

**TDMs No.** 20005 - 05

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH  
AVERAGE SEVERITY GRADES[b]**

**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

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Ginseng

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First Dose M/F: 01/21/04 / 01/22/04

Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
<b>Disposition Summary</b>				
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
<b>ALIMENTARY SYSTEM</b>				
Esophagus	(50)	(50)	(50)	(50)
Perforation	1			
Muscularis, Degeneration	1 [2.0]			
Muscularis, Hemorrhage	1 [2.0]			
Muscularis, Inflammation	1 [2.0]			
Periesophageal Tissue, Foreign Body	1			
Periesophageal Tissue, Inflammation	1 [4.0]			
Intestine Large, Colon	(50)	(50)	(50)	(50)
Parasite Metazoan	12	10	11	2
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Inflammation	1 [2.0]		1 [2.0]	
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Inflammation, Histiocytic			1 [2.0]	
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Liver	(50)	(50)	(50)	(50)
Angiectasis	2 [1.5]	6 [1.2]		1 [1.0]
Basophilic Focus	21	23	27	20
Clear Cell Focus	28	22	25	20
Degeneration, Cystic	9 [1.1]	7 [1.1]	5 [1.2]	5 [1.4]
Eosinophilic Focus	8	7	5	8
Fatty Change, Focal				2 [1.5]
Fatty Change, Diffuse	4 [2.5]	3 [2.0]		1 [1.0]
Hematopoietic Cell Proliferation	2 [1.0]	6 [1.0]	3 [1.0]	3 [1.0]
Hepatodiaphragmatic Nodule	3	6	1	4
Inflammation	35 [1.0]	34 [1.0]	41 [1.0]	32 [1.0]

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

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Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
Mixed Cell Focus	4	1	1	5
Necrosis	6 [1.3]	4 [1.8]	1 [2.0]	2 [2.5]
Pigmentation, Hemosiderin	1 [2.0]	4 [1.5]		
Bile Duct, Cyst			1 [2.0]	
Bile Duct, Hyperplasia	47 [2.0]	49 [2.2]	44 [1.5]	39 [1.4]
Centrilobular, Degeneration	3 [2.0]	2 [2.5]	1 [1.0]	
Hepatocyte, Hyperplasia	1 [2.0]	1 [2.0]		1 [2.0]
Oval Cell, Hyperplasia				1 [1.0]
Serosa, Fibrosis			1 [2.0]	
Mesentery	(13)	(9)	(6)	(5)
Fat, Necrosis	11 [2.5]	8 [2.1]	4 [2.0]	4 [2.3]
Oral Mucosa	(0)	(1)	(1)	(1)
Pancreas	(50)	(50)	(50)	(50)
Atrophy	24 [1.3]	22 [1.6]	23 [1.2]	22 [1.6]
Inflammation	1 [1.0]	2 [1.0]		
Acinus, Basophilic Focus				1 [1.0]
Acinus, Hyperplasia	1 [1.0]		2 [1.0]	3 [1.3]
Duct, Cyst		1 [2.0]		
Salivary Glands	(50)	(50)	(50)	(50)
Inflammation			1 [3.0]	
Necrosis			1 [2.0]	
Duct, Metaplasia, Squamous			1 [4.0]	
Stomach, Forestomach	(50)	(50)	(50)	(50)
Foreign Body	1			
Inflammation	5 [2.2]	3 [2.3]	1 [1.0]	2 [2.0]
Necrosis	3 [2.3]	1 [3.0]		1 [1.0]
Epithelium, Dysplasia				1 [1.0]
Epithelium, Hyperplasia	4 [2.3]	2 [3.0]		3 [1.7]
Stomach, Glandular	(50)	(50)	(50)	(50)
Dysplasia				1 [2.0]
Erosion	1 [1.0]			
Inflammation	2 [1.5]	1 [2.0]		
Mineralization			1 [1.0]	
Necrosis	2 [1.5]	1 [2.0]		
Tongue	(0)	(0)	(1)	(0)
Epithelium, Hyperplasia			1 [3.0]	

