

TDMS No. 20005 - 05
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

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

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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%)			
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				2 (4%)
Fatty Change, Diffuse	4 (8%)	3 (6%)		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	6 (12%)	4 (8%)	1 (2%)	2 (4%)
Pigmentation, Hemosiderin	1 (2%)	4 (8%)		
Bile Duct, Cyst			1 (2%)	
Bile Duct, Hyperplasia	47 (94%)	49 (98%)	44 (88%)	39 (78%)

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%)		
Acinus, Basophilic Focus				1 (2%)
Acinus, Hyperplasia	1 (2%)		2 (4%)	3 (6%)
Duct, Cyst		1 (2%)		
Salivary Glands	(50)	(50)	(50)	(50)
Inflammation			1 (2%)	
Necrosis			1 (2%)	
Duct, Metaplasia, Squamous			1 (2%)	
Stomach, Forestomach	(50)	(50)	(50)	(50)
Foreign Body	1 (2%)			
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%)		

FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Atrophy			1 (2%)	
Degeneration, Cystic	1 (2%)		1 (2%)	1 (2%)
Hypertrophy	1 (2%)	2 (4%)	4 (8%)	4 (8%)
Necrosis		1 (2%)		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		1 (2%)		
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%)

FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
Testes	(50)	(50)	(50)	(50)
Germinal Epithelium, Degeneration				1 (2%)
Interstitial Cell, Hyperplasia	13 (26%)	12 (24%)	11 (22%)	9 (18%)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Hyperplasia	25 (50%)	28 (56%)	27 (54%)	28 (56%)
Myelofibrosis	1 (2%)	1 (2%)	1 (2%)	
Necrosis	1 (2%)			
Thrombosis	1 (2%)			
Lymph Node	(7)	(15)	(4)	(6)
Mediastinal, Ectasia	2 (29%)			
Mediastinal, Hemorrhage		1 (7%)		
Mediastinal, Hyperplasia, Lymphoid	1 (14%)			1 (17%)
Mediastinal, Infiltration Cellular, Histiocyte		1 (7%)		
Mediastinal, Infiltration Cellular, Plasma Cell	1 (14%)	3 (20%)	1 (25%)	
Mediastinal, Necrosis			1 (25%)	
Pancreatic, Atrophy		1 (7%)		
Pancreatic, Ectasia		2 (13%)	1 (25%)	
Lymph Node, Mesenteric	(49)	(50)	(50)	(50)
Atrophy	3 (6%)	6 (12%)	3 (6%)	4 (8%)
Ectasia	1 (2%)	2 (4%)		
Hyperplasia, Lymphoid				1 (2%)
Spleen	(50)	(50)	(50)	(50)
Angiectasis		1 (2%)		
Fibrosis	1 (2%)	1 (2%)		1 (2%)
Hematopoietic Cell Proliferation	29 (58%)	26 (52%)	33 (66%)	26 (52%)
Hyperplasia, Histiocytic		2 (4%)		
Necrosis		2 (4%)	1 (2%)	1 (2%)
Pigmentation, Hemosiderin	30 (60%)	30 (60%)	31 (62%)	31 (62%)
Thrombosis	1 (2%)			
Lymphoid Follicle, Hyperplasia		1 (2%)		
Thymus	(50)	(47)	(49)	(50)
Atrophy	48 (96%)	46 (98%)	47 (96%)	46 (92%)
Inflammation	1 (2%)			
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(50)	(50)
Cyst			1 (2%)	1 (2%)
Skin	(50)	(50)	(50)	(50)
Ulcer	1 (2%)	1 (2%)		
Epidermis, Cyst Epithelial Inclusion	2 (4%)	5 (10%)	6 (12%)	7 (14%)

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

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%)
SPECIAL 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		1 (2%)	1 (2%)	
Zymbal's Gland	(0)	(0)	(0)	(1)
URINARY 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%)		
Renal Tubule, Dilatation				1 (2%)
Renal Tubule, Hyperplasia, Atypical	1 (2%)			
Urinary Bladder	(50)	(50)	(50)	(50)
Inflammation				1 (2%)

*** END OF MALE ***

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FISCHER 344 RATS FEMALE	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			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

ALIMENTARY 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 (2%)	
Degeneration, Cystic	1 (2%)			
Eosinophilic Focus	16 (32%)	10 (20%)	12 (24%)	13 (26%)
Fatty Change, Focal	1 (2%)	2 (4%)		
Fatty Change, Diffuse	5 (10%)	4 (8%)	4 (8%)	5 (10%)
Hematopoietic Cell Proliferation	6 (12%)	6 (12%)	7 (14%)	4 (8%)
Hepatodiaphragmatic Nodule	4 (8%)	4 (8%)	2 (4%)	5 (10%)
Inflammation	43 (86%)	38 (76%)	43 (86%)	45 (90%)
Mixed Cell Focus	5 (10%)	3 (6%)	5 (10%)	4 (8%)
Necrosis		2 (4%)	1 (2%)	1 (2%)
Pigmentation, Hemosiderin	2 (4%)	3 (6%)		2 (4%)
Tension Lipidosis			1 (2%)	1 (2%)
Bile Duct, Hyperplasia	19 (38%)	19 (38%)	17 (34%)	9 (18%)

