

TDMS No. 20304 - 01
Test Type: CHRONIC
Route: GAVAGE
Species/Strain: RATS/SD

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

TEF evaluation (PCB 118)

CAS Number: 31508-00-6

Date Report Requested: 06/26/2008

Time Report Requested: 12:05:16

First Dose M/F: NA / 03/26/04

Lab: BAT

F1_R8

C Number: C20304

Lock Date: 10/12/2006

Cage Range: ALL

Date Range: ALL

Reasons For Removal: 25022 ACCK 25021 TSAC 25020 NATD
25019 MSAC 25018 DACC

Removal Date Range: ALL

Treatment Groups: Include 001 0 UG/KG Include 004 100 UG/KG Include 005 220 UG/KG
Include 006 460 UG/KG Include 007 1000 UG/KG Include 008 4600 UG/KG
Include 009 4600 UG/KG STOP

Study Gender: Female

TDMSE Version: 2.0.0

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SPRAGUE-DAWLEY RATS FEMALE	0 UG/KG	100 UG/KG	220 UG/KG	460 UG/KG	1000 UG/KG	4600 UG/KG
Disposition Summary						
Animals Initially in Study	80	80	80	80	80	80
Early Deaths						
Accidentally Killed						
Dosing Accident		1				
Moribund Sacrifice	27	22	22	17	16	16
Natural Death	4	9	5	5	8	11
Survivors						
Moribund Sacrifice						
Terminal Sacrifice	21	20	25	30	28	25
Animals Examined Microscopically	52	52	52	52	52	52
ALIMENTARY SYSTEM						
Esophagus	(51)	(52)	(52)	(52)	(52)	(52)
Ulcer				1 (2%)		
Muscularis, Degeneration					1 (2%)	
Muscularis, Inflammation		3 (6%)		1 (2%)		
Intestine Large, Cecum	(52)	(51)	(51)	(52)	(52)	(48)
Degeneration, Fatty					1 (2%)	
Inflammation			1 (2%)	1 (2%)		
Ulcer			1 (2%)			
Artery, Inflammation, Chronic Active				1 (2%)	3 (6%)	1 (2%)
Intestine Large, Colon	(52)	(52)	(52)	(52)	(52)	(48)
Parasite Metazoan	1 (2%)				1 (2%)	1 (2%)
Artery, Inflammation, Chronic Active				1 (2%)	3 (6%)	1 (2%)
Intestine Large, Rectum	(52)	(52)	(52)	(52)	(52)	(50)
Inflammation		1 (2%)				
Parasite Metazoan	2 (4%)	2 (4%)	3 (6%)	2 (4%)	1 (2%)	3 (6%)
Artery, Inflammation, Chronic Active	1 (2%)			2 (4%)	5 (10%)	1 (2%)
Intestine Small, Duodenum	(52)	(52)	(52)	(52)	(52)	(48)
Inflammation					1 (2%)	
Ulcer					1 (2%)	
Intestine Small, Ileum	(52)	(51)	(50)	(52)	(52)	(47)
Artery, Inflammation, Chronic Active					1 (2%)	
Intestine Small, Jejunum	(52)	(52)	(50)	(52)	(52)	(48)
Inflammation, Chronic Active					1 (2%)	
Artery, Inflammation, Chronic Active					1 (2%)	
Liver	(52)	(51)	(52)	(52)	(52)	(49)
Angiectasis		1 (2%)	1 (2%)	2 (4%)		2 (4%)
Basophilic Focus	11 (21%)	5 (10%)	8 (15%)	4 (8%)	8 (15%)	1 (2%)
Basophilic Focus, Multiple	4 (8%)	2 (4%)	3 (6%)	2 (4%)	1 (2%)	

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

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SPRAGUE-DAWLEY RATS FEMALE	