## CARDIOVASCULAR SYSTEM

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

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Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
Blood Vessel	(50)	(50)	(50)	(50)
Mineralization				1 [2.0]
Carotid Artery, Thrombosis	1 [2.0]			
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	48 [2.1]	50 [2.0]	50 [2.2]	49 [2.0]
Fibrosis	1 [2.0]			
Atrium, Thrombosis	8 [1.9]	2 [2.5]	3 [1.3]	1 [1.0]
Epicardium, Inflammation	1 [2.0]			
Valve, Thrombosis		1 [1.0]		
<b>ENDOCRINE SYSTEM</b>				
Adrenal Cortex	(50)	(50)	(50)	(50)
Atrophy			1 [3.0]	
Degeneration, Cystic	1 [1.0]		1 [3.0]	1 [1.0]
Hypertrophy	1 [1.0]	2 [1.0]	4 [1.5]	4 [2.0]
Necrosis		1 [2.0]		2 [1.0]
Zona Fasciculata, Hyperplasia	9 [1.3]	6 [1.2]	7 [1.1]	6 [1.7]
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	9 [2.0]	11 [1.8]	6 [2.2]	11 [1.8]
Infiltration Cellular, Lymphocyte		1 [2.0]		
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia		2 [1.0]	1 [2.0]	1 [1.0]
Parathyroid Gland	(50)	(49)	(49)	(46)
Hyperplasia	1 [2.0]	3 [1.7]		1 [1.0]
Pituitary Gland	(50)	(50)	(50)	(50)
Atrophy			1 [2.0]	
Fibrosis				1 [1.0]
Necrosis			1 [2.0]	
Pars Distalis, Angiectasis	2 [1.5]	3 [1.7]	1 [1.0]	1 [2.0]
Pars Distalis, Hyperplasia	16 [2.0]	20 [2.0]	18 [1.8]	21 [1.9]
Thyroid Gland	(50)	(50)	(50)	(50)
C-cell, Angiectasis	1 [2.0]			
C-cell, Hyperplasia	14 [1.6]	14 [1.8]	14 [1.6]	14 [1.8]
Follicular Cell, Hyperplasia	1 [2.0]	1 [1.0]		

**GENERAL BODY SYSTEM**

None

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

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Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
<b>GENITAL SYSTEM</b>				
Epididymis	(50)	(50)	(50)	(50)
Inflammation	1 [2.0]		1 [2.0]	
Preputial Gland	(50)		(50)	(50)
Fibrosis		1 [3.0]		
Inflammation	1 [4.0]	1 [3.0]	1 [2.0]	2 [4.0]
Prostate	(50)	(50)	(50)	(50)
Inflammation	26 [1.8]	29 [1.6]	20 [1.6]	21 [1.7]
Epithelium, Hyperplasia	3 [2.0]	7 [1.6]	8 [1.6]	4 [2.0]
Seminal Vesicle	(50)	(50)	(50)	(50)
Hyperplasia	1 [4.0]			
Inflammation	1 [1.0]			1 [3.0]
Testes	(50)	(50)	(50)	(50)
Germinal Epithelium, Degeneration				1 [4.0]
Interstitial Cell, Hyperplasia	13 [2.6]	12 [2.0]	11 [2.1]	9 [2.4]
<b>HEMATOPOIETIC SYSTEM</b>				
Bone Marrow	(50)	(50)	(50)	(50)
Hyperplasia	25 [2.4]	28 [2.5]	27 [1.9]	28 [2.0]
Myelofibrosis	1 [1.0]	1 [1.0]	1 [1.0]	
Necrosis	1 [2.0]			
Thrombosis	1 [1.0]			
Lymph Node	(7)	(15)	(4)	(6)
Mediastinal, Ectasia	2 [2.0]			
Mediastinal, Hemorrhage		1 [2.0]		
Mediastinal, Hyperplasia, Lymphoid	1 [2.0]			1 [2.0]
Mediastinal, Infiltration Cellular, Histiocyte		1 [2.0]		
Mediastinal, Infiltration Cellular, Plasma Cell	1 [2.0]	3 [2.0]	1 [2.0]	
Mediastinal, Necrosis			1 [3.0]	
Pancreatic, Atrophy		1 [4.0]		
Pancreatic, Ectasia		2 [3.0]	1 [2.0]	
Lymph Node, Mesenteric	(49)	(50)	(50)	(50)
Atrophy	3 [2.7]	6 [2.5]	3 [2.0]	4 [1.8]
Ectasia	1 [2.0]	2 [4.0]		

