TDMS No. 20005 - 05	P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)	Date Report Requested: 07/23/2008
Test Type: CHRONIC	Ginseng	Time Report Requested: 11:57:36
Route: GAVAGE	CAS Number: 50647-08-0	First Dose M/F: 01/21/04 / 01/22/04
Species/Strain: RATS/F 344		Lab: BAT
	F1_R2	

C Number:	C20005
Lock Date:	09/07/2006
Cage Range:	ALL
Date Range:	ALL
Reasons For Removal:	ALL
Removal Date Range:	ALL
Treatment Groups:	Include ALL
Study Gender:	Both
TDMSE Version:	2.0.0

Species/Strain: RATS/F 344

Test Type: CHRONIC

Route: GAVAGE

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Ginseng

CAS Number: 50647-08-0

Date Report Requested: 07/23/2008 Time Report Requested: 11:57:36 First Dose M/F: 01/21/04 / 01/22/04 Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG	
Disposition Summary					
Animals Initially in Study	50	50	50	50	
Early Deaths					
Dosing Accident	2				
Moribund Sacrifice	13	16	7	16	
Natural Death	5	4	6	11	
Survivors					
Terminal Sacrifice	30	30	37	23	
Animals Examined Microscopically	50	50	50	50	
ALIMENTARY SYSTEM					
Esophagus	(50)	(50)	(50)	(50)	
Perforation	1 (2%)	(56)	(30)	(56)	
Muscularis, Degeneration	1 (2%)				
Muscularis, Hemorrhage	1 (2%)				
Muscularis, Inflammation	1 (2%)				
Periesophageal Tissue, Foreign Body	1 (2%)				
Periesophageal Tissue, Inflammation	1 (2%)				
Intestine Large, Colon	(50)	(50)	(50)	(50)	
Parasite Metazoan	12 (24%)	10 (20%)	11 (22%)	2 (4%)	
Intestine Large, Rectum	(50)	(50)	(50)	(50)	
Inflammation	1 (2%)		1 (2%)		
Intestine Small, Ileum	(50)	(50)	(50)	(50)	
Inflammation, Histiocytic			1 (2%)		
Intestine Small, Jejunum	(50)	(50)	(50)	(50)	
Liver	(50)	(50)	(50)	(50)	
Angiectasis	2 (4%)	6 (12%)		1 (2%)	
Basophilic Focus	21 (42%)	23 (46%)	27 (54%)	20 (40%)	
Clear Cell Focus	28 (56%)	22 (44%)	25 (50%)	20 (40%)	
Degeneration, Cystic	9 (18%)	7 (14%)	5 (10%)	5 (10%)	
Eosinophilic Focus	8 (16%)	7 (14%)	5 (10%)	8 (16%)	
Fatty Change, Focal	4 (00())	0 (00)		2 (4%)	
Fatty Change, Diffuse	4 (8%)	3 (6%)	0 (00)	1 (2%)	
Hematopoietic Cell Proliferation	2 (4%)	6 (12%)	3 (6%)	3 (6%)	
Hepatodiaphragmatic Nodule	3 (6%)	6 (12%)	1 (2%)	4 (8%)	
Inflammation	35 (70%)	34 (68%)	41 (82%)	32 (64%)	
Mixed Cell Focus	4 (8%)	1 (2%)	1 (2%)	5 (10%)	
Necrosis Pigmentation, Hemosiderin	6 (12%)	4 (8%)	1 (2%)	2 (4%)	
Bile Duct, Cyst	1 (2%)	4 (8%)	1 (2%)		
	17 (04%)	10 (09%)		30 (78%)	
Bile Duct, Hyperplasia	47 (94%)	49 (98%)	44 (88%)	39 (78%)	

