.25	3.55 ± 0.30^{b}
Adrenals		0.0212 ± 0.001	0.0221 ± 0.002	0.0201 ± 0.002	0.0185 ± 0.002^{d}
Kidneys		0.68 ± 0.07	0.68 ± 0.05	0.69 ± 0.04	0.70 ± 0.05
Ovaries		0.042 ± 0.007	0.042 ± 0.009	0.041 ± 0.003	0.039 ± 0.006
Uterus		0.63 ± 0.11	0.57 ± 0.09	0.51 ± 0.08	0.57 ± 0.09

[a] Means ± SD.

Significantly different from control group by one-way ANOVA, Bonferroni multiple comparison test ([b] $P<0.01$, [c] $P<0.001$ and [d] $P<0.05$).

Table 10. Mean food consumption in F344 rats at week 80 in two-years bioassay of ferulic acid

Sex	Dose	Food consumption (g/rat/day)
Male	0	13.8 ± 1.2 [a]
	0.5	11.9 ± 2.3
	1.0	12.2 ± 2.3
	2.0	14.3 ± 3.1
Female	0	9.0 ± 0.9
	0.5	7.1 ± 2.6
	1.0	6.8 ± 2.2
	2.0	8.5 ± 3.2

[a] Means ± SD.

研究成果の刊行に関する一覧表

発表者氏名	論文タイトル名	発表誌名	巻号	ページ	出版年
Son H-Y, Nishikawa A, Okazaki K, Kitamura Y, Kanki K, Lee K-Y, Umemura T, Hirose M	Specificity of co-promoting effects of caffeine on thyroid carcinogenesis in rats pretreated with *N*-bis(2-hydroxypropyl)nitrosamine	Toxicol. Pathol.	32	338-344	2004
Kohno H, Suzuki R, Sugie S, Tsuda H, Tanaka T	Lack of modifying effects of 4-*tert*-octylphenol and benzyl butyl phthalate on 3,2-dimethyl-4-aminobiphenyl-induced prostate carcinogenesis in rats	Cancer Sci.	95	300-305	2004
Umemura T, Kitamura Y, Kanki K, Maruyama S, Okazaki K, Imazawa T, Nishimura T, Hasegawa R, Nishikawa A, Hirose M	Dose-related changes of oxidative stress and cell proliferation in kidneys of male and female F344 rats exposed to potassium bromate	Cancer Sci.	95	393-398	2004
Kohno H, Suzuki R, Yasui Y, Hosokawa M, Miyashita K, Tanaka T	Pomegranate seed oil rich in conjugated linolenic acid suppresses chemically induced colon carcinogenesis in rats	Cancer Sci.	95	481-486	2004
Tanaka T, Kohno H, Suzuki R, Sugie S	Lack of modifying effects of an estrogenic compound atrazine on 7,12-dimethylbenz(*a*)anthracene-induced ovarian carcinogenesis in rats	Cancer Lett.	210	129-137	2004
Suzuki R, Kohno H, Sugie S, Sasaki K, Yoshimura T, Wada K, Tanaka T	Preventive effects of extract of leaves of ginkgo (*Ginkgo biloba*) and its component bilobalide on azoxymethane-induced colonic aberrant crypt foci in rats	Cancer Lett.	210	159-169	2004

Kitamura Y, Nishikawa A, Nakamura H, Furukawa F, Imazawa T, Umemura T, Uchida K, Hirose M	Effects of *N*-acetylcysteine, quercetin, and phytic acid on spontaneous hepatic and renal lesions in LEC rats	Toxicol. Pathol.	33	584-592	2005
Kuroiwa Y, Nishikawa A, Imazawa T, Kanki K, Kitamura Y, Umemura T, Hirose M	Lack of subchronic toxicity of an aqueous extract of Agaricus blazei Murrill in F344 rats	Food Chem. Toxicol.	43	1047-1053	2005
Kuroiwa Y, Nishikawa A, Imazawa T, Kitamura Y, Kanki K, Umemura T, Hirose M	Lack of carcinogenicity of *D*-xylose given in the diet to F344 rats for two years	Food Chem. Toxicol.	43	1399-1404	2005
Nishikawa A, Imazawa T, Kuroiwa Y, Kitamura Y, Kanki K, Ishii Y, Umemura T, Hirose M	Induction of colon tumors in C57BL/6J mice fed MeIQx, IQ, or PhIP followed by dextran sulfate sodium treatment	Toxicol. Sci.	84	243-248	2005
Nishikawa A, Ikeda T, Son HY, Okazaki K, Imazawa T, Umemura T, Kimura S, Hirose M	Pronounced synergistic promotion of *N*-bis(2-hydroxypropyl) nitrosamine-initiated thyroid tumorigenesis in rats treated with excess soybean and iodine-deficient diets	Toxicol. Sci.	86	258-263	2005
Kanki K, Nishikawa A, Masumura K, Umemura T, Imazawa T, Kitamura Y, Nohmi T, Hirose M	*In vivo* mutational analysis of liver DNA in *gpt* delta transgenic rats treated with the hepatocarcinogens *N*-nitrosopyrrolidine, 2-amino-3-methylimidazo[4,5-*f*]quinoline, and di(2-ethylhexyl)phthalate	Mol. Carcinog.	42	9-17	2005

Kohno H, Suzuki R, Sugie S, Tsuda H, Tanaka T	Dietary supplementation with silymarin inhibits 3,2'-dimethyl-4-aminobiphenyl-induced prostate carcinogenesis in male F344 rats	Clin. Cancer Res.	11	4962-4967	2005
Yoshida K, Tanaka T, Hirose Y, Yamaguchi F, Kohno H, Toida M, Hara A, Sugie S, Shibata T, Mori H	Dietary garcinol inhibits 4-nitroquinoline 1-oxide-induced tongue carcinogenesis in rats	Cancer Lett.	221	29-39	2005
Kohno H, Suzuki R, Sugie S, Tanaka T	Beta-Catenin mutations in a mouse model of inflammation-related colon carcinogenesis induced by 1,2-dimethylhydrazine and dextran sodium sulfate	Cancer Sci.	96	69-76	2005
Tanaka T, Suzuki R, Kohno H, Sugie S, Takahashi M, Wakabayashi K	Colonic adenocarcinomas rapidly induced by the combined treatment with 2-amino-1-methyl-6-phenylimidazo[4,5-*b*]pyridine and dextran sodium sulfate in male ICR mice possess beta-catenin gene mutations and increases immunoreactivity for beta-catenin, cyclooxygenase-2 and inducible nitric oxide synthase	Carcinogenesis	26	229-238	2005