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FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
Hyperplasia, Lymphoid Spleen	(50)	(50)	(50)	1 [2.0] (50)
Angiectasis		1 [3.0]		
Fibrosis	1 [2.0]	1 [2.0]		1 [2.0]
Hematopoietic Cell Proliferation	29 [1.2]	26 [1.4]	33 [1.2]	26 [1.3]
Hyperplasia, Histiocytic Necrosis		2 [4.0]	1 [4.0]	1 [2.0]
Pigmentation, Hemosiderin	30 [1.0]	30 [1.1]	31 [1.1]	31 [1.2]
Thrombosis	1 [3.0]			
Lymphoid Follicle, Hyperplasia		1 [4.0]		
Thymus	(50)	(47)	(49)	(50)
Atrophy	48 [3.3]	46 [3.3]	47 [3.3]	46 [3.4]
Inflammation	1 [2.0]			
<b>INTEGUMENTARY SYSTEM</b>				
Mammary Gland	(50)	(50)	(50)	(50)
Cyst			1 [1.0]	1 [3.0]
Skin	(50)	(50)	(50)	(50)
Ulcer	1 [2.0]	1 [2.0]		
Epidermis, Cyst Epithelial Inclusion	2	5	6	7
Epidermis, Hyperplasia	2 [2.5]			
Subcutaneous Tissue, Inflammation, Histiocytic	1 [3.0]			
<b>MUSCULOSKELETAL SYSTEM</b>				
Bone	(50)	(50)	(50)	(50)
Cranium, Osteopetrosis	1 [2.0]			
Femur, Osteopetrosis	1 [2.0]	2 [2.0]	1 [2.0]	2 [2.5]
Skeletal Muscle	(0)	(0)	(0)	(1)
<b>NERVOUS SYSTEM</b>				
Brain	(50)	(50)	(50)	(50)
Gliosis, Focal		1 [1.0]		
Necrosis		1 [1.0]	2 [2.5]	
Peripheral Nerve	(0)	(0)	(2)	(0)

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Infiltration Cellular, Mononuclear Cell			1 [2.0]	
<b>RESPIRATORY SYSTEM</b>				
Larynx	(1)	(0)	(0)	(0)
Inflammation	1 [2.0]			
Lung	(50)	(50)	(50)	(50)
Fibrosis		2 [1.0]	1 [1.0]	2 [1.0]
Hemorrhage		1 [2.0]		1 [2.0]
Inflammation	4 [2.0]	8 [2.0]	3 [1.3]	8 [1.8]
Inflammation, Chronic Active	1 [1.0]			
Thrombosis	3 [1.0]			
Alveolar Epithelium, Hyperplasia	10 [1.6]	7 [1.4]	7 [2.0]	6 [1.7]
Alveolar Epithelium, Metaplasia			1 [1.0]	1 [1.0]
Alveolar Epithelium, Metaplasia, Squamous	2 [1.5]		2 [1.0]	
Alveolus, Infiltration Cellular, Histiocyte Arteriole, Hypertrophy	15 [1.3]	14 [1.4]	18 [1.1]	19 [1.1]
Nose	(50)	(50)	(50)	(50)
Foreign Body	7	7	9	5
Thrombosis	1 [2.0]			
Nasolacrimal Duct, Foreign Body	1			
Nasolacrimal Duct, Inflammation	1 [1.0]			
Olfactory Epithelium, Inflammation		2 [1.0]	2 [1.5]	4 [1.5]
Respiratory Epithelium, Hyperplasia		1 [2.0]		
Respiratory Epithelium, Inflammation	12 [1.8]	11 [1.4]	10 [1.7]	16 [2.1]
Trachea	(50)	(50)	(50)	(50)
Inflammation				1 [2.0]
Ulcer				1 [3.0]
Epithelium, Metaplasia, Squamous	1 [2.0]			1 [1.0]
<b>SPECIAL SENSES SYSTEM</b>				
Eye	(50)	(50)	(50)	(50)
Anterior Chamber, Posterior Chamber, Fibrosis			1 [4.0]	
Cornea, Inflammation	1 [2.0]			1 [3.0]
Lens, Cataract	2 [2.5]	1 [1.0]		1 [2.0]
Retina, Degeneration	4 [2.5]			3 [1.3]