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

FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
Centrilobular, Degeneration Oval Cell, Hyperplasia		1 (2%)	2 (4%)	
Mesentery	(9)	(8)	(6)	(6)
Fat, Necrosis	9 (100%)	8 (100%)	6 (100%)	6 (100%)
Oral Mucosa	(0)	(0)	(1)	(0)
Pancreas	(50)	(50)	(50)	(50)
Atrophy	16 (32%)	11 (22%)	12 (24%)	12 (24%)
Basophilic Focus			1 (2%)	
Inflammation	1 (2%)			
Acinus, Vacuolization Cytoplasmic	1 (2%)			
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy	1 (2%)			
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%)			
Tooth	(1)	(0)	(0)	(0)
Peridontal Tissue, Inflammation	1 (100%)			
CARDIOVASCULAR SYSTEM				
Blood Vessel	(50)	(50)	(50)	(50)
Inflammation	1 (2%)	1 (2%)		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%)			
Degeneration, Cystic	5 (10%)	6 (12%)	4 (8%)	4 (8%)

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%)

GENERAL BODY SYSTEM

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		1 (2%)		
Thrombosis		1 (2%)		
Cervix, Cyst, Multiple		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%)

FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
Lymph Node	(1)	(5)	(4)	(4)
Deep Cervical, Infiltration Cellular, Histiocyte	1 (100%)	1 (20%)		
Deep Cervical, Infiltration Cellular, Mast Cell			1 (25%)	
Mediastinal, Hyperplasia, Lymphoid		2 (40%)		1 (25%)
Mediastinal, Infiltration Cellular, Histiocyte			1 (25%)	
Mediastinal, Infiltration Cellular, Plasma Cell			1 (25%)	1 (25%)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Atrophy	2 (4%)		3 (6%)	1 (2%)
Hyperplasia, Lymphoid				2 (4%)
Spleen	(50)	(50)	(50)	(50)
Hematopoietic Cell Proliferation	42 (84%)	41 (82%)	42 (84%)	38 (76%)
Hyperplasia, Histiocytic	1 (2%)		1 (2%)	
Pigmentation, Hemosiderin	44 (88%)	41 (82%)	40 (80%)	43 (86%)
Capsule, Fibrosis	1 (2%)			
Lymphoid Follicle, Atrophy	1 (2%)			
Red Pulp, Atrophy				1 (2%)
Thymus	(48)	(49)	(50)	(50)
Atrophy	47 (98%)	44 (90%)	49 (98%)	50 (100%)

INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(50)	(50)	(50)
Cyst			1 (2%)	
Hyperplasia		2 (4%)		
Skin	(50)	(50)	(50)	(50)
Ulcer				1 (2%)
Epidermis, Atrophy				1 (2%)
Epidermis, Cyst Epithelial Inclusion		1 (2%)		
Subcutaneous Tissue, Inflammation				1 (2%)

MUSCULOSKELETAL SYSTEM

Bone	(50)	(50)	(50)	(50)
Femur, Osteopetrosis	3 (6%)			
Skeletal Muscle	(1)	(1)	(0)	(0)
Atrophy	1 (100%)			

NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Gliosis		1 (2%)		
Infiltration Cellular, Mononuclear Cell	1 (2%)	1 (2%)		1 (2%)
Cerebrum, Necrosis	1 (2%)			

FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
Peripheral Nerve	(1)	(1)	(0)	(0)
Radial, Ulnar, Degeneration	1 (100%)			
Spinal Cord	(1)	(1)	(0)	(0)
RESPIRATORY SYSTEM				
Larynx	(1)	(0)	(0)	(2)
Foreign Body	1 (100%)			2 (100%)
Lung	(50)	(50)	(50)	(50)
Congestion			2 (4%)	1 (2%)
Fibrosis	1 (2%)			1 (2%)
Hemorrhage				1 (2%)
Inflammation	4 (8%)	7 (14%)	6 (12%)	5 (10%)
Mineralization				1 (2%)
Alveolar Epithelium, Hyperplasia	10 (20%)	10 (20%)	6 (12%)	5 (10%)
Alveolar Epithelium, Metaplasia	1 (2%)	1 (2%)		
Alveolar Epithelium, Metaplasia, Squamous		1 (2%)	1 (2%)	1 (2%)
Alveolus, Infiltration Cellular, Histiocyte	14 (28%)	13 (26%)	15 (30%)	9 (18%)
Nose	(50)	(50)	(50)	(50)
Foreign Body	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Thrombosis	1 (2%)			
Nasolacrimal Duct, Inflammation		1 (2%)		
Olfactory Epithelium, Hyperplasia		1 (2%)		
Olfactory Epithelium, Inflammation	1 (2%)			4 (8%)
Respiratory Epithelium, Hyperplasia	1 (2%)	1 (2%)		
Respiratory Epithelium, Inflammation	3 (6%)	2 (4%)	1 (2%)	10 (20%)
SPECIAL SENSES SYSTEM				
Eye	(50)	(50)	(50)	(50)
Fibrosis	1 (2%)			
Synechia			1 (2%)	
Cornea, Fibrosis		3 (6%)	1 (2%)	2 (4%)
Cornea, Hyperplasia, Squamous			1 (2%)	
Cornea, Inflammation		1 (2%)		2 (4%)
Cornea, Pigmentation, Hemosiderin				1 (2%)
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%)	1 (2%)
Retina, Gliosis				1 (2%)
Harderian Gland	(50)	(50)	(50)	(50)
Atrophy				1 (2%)

TDMS No. 20005 - 05
 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
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet	1 (2%)			
Infarct		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%)			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		1 (100%)		
Urinary Bladder	(50)	(50)	(50)	(50)
Calculus Gross Observation	2 (4%)			
Hemorrhage		1 (2%)		
Inflammation		1 (2%)		
Mineralization				1 (2%)
Transitional Epithelium, Hyperplasia		1 (2%)		
Transitional Epithelium, Hyperplasia, Adenomatous	2 (4%)			

*** END OF REPORT ***