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Ginseng

CAS Number: 50647-08-0

Date Report Requested: 07/23/2008 Time Report Requested: 11:57:36 First Dose M/F: 01/21/04 / 01/22/04 Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG	
Centrilobular, Degeneration	3 (6%)	2 (4%)	1 (2%)		
Hepatocyte, Hyperplasia	1 (2%)	1 (2%)		1 (2%)	
Oval Cell, Hyperplasia				1 (2%)	
Serosa, Fibrosis	((-)	1 (2%)		
Mesentery	(13)	(9)	(6)	(5)	
Fat, Necrosis	11 (85%)	8 (89%)	4 (67%)	4 (80%)	
Oral Mucosa	(0)	(1)	(1)	(1)	
Pancreas	(50)	(50)	(50)	(50)	
Atrophy	24 (48%)	22 (44%)	23 (46%)	22 (44%)	
Inflammation	1 (2%)	2 (4%)		1 (20()	
Acinus, Basophilic Focus	1 (2%)		2(49/)	1 (2%) 3 (6%)	
Acinus, Hyperplasia Duct, Cyst	I (∠%)	1 (2%)	2 (4%)	3 (0%)	
Salivary Glands	(50)	(50)	(50)	(50)	
Inflammation	(50)	(30)	1 (2%)	(50)	
Necrosis			1 (2%)		
Duct, Metaplasia, Squamous			1 (2%)		
Stomach, Forestomach	(50)	(50)	(50)	(50)	
Foreign Body	1 (2%)	(00)	(88)	(00)	
Inflammation	5 (10%)	3 (6%)	1 (2%)	2 (4%)	
Necrosis	3 (6%)	1 (2%)	(_,,)	1 (2%)	
Epithelium, Dysplasia		(_,,,)		1 (2%)	
Epithelium, Hyperplasia	4 (8%)	2 (4%)		3 (6%)	
Stomach, Glandular	(50)	(50)	(50)	(50)	
Dysplasia			× ,	1 (2%)	
Erosion	1 (2%)				
Inflammation	2 (4%)	1 (2%)			
Mineralization			1 (2%)		
Necrosis	2 (4%)	1 (2%)			
Tongue	(0)	(0)	(1)	(0)	
Epithelium, Hyperplasia			1 (100%)		
CARDIOVASCULAR SYSTEM					
Blood Vessel	(50)	(50)	(50)	(50)	
Mineralization				1 (2%)	
Carotid Artery, Thrombosis	1 (2%)			× ,	
Heart	(50)	(50)	(50)	(50)	
Cardiomyopathy	48 (96%)	50 (100%)	50 (100%)	49 (98%)	
Fibrosis	1 (2%)				
Atrium, Thrombosis	8 (16%)	2 (4%)	3 (6%)	1 (2%)	
Epicardium, Inflammation	1 (2%)				
Valve, Thrombosis		1 (2%)			

Route: GAVAGE

Test Type: CHRONIC

Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Ginseng

CAS Number: 50647-08-0

Date Report Requested: 07/23/2008 Time Report Requested: 11:57:36 First Dose M/F: 01/21/04 / 01/22/04 Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG	
DOCRINE SYSTEM					
Adrenal Cortex	(50)	(50)	(50)	(50)	
Atrophy Degeneration Cyntia	1 (29/)		1 (2%) 1 (2%)	1 (2%)	
Degeneration, Cystic Hypertrophy	1 (2%)	2 (4%)	4 (8%)		
Necrosis	1 (2%)	2 (4%) 1 (2%)	4 (8%)	4 (8%) 2 (4%)	
Zona Fasciculata, Hyperplasia	9 (18%)	6 (12%)	7 (14%)	6 (12%)	
Adrenal Medulla	(50)	(50)	(50)	(50)	
Hyperplasia	9 (18%)	11 (22%)	6 (12%)	11 (22%)	
Infiltration Cellular, Lymphocyte	0 (10,0)	1 (2%)	0 (1270)	(22/3)	
Islets, Pancreatic	(50)	(50)	(50)	(50)	
Hyperplasia	()	2 (4%)	1 (2%)	1 (2%)	
Parathyroid Gland	(50)	(49)	(49)	(46)	
Hyperplasia	1 (2%)	3 (6%)		1 (2%)	
Pituitary Gland	(50)	(50)	(50)	(50)	
Atrophy			1 (2%)		
Fibrosis				1 (2%)	
Necrosis			1 (2%)		
Pars Distalis, Angiectasis	2 (4%)	3 (6%)	1 (2%)	1 (2%)	
Pars Distalis, Hyperplasia	16 (32%)	20 (40%)	18 (36%)	21 (42%)	
Thyroid Gland	(50)	(50)	(50)	(50)	
C-cell, Angiectasis	1 (2%)				
C-cell, Hyperplasia	14 (28%)	14 (28%)	14 (28%)	14 (28%)	
Follicular Cell, Hyperplasia	1 (2%)	1 (2%)			