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FISCHER 344 RATS MALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
Retina, Fibrosis	1 [1.0]			
Retina, Mineralization	1 [1.0]			
Retina, Necrosis				1 [1.0]
Harderian Gland	(50)	(50)	(50)	(50)
Metaplasia		1 [2.0]	1 [2.0]	
Zymbal's Gland	(0)	(0)	(0)	(1)
<b>URINARY SYSTEM</b>				
Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet	2 [2.0]	2 [2.0]		1 [1.0]
Amyloid Deposition		1 [2.0]		
Mineralization	26 [1.0]	31 [1.0]	29 [1.0]	35 [1.0]
Nephropathy	47 [1.9]	50 [1.9]	50 [1.8]	44 [1.5]
Cortex, Cyst		1 [2.0]		
Cortex, Hemorrhage				1 [3.0]
Papilla, Necrosis				1 [2.0]
Papilla, Transitional Epithelium, Hyperplasia	1 [1.0]	1 [1.0]		
Renal Tubule, Dilatation				1 [4.0]
Renal Tubule, Hyperplasia, Atypical	1 [2.0]			
Urinary Bladder	(50)	(50)	(50)	(50)
Inflammation				1 [4.0]

\*\*\* END OF MALE \*\*\*



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FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
<b>Disposition Summary</b>				
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
<b>ALIMENTARY SYSTEM</b>				
Esophagus	(50)	(50)	(50)	(50)
Perforation				1
Muscularis, Degeneration		1 [2.0]		
Periesophageal Tissue, Foreign Body				1
Periesophageal Tissue, Inflammation				1 [4.0]
Periesophageal Tissue, Necrosis				1 [4.0]
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Inflammation		1 [1.0]		
Intestine Large, Colon	(50)	(50)	(50)	(50)
Parasite Metazoan	5	9	7	4
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 [1.0]	1 [2.0]		2 [1.5]
Basophilic Focus	46	38	46	45
Clear Cell Focus	6	3	8	6
Cytoplasmic Alteration, Focal Degeneration, Cystic	1 [1.0]		1 [1.0]	
Eosinophilic Focus	16	10	12	13
Fatty Change, Focal	1 [1.0]	2 [1.0]		
Fatty Change, Diffuse	5 [1.2]	4 [2.5]	4 [1.3]	5 [1.6]
Hematopoietic Cell Proliferation	6 [1.0]	6 [1.0]	7 [1.0]	4 [1.0]
Hepatodiaphragmatic Nodule	4	4	2	5
Inflammation	43 [1.1]	38 [1.1]	43 [1.0]	45 [1.1]

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Mixed Cell Focus	5	3	5	4
Necrosis		2 [1.5]	1 [1.0]	1 [1.0]
Pigmentation, Hemosiderin	2 [1.0]	3 [1.0]		2 [1.0]
Tension Lipidosis			1 [2.0]	1 [1.0]
Bile Duct, Hyperplasia	19 [1.3]	19 [1.2]	17 [1.3]	9 [1.0]
Centrilobular, Degeneration		1 [3.0]	2 [1.5]	
Oval Cell, Hyperplasia			2 [1.0]	
Mesentery	(9)	(8)	(6)	(6)
Fat, Necrosis	9 [1.6]	8 [2.3]	6 [1.8]	6 [2.2]
Oral Mucosa	(0)	(0)	(1)	(0)
Pancreas	(50)	(50)	(50)	(50)
Atrophy	16 [1.4]	11 [1.2]	12 [1.2]	12 [1.1]
Basophilic Focus			1 [1.0]	
Inflammation	1 [2.0]			
Acinus, Vacuolization Cytoplasmic	1 [2.0]			
Salivary Glands	(50)	(50)	(50)	(50)
Atrophy	1 [2.0]			
Inflammation	1 [2.0]			
Stomach, Forestomach	(50)	(50)	(50)	(50)
Inflammation	1 [2.0]	2 [1.5]		
Mineralization				1 [2.0]
Necrosis	1 [2.0]			
Epithelium, Cyst				1 [1.0]
Epithelium, Dysplasia		1 [1.0]		
Epithelium, Hyperplasia	1 [2.0]	2 [1.5]		3 [1.7]
Stomach, Glandular	(50)	(50)	(50)	(50)
Inflammation				1 [1.0]
Mineralization				1 [4.0]
Tongue	(1)	(0)	(0)	(0)
Epithelium, Hyperplasia	1 [1.0]			
Tooth	(1)	(0)	(0)	(0)
Peridontal Tissue, Inflammation	1 [2.0]			
<b>CARDIOVASCULAR SYSTEM</b>				
Blood Vessel	(50)	(50)	(50)	(50)
Inflammation	1 [1.0]	1 [1.0]		1 [2.0]
Mineralization				1 [4.0]
Heart	(50)	(50)	(50)	(50)

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Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
Cardiomyopathy	47 [1.8]	43 [1.4]	48 [1.7]	46 [1.5]
Mineralization				1 [2.0]
Atrium, Thrombosis		1 [2.0]		1 [2.0]
Endocardium, Hyperplasia	1 [2.0]			
<b>ENDOCRINE SYSTEM</b>				
Adrenal Cortex	(50)	(50)	(50)	(50)
Atrophy	1 [3.0]			
Degeneration, Cystic	5 [2.0]	6 [1.2]	4 [1.3]	4 [1.3]
Hypertrophy	3 [1.0]	6 [1.5]	1 [1.0]	2 [1.0]
Necrosis	2 [1.5]			2 [2.5]
Zona Fasciculata, Hyperplasia	11 [1.3]	10 [1.4]	7 [1.3]	8 [1.0]
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	2 [1.5]	3 [1.3]	3 [1.3]	1 [1.0]
Islets, Pancreatic	(50)	(50)	(50)	(50)
Atrophy	1 [2.0]			
Hyperplasia			1 [2.0]	
Inflammation, Chronic	1 [2.0]			
Parathyroid Gland	(48)	(45)	(46)	(50)
Hyperplasia				1 [3.0]
Pituitary Gland	(50)	(49)	(50)	(50)
Hemorrhage	1 [4.0]			1 [3.0]
Pars Distalis, Angiectasis	7 [2.3]	2 [1.5]	6 [2.0]	3 [2.3]
Pars Distalis, Cyst		1 [2.0]		2 [3.0]
Pars Distalis, Hyperplasia	23 [2.3]	19 [2.2]	19 [1.8]	20 [1.9]
Pars Intermedia, Hyperplasia			1 [2.0]	
Thyroid Gland	(50)	(50)	(50)	(50)
C-cell, Hyperplasia	18 [1.7]	18 [1.2]	17 [1.6]	19 [1.5]