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Epididymis	(50)	(50)	(50)	(50)
Inflammation	1 (2%)		1 (2%)	
Preputial Gland	(50)	(50)	(50)	(50)
Fibrosis		1 (2%)		
Inflammation	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Prostate	(50)	(50)	(50)	(50)
Inflammation	26 (52%)	29 (58%)	20 (40%)	21 (42%)
Epithelium, Hyperplasia	3 (6%)	7 (14%)	8 (16%)	4 (8%)
Seminal Vesicle	(50)	(50)	(50)	(50)
Hyperplasia	1 (2%)			. ,
Inflammation	1 (2%)			1 (2%)

DMS No. 20005 - 05 Test Type: CHRONIC Route: GAVAGE Species/Strain: RATS/F 344	P03: INCIDENC	Date Report Requested: 07/23/200 Time Report Requested: 11:57:36 First Dose M/F: 01/21/04 / 01/22/04 Lab: BAT			
FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG	
Testes	(50)	(50)	(50)	(50)	
Germinal Epithelium, Degeneration Interstitial Cell, Hyperplasia	13 (26%)	12 (24%)	11 (22%)	1 (2%) 9 (18%)	
HEMATOPOIETIC SYSTEM					
Bone Marrow Hyperplasia Myelofibrosis Necrosis	(50) 25 (50%) 1 (2%) 1 (2%)	(50) 28 (56%) 1 (2%)	(50) 27 (54%) 1 (2%)	(50) 28 (56%)	
Thrombosis Lymph Node Mediastinal, Ectasia	1 (2%) (7) 2 (29%)	(15)	(4)	(6)	
Mediastinal, Hemorrhage Mediastinal, Hyperplasia, Lymphoid Mediastinal, Infiltration Cellular, Histiocyte Mediastinal, Infiltration Cellular, Plasma Cell Mediastinal, Necrosis	1 (14%) 1 (14%)	1 (7%) 1 (7%) 3 (20%)	1 (25%) 1 (25%)	1 (17%)	
Pancreatic, Atrophy Pancreatic, Ectasia Lymph Node, Mesenteric Atrophy Ectasia	(49) 3 (6%) 1 (2%)	1 (7%) 2 (13%) (50) 6 (12%) 2 (4%)	1 (25%) (50) 3 (6%)	(50) 4 (8%)	
Hyperplasia, Lymphoid Spleen Angiectasis	(50)	(50) 1 (2%)	(50)	1 (2%) (50)	
Fibrosis Hematopoietic Cell Proliferation Hyperplasia, Histiocytic	1 (2%) 29 (58%)	1 (2%) 26 (52%) 2 (4%)	33 (66%)	1 (2%) 26 (52%)	
Necrosis Pigmentation, Hemosiderin Thrombosis	30 (60%) 1 (2%)	2 (4%) 2 (4%) 30 (60%)	1 (2%) 31 (62%)	1 (2%) 31 (62%)	
Lymphoid Follicle, Hyperplasia Thymus Atrophy Inflammation	(50) 48 (96%) 1 (2%)	1 (2%) (47) 46 (98%)	(49) 47 (96%)	(50) 46 (92%)	
INTEGUMENTARY SYSTEM					
Mammary Gland Cyst Skin Ulcer Epidermis, Cyst Epithelial Inclusion	(50) (50) 1 (2%) 2 (4%)	(50) (50) 1 (2%) 5 (10%)	(50) 1 (2%) (50) 6 (12%)	(50) 1 (2%) (50) 7 (14%)	

a - Number of animals examined microscopically at site and number of animals with lesion

Test Type: CHRONIC

Species/Strain: RATS/F 344

Route: GAVAGE

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Ginseng

CAS Number: 50647-08-0

Date Report Requested: 07/23/2008 Time Report Requested: 11:57:36 First Dose M/F: 01/21/04 / 01/22/04 Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG	
Epidermis, Hyperplasia Subcutaneous Tissue, Inflammation, Histiocytic	2 (4%) 1 (2%)				
MUSCULOSKELETAL SYSTEM					
Bone Cranium, Osteopetrosis	(50) 1 (2%)	(50)	(50)	(50)	
Femur, Osteopetrosis Skeletal Muscle	1 (2%) (0)	2 (4%) (0)	1 (2%) (0)	2 (4%) (1)	
NERVOUS SYSTEM					
Brain Gliosis, Focal	(50)	(50) 1 (2%)	(50)	(50)	
Necrosis Peripheral Nerve Infiltration Cellular, Mononuclear Cell	(0)	1 (2%) (0)	2 (4%) (2) 1 (50%)	(0)	
RESPIRATORY SYSTEM					
Larynx Inflammation	(1) 1 (100%)	(0)	(0)	(0)	
Lung	(50)	(50)	(50)	(50)	
Fibrosis	()	2 (4%)	1 (2%)	2 (4%)	
Hemorrhage	. ()	1 (2%)	- />	1 (2%)	
Inflammation Inflammation, Chronic Active Thrombosis	4 (8%) 1 (2%) 3 (6%)	8 (16%)	3 (6%)	8 (16%)	
Alveolar Epithelium, Hyperplasia Alveolar Epithelium, Metaplasia	10 (20%)	7 (14%)	7 (14%) 1 (2%)	6 (12%) 1 (2%)	
Alveolar Epithelium, Metaplasia, Squamous Alveolus, Infiltration Cellular, Histiocyte Arteriole, Hypertrophy	2 (4%) 15 (30%) 1 (2%)	14 (28%)	2 (4%) 18 (36%)	19 (38%)	
Nose	(50)	(50)	(50)	(50)	
Foreign Body Thrombosis Nasolacrimal Duct, Foreign Body Nasolacrimal Duct, Inflammation	7 (14%) 1 (2%) 1 (2%) 1 (2%)	7 (14%)	9 (18%)	5 (10%)	
Olfactory Epithelium, Inflammation Respiratory Epithelium, Hyperplasia	1 (270)	2 (4%) 1 (2%)	2 (4%)	4 (8%)	
Respiratory Epithelium, Inflammation Trachea	12 (24%) (50)	11 (22%) (50)	10 (20%) (50)	16 (32%) (50)	

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Ginseng

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FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG	
Inflammation				1 (2%)	
Ulcer				1 (2%)	
Epithelium, Metaplasia, Squamous	1 (2%)			1 (2%)	
PECIAL SENSES SYSTEM					
Eye	(50)	(50)	(50)	(50)	
Anterior Chamber, Posterior Chamber, Fibrosis			1 (2%)		
Cornea, Inflammation	1 (2%)			1 (2%)	
Lens, Cataract	2 (4%)	1 (2%)		1 (2%)	
Retina, Degeneration	4 (8%)			3 (6%)	
Retina, Fibrosis	1 (2%)				
Retina, Mineralization	1 (2%)				
Retina, Necrosis				1 (2%)	
Harderian Gland	(50)	(50)	(50)	(50)	
Metaplasia	(0)	1 (2%)	1 (2%)		
Zymbal's Gland	(0)	(0)	(0)	(1)	
JRINARY SYSTEM					
Kidney	(50)	(50)	(50)	(50)	
Accumulation, Hyaline Droplet	2 (4%)	2 (4%)	()	1 (2%)	
Amyloid Deposition		1 (2%)			
Mineralization	26 (52%)	31 (62%)	29 (58%)	35 (70%)	
Nephropathy	47 (94%)	50 (100%)	50 (100%)	44 (88%)	
Cortex, Cyst		1 (2%)			
Cortex, Hemorrhage				1 (2%)	
Papilla, Necrosis				1 (2%)	
Papilla, Transitional Epithelium, Hyperplasia	1 (2%)	1 (2%)		4 (20()	
Renal Tubule, Dilatation	4 (00/)			1 (2%)	
Renal Tubule, Hyperplasia, Atypical	1 (2%)	(50)	(50)	(50)	
Urinary Bladder Inflammation	(50)	(50)	(50)	(50) 1 (2%)	

*** END OF MALE ***

Species/Strain: RATS/F 344

Test Type: CHRONIC

Route: GAVAGE

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Ginseng

CAS Number: 50647-08-0

Date Report Requested: 07/23/2008 Time Report Requested: 11:57:36 First Dose M/F: 01/21/04 / 01/22/04 Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG	
isposition Summary					
Animals Initially in Study	50	50	50	50	
Early Deaths					
Dosing Accident			3	1	
Moribund Sacrifice	8	12	7	10	
Natural Death	6	11	6	15	
Survivors					
Terminal Sacrifice	36	27	34	24	
Animals Examined Microscopically	50	50	50	50	
IMENTARY SYSTEM					
Esophagus	(50)	(50)	(50)	(50)	
Perforation				1 (2%)	
Muscularis, Degeneration		1 (2%)			
Periesophageal Tissue, Foreign Body				1 (2%)	
Periesophageal Tissue, Inflammation				1 (2%)	
Periesophageal Tissue, Necrosis				1 (2%)	
Intestine Large, Cecum	(50)	(50)	(50)	(50)	
Inflammation		1 (2%)			
Intestine Large, Colon	(50)	(50)	(50)	(50)	
Parasite Metazoan	5 (10%)	9 (18%)	7 (14%)	4 (8%)	
Intestine Large, Rectum	(50)	(50)	(50)	(50)	
Intestine Small, Duodenum	(50)	(50)	(50)	(50)	
Intestine Small, Jejunum	(50)	(50)	(50)	(50)	
Liver	(50)	(50)	(50)	(50)	
Angiectasis	1 (2%)	1 (2%)		2 (4%)	
Basophilic Focus	46 (92%)	38 (76%)	46 (92%)	45 (90%)	
Clear Cell Focus	6 (12%)	3 (6%)	8 (16%)	6 (12%)	
Cytoplasmic Alteration, Focal	1 (00()		1 (2%)		
Degeneration, Cystic Eosinophilic Focus	1 (2%) 16 (32%)	10 (200/)	10 (040/)	12 (269/)	
Fatty Change, Focal	16 (32%)	10 (20%) 2 (4%)	12 (24%)	13 (26%)	
Fatty Change, Focal Fatty Change, Diffuse	5 (10%)	2 (4%) 4 (8%)	4 (8%)	5 (10%)	
Hematopoietic Cell Proliferation	5 (10%) 6 (12%)	4 (8%) 6 (12%)	4 (8%) 7 (14%)	5 (10%) 4 (8%)	
Hepatodiaphragmatic Nodule	4 (8%)	4 (8%)	2 (4%)	4 (8%) 5 (10%)	
Inflammation	43 (86%)	38 (76%)	43 (86%)	45 (90%)	
Mixed Cell Focus	5 (10%)	3 (6%)	5 (10%)	43 (90%)	
Necrosis	0 (10/0)	2 (4%)	1 (2%)	1 (2%)	
Pigmentation, Hemosiderin	2 (4%)	3 (6%)	1 (270)	2 (4%)	
Tension Lipidosis	2 (170)	0 (070)	1 (2%)	1 (2%)	
Bile Duct, Hyperplasia	19 (38%)	19 (38%)	17 (34%)	9 (18%)	

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Ginseng

CAS Number: 50647-08-0

Date Report Requested: 07/23/2008 Time Report Requested: 11:57:36 First Dose M/F: 01/21/04 / 01/22/04 Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG	
Centrilobular, Degeneration		1 (2%)	2 (4%)		
Oval Cell, Hyperplasia		(-)	2 (4%)	(-)	
Mesentery	(9)	(8)	(6)	(6)	
Fat, Necrosis Oral Mucosa	9 (100%)	8 (100%)	6 (100%)	6 (100%)	
Pancreas	(0) (50)	(0) (50)	(1) (50)	(0) (50)	
Atrophy	(50) 16 (32%)	(50) 11 (22%)	(50) 12 (24%)	(50) 12 (24%)	
Basophilic Focus	10 (32 %)	11 (2270)	1 (2%)	12 (2476)	
Inflammation	1 (2%)		1 (270)		
Acinus, Vacuolization Cytoplasmic	1 (2%)				
Salivary Glands	(50)	(50)	(50)	(50)	
Atrophy	1 (2%)	(66)	(00)	(88)	
Inflammation	1 (2%)				
Stomach, Forestomach	(50)	(50)	(50)	(50)	
Inflammation	1 (2%)	2 (4%)	()	()	
Mineralization	(),			1 (2%)	
Necrosis	1 (2%)				
Epithelium, Cyst				1 (2%)	
Epithelium, Dysplasia		1 (2%)			
Epithelium, Hyperplasia	1 (2%)	2 (4%)		3 (6%)	
Stomach, Glandular	(50)	(50)	(50)	(50)	
Inflammation				1 (2%)	
_ Mineralization		(-)	(-)	1 (2%)	
Tongue	(1)	(0)	(0)	(0)	
_ Epithelium, Hyperplasia	1 (100%)			(0)	
Tooth	(1)	(0)	(0)	(0)	
Peridontal Tissue, Inflammation	1 (100%)				
CARDIOVASCULAR SYSTEM					
Blood Vessel	(50)	(50)	(50)	(50)	
Inflammation	1 (2%)	1 (2%)	(00)	1 (2%)	
Mineralization	. (_ /)	. (_,,,,		1 (2%)	
Heart	(50)	(50)	(50)	(50)	
Cardiomyopathy	47 (94%)	43 (86%)	48 (96%)	46 (92%)	
Mineralization	• •			1 (2%)	
Atrium, Thrombosis		1 (2%)		1 (2%)	
Endocardium, Hyperplasia	1 (2%)				
ENDOCRINE SYSTEM					
Adrenal Cortex	(50)	(50)	(50)	(50)	
Atrophy	1 (2%)		(30)	(00)	
Degeneration, Cystic	5 (10%)	6 (12%)	4 (8%)	4 (8%)	
5	· · /	· · /	· · /	× ,	

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Ginseng

CAS Number: 50647-08-0

Date Report Requested: 07/23/2008 Time Report Requested: 11:57:36 First Dose M/F: 01/21/04 / 01/22/04 Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG	
Hypertrophy	3 (6%)	6 (12%)	1 (2%)	2 (4%)	
Necrosis	2 (4%)			2 (4%)	
Zona Fasciculata, Hyperplasia	11 (22%)	10 (20%)	7 (14%)	8 (16%)	
Adrenal Medulla	(50)	(50)	(50)	(50)	
Hyperplasia	2 (4%)	3 (6%)	3 (6%)	1 (2%)	
Islets, Pancreatic	(50)	(50)	(50)	(50)	
Atrophy	1 (2%)				
Hyperplasia			1 (2%)		
Inflammation, Chronic	1 (2%)				
Parathyroid Gland	(48)	(45)	(46)	(50)	
Hyperplasia				1 (2%)	
Pituitary Gland	(50)	(49)	(50)	(50)	
Hemorrhage	1 (2%)	()	()	1 (2%)	
Pars Distalis, Angiectasis	7 (14%)	2 (4%)	6 (12%)	3 (6%)	
Pars Distalis, Cyst		1 (2%)	()	2 (4%)	
Pars Distalis, Hyperplasia	23 (46%)	19 (39%)	19 (38%)	20 (40%)	
Pars Intermedia, Hyperplasia	· · · · ·	()	1 (2%)	(
Thyroid Gland	(50)	(50)	(50)	(50)	
C-cell, Hyperplasia	18 (36%)	18 (36%)	17 (34%)	19 (38%)	

None

GENITAL SYSTEM					
Clitoral Gland	(50)	(50)	(50)	(50)	
Inflammation	()	1 (2%)	1 (2%)	1 (2%)	
Ovary	(50)	(50)	(50)	(50)	
Cyst	6 (12%)	5 (10%)	9 (18%)	7 (14%)	
Uterus	(50)	(50)	(50)	(50)	
Inflammation Thrombosis		1 (2%)			
Cervix, Cyst, Multiple		1 (2%) 1 (2%)			
Endometrium, Hyperplasia, Cystic	4 (8%)	5 (10%)	3 (6%)	4 (8%)	
Vagina	(0)	(0)	(2)	(0)	
Inflammation	(-)	(-)	1 (50%)		
HEMATOPOIETIC SYSTEM					
Bone Marrow	(50)	(50)	(50)	(50)	
Hyperplasia	13 (26%)	18 (36%)	18 (36%)	18 (36%)	
Myelofibrosis	1 (2%)			1 (2%)	

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Ginseng

CAS Number: 50647-08-0

Date Report Requested: 07/23/2008 Time Report Requested: 11:57:36 First Dose M/F: 01/21/04 / 01/22/04 Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG	
Lymph Node Deep Cervical, Infiltration Cellular, Histiocyte Deep Cervical, Infiltration Cellular, Mast Cell Mediastinal, Hyperplasia, Lymphoid Mediastinal, Infiltration Cellular, Histiocyte Mediastinal, Infiltration Cellular, Plasma Cell Lymph Node, Mesenteric Atrophy Hyperplasia, Lymphoid Spleen Hematopoietic Cell Proliferation Hyperplasia, Histiocytic Pigmentation, Hemosiderin Capsule, Fibrosis Lymphoid Follicle, Atrophy Red Pulp, Atrophy	(1) 1 (100%) (50) 2 (4%) (50) 42 (84%) 1 (2%) 44 (88%) 1 (2%) 1 (2%) (48)	(5) 1 (20%) 2 (40%) (50) (50) 41 (82%) 41 (82%)	 (4) 1 (25%) 1 (25%) 1 (25%) (50) 3 (6%) (50) 42 (84%) 1 (2%) 40 (80%) 	 (4) 1 (25%) 1 (25%) (50) 1 (2%) 2 (4%) (50) 38 (76%) 43 (86%) 1 (2%) (50) 	
Thymus Atrophy	(48) 47 (98%)	(49) 44 (90%)	(50) 49 (98%)	(50) 50 (100%)	
INTEGUMENTARY SYSTEM Mammary Gland Cyst Hyperplasia Skin Ulcer Epidermis, Atrophy Epidermis, Cyst Epithelial Inclusion Subcutaneous Tissue, Inflammation	(50) (50)	(50) 2 (4%) (50) 1 (2%)	(50) 1 (2%) (50)	(50) (50) 1 (2%) 1 (2%) 1 (2%)	
MUSCULOSKELETAL SYSTEM Bone Femur, Osteopetrosis Skeletal Muscle Atrophy	(50) 3 (6%) (1) 1 (100%)	(50) (1)	(50) (0)	(50) (0)	
NERVOUS SYSTEM Brain Gliosis Infiltration Cellular, Mononuclear Cell Cerebrum, Necrosis	(50) 1 (2%) 1 (2%)	(50) 1 (2%) 1 (2%)	(50)	(50) 1 (2%)	

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: RATS/F 344

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

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Eye (50) (50) (50) (50) Fibrosis 1 (2%) 1 (2%) 1 Synechia 1 (2%) 1 (2%) 2 (4%) Cornea, Fibrosis 3 (6%) 1 (2%) 2 (4%) Cornea, Hyperplasia, Squamous 1 (2%) 2 (4%) Cornea, Inflammation 1 (2%) 2 (4%) Cornea, Pigmentation, Hemosiderin 1 (2%) 1 (2%) Lens, Cataract 3 (6%) 3 (6%) 4 (8%) 2 (4%) Optic Nerve, Degeneration 1 (2%) 1 (2%) 1 (2%) Retina, Degeneration 3 (6%) 4 (8%) 2 (4%) Harderian Gland (50) (50) (50)	FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG	
Spinal Cord (1) (1) (1) (0) (0) SSPIRATORY SYSTEM Larynx (1) (0) (0) (2) Foreign Body 1 (100%) (50) (50) (200%) Constraint (200%) (50) (50) (50) (50) Foreign Body 1 (2%) (100%) (100%) (100%) (100%) Hamornhage 1 (2%) 1 (2%) 1 (2%) (100%) (1	Peripheral Nerve		(1)	(0)	(0)	
Largent (1) (0) (0) (2) Foreign Body 1 (100%) 2 (100%) 2 (100%) Largent 2 (4%) 1 (2%) Fibrosis 1 (2%) 1 (2%) Hemorrhage 1 (2%) 1 (2%) Inflammation 4 (8%) 7 (14%) 6 (12%) 5 (10%) Alveolar Epithelium, Hyperplasia 10 (20%) 10 (20%) 6 (12%) 1 (2%) Alveolar Epithelium, Metaplasia 10 (20%) 10 (20%) 6 (12%) 1 (2%) Alveolar Epithelium, Metaplasia 1 (2%) 1 (2%) 1 (2%) 1 (2%) Alveolar Epithelium, Metaplasia 1 (2%) 1 (2%) 1 (2%) 1 (2%) Alveolar Epithelium, Metaplasia 1 (2%) 1 (2%) 1 (2%) 1 (2%) Nase (50) (50) (50) (50) (50) Olfactory Epithelium, Myperplasia 1 (2%) 1 (2%) 1 (2%) 10 (20%) Precipin Body 1 (2%) 1 (2%) 10 (20%) 10 (20%) Precipin Body 1 (2%) 1 (2%) 10 (20%) 10 (20%) Precipin Body			(1)	(0)	(0)	
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Lens, Cataract 3 (6%) 3 (6%) 4 (8%) 2 (4%) Optic Nerve, Degeneration 1 (2%) 1 (2%) Retina, Degeneration 3 (6%) 4 (8%) 2 (4%) Retina, Gliosis 1 (2%) 1 (2%) Harderian Gland (50) (50) (50)	Cornea, IIIIIdIIIIIdii011 Cornea, Diamontation, Llamonidaria		1 (2%)			
Optic Nerve, Degeneration 1 (2%) 1 (2%) Retina, Degeneration 3 (6%) 4 (8%) 2 (4%) 1 (2%) Retina, Gliosis 1 (2%) 1 (2%) 1 (2%) Harderian Gland (50) (50) (50) (50)	Long, Cotoroot	2 (60/)	2 (60/)	4 (00/)		
Retina, Degeneration 3 (6%) 4 (8%) 2 (4%) 1 (2%) Retina, Gliosis 1 (2%) 1 (2%) 1 (2%) Harderian Gland (50) (50) (50) (50)		3 (b%) 1 (2%)	3 (0%)		∠ (4%)	
Retina, Gliosis 1 (2%) Harderian Gland (50) (50) (50)			4 (90/)		1 (29()	
Harderian Gland (50) (50) (50) (50)	Retina, Degeneration	S (0%)	4 (8%)	∠ (4%)		
				(EO)		
	Atrophy	(00)	(00)	(06)	(50) 1 (2%)	

Test Type: CHRONIC

Species/Strain: RATS/F 344

Route: GAVAGE

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Ginseng

CAS Number: 50647-08-0

Date Report Requested: 07/23/2008 Time Report Requested: 11:57:36 First Dose M/F: 01/21/04 / 01/22/04 Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG	
RINARY SYSTEM					
Kidney	(50)	(50)	(50)	(50)	
Accumulation, Hyaline Droplet	1 (2%)	1 (2%)	1 (2%)		
Mineralization	39 (78%)	37 (74%)	41 (82%)	46 (92%)	
Nephropathy	42 (84%)	36 (72%)	43 (86%)	39 (78%)	
Papilla, Necrosis	1 (2%)	00 (1 = 70)	10 (0070)	1 (2%)	
Papilla, Transitional Epithelium, Hyperplasia	1 (2%)		1 (2%)	. (_,,,,	
Pelvis, Inflammation	3 (6%)		~ ,	1 (2%)	
Pelvis, Transitional Epithelium, Hyperplasia	1 (2%)				
Renal Tubule, Hyperplasia, Atypical	1 (2%)			1 (2%)	
Renal Tubule, Infarct	1 (2%)			1 (2%)	
Urethra	(0)	(1)	(0)	(0)	
Inflammation	(=0)	1 (100%)			
Urinary Bladder	(50)	(50)	(50)	(50)	
Calculus Gross Observation	2 (4%)	1 (20/)			
Hemorrhage Inflammation		1 (2%)			
Mineralization		1 (2%)		1 (2%)	
Transitional Epithelium, Hyperplasia		1 (2%)		1 (270)	
Transitional Epithelium, Hyperplasia,	2 (4%)	1 (270)			
Adenomatous					

*** END OF REPORT ***