**GENERAL BODY SYSTEM**

None

**GENITAL SYSTEM**

Clitoral Gland	(50)	(50)	(50)	(50)
Inflammation		1 [1.0]	1 [1.0]	1 [2.0]

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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

FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
Ovary	(50)	(50)	(50)	(50)
Cyst	6 [3.3]	5 [3.4]	9 [2.6]	7 [2.4]
Uterus	(50)	(50)	(50)	(50)
Inflammation		1 [2.0]		
Thrombosis		1 [3.0]		
Cervix, Cyst, Multiple		1 [3.0]		
Endometrium, Hyperplasia, Cystic	4 [1.0]	5 [2.2]	3 [1.0]	4 [1.5]
Vagina	(0)	(0)	(2)	(0)
Inflammation			1 [2.0]	
<b>HEMATOPOIETIC SYSTEM</b>				
Bone Marrow	(50)	(50)	(50)	(50)
Hyperplasia	13 [2.1]	18 [2.2]	18 [1.7]	18 [2.0]
Myelofibrosis	1 [2.0]			1 [2.0]
Lymph Node	(1)	(5)	(4)	(4)
Deep Cervical, Infiltration Cellular, Histiocyte	1 [2.0]	1 [2.0]		
Deep Cervical, Infiltration Cellular, Mast Cell			1 [2.0]	
Mediastinal, Hyperplasia, Lymphoid		2 [2.0]		1 [3.0]
Mediastinal, Infiltration Cellular, Histiocyte			1 [2.0]	
Mediastinal, Infiltration Cellular, Plasma Cell			1 [2.0]	1 [2.0]
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Atrophy	2 [2.0]		3 [1.3]	1 [3.0]
Hyperplasia, Lymphoid				2 [2.0]
Spleen	(50)	(50)	(50)	(50)
Hematopoietic Cell Proliferation	42 [1.3]	41 [1.3]	42 [1.3]	38 [1.4]
Hyperplasia, Histiocytic	1 [4.0]		1 [4.0]	
Pigmentation, Hemosiderin	44 [1.4]	41 [1.2]	40 [1.2]	43 [1.4]
Capsule, Fibrosis	1 [2.0]			
Lymphoid Follicle, Atrophy	1 [3.0]			
Red Pulp, Atrophy				1 [4.0]
Thymus	(48)	(49)	(50)	(50)
Atrophy	47 [3.0]	44 [3.0]	49 [3.0]	50 [3.1]

**INTEGUMENTARY SYSTEM**

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Ginseng

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Route: GAVAGE

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First Dose M/F: 01/21/04 / 01/22/04

Species/Strain: RATS/F 344

Lab: BAT

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Mammary Gland	(50)	(50)	(50)	(50)
Cyst			1 [2.0]	
Hyperplasia		2 [2.5]		
Skin	(50)	(50)	(50)	(50)
Ulcer				1 [2.0]
Epidermis, Atrophy				1 [4.0]
Epidermis, Cyst Epithelial Inclusion		1 [4.0]		
Subcutaneous Tissue, Inflammation				1 [2.0]
<b>MUSCULOSKELETAL SYSTEM</b>				
Bone	(50)	(50)	(50)	(50)
Femur, Osteopetrosis	3 [1.0]			
Skeletal Muscle	(1)	(1)	(0)	(0)
Atrophy	1 [3.0]			
<b>NERVOUS SYSTEM</b>				
Brain	(50)	(50)	(50)	(50)
Gliosis		1 [3.0]		
Infiltration Cellular, Mononuclear Cell	1 [1.0]	1 [1.0]		1 [1.0]
Cerebrum, Necrosis	1 [4.0]			
Peripheral Nerve	(1)	(1)	(0)	(0)
Radial, Ulnar, Degeneration	1 [2.0]			
Spinal Cord	(1)	(1)	(0)	(0)
<b>RESPIRATORY SYSTEM</b>				
Larynx	(1)	(0)	(0)	(2)
Foreign Body	1			2
Lung	(50)	(50)	(50)	(50)
Congestion			2 [2.0]	1 [2.0]
Fibrosis	1 [2.0]			1 [1.0]
Hemorrhage				1 [1.0]
Inflammation	4 [1.0]	7 [1.3]	6 [1.5]	5 [1.4]
Mineralization				1 [3.0]
Alveolar Epithelium, Hyperplasia	10 [1.1]	10 [1.1]	6 [1.3]	5 [1.6]
Alveolar Epithelium, Metaplasia	1 [2.0]	1 [1.0]		

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Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
Alveolar Epithelium, Metaplasia, Squamous		1 [1.0]	1 [1.0]	1 [1.0]
Alveolus, Infiltration Cellular, Histiocyte	14 [1.0]	13 [1.0]	15 [1.0]	9 [1.0]
Nose	(50)	(50)	(50)	(50)
Foreign Body	1	1	1	2
Thrombosis	1 [1.0]			
Nasolacrimal Duct, Inflammation		1 [1.0]		
Olfactory Epithelium, Hyperplasia		1 [1.0]		
Olfactory Epithelium, Inflammation	1 [1.0]			4 [1.3]
Respiratory Epithelium, Hyperplasia	1 [1.0]	1 [2.0]		
Respiratory Epithelium, Inflammation	3 [1.3]	2 [1.0]	1 [1.0]	10 [1.5]
<b>SPECIAL SENSES SYSTEM</b>				
Eye	(50)	(50)	(50)	(50)
Fibrosis	1 [2.0]			
Synechia			1 [4.0]	
Cornea, Fibrosis		3 [1.7]	1 [3.0]	2 [2.5]
Cornea, Hyperplasia, Squamous			1 [1.0]	
Cornea, Inflammation		1 [3.0]		2 [2.0]
Cornea, Pigmentation, Hemosiderin				1 [2.0]
Lens, Cataract	3 [3.3]	3 [2.7]	4 [2.0]	2 [2.0]
Optic Nerve, Degeneration	1 [3.0]		1 [2.0]	
Retina, Degeneration	3 [4.0]	4 [2.5]	2 [3.0]	1 [3.0]
Retina, Gliosis				1 [2.0]
Harderian Gland	(50)	(50)	(50)	(50)
Atrophy				1 [3.0]
<b>URINARY SYSTEM</b>				
Kidney	(50)	(50)	(50)	(50)
Accumulation, Hyaline Droplet	1 [1.0]			
Infarct		1 [1.0]	1 [1.0]	
Mineralization	39 [1.0]	37 [1.0]	41 [1.0]	46 [1.1]
Nephropathy	42 [1.3]	36 [1.2]	43 [1.1]	39 [1.2]
Papilla, Necrosis	1 [2.0]			1 [4.0]
Papilla, Transitional Epithelium, Hyperplasia	1 [3.0]		1 [1.0]	
Pelvis, Inflammation	3 [2.7]			1 [4.0]

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Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	1250 MG/KG	2500 MG/KG	5000 MG/KG
Pelvis, Transitional Epithelium, Hyperplasia	1 [2.0]			
Renal Tubule, Hyperplasia, Atypical	1 [3.0]			1 [1.0]
Renal Tubule, Infarct	1 [3.0]			1 [4.0]
Urethra	(0)	(1)	(0)	(0)
Inflammation		1 [2.0]		
Urinary Bladder	(50)	(50)	(50)	(50)
Calculus Gross Observation	2			
Hemorrhage		1 [3.0]		
Inflammation		1 [1.0]		
Mineralization				1 [2.0]
Transitional Epithelium, Hyperplasia		1 [2.0]		
Transitional Epithelium, Hyperplasia, Adenomatous	2 [4.0]			

\*\*\* END OF REPORT \*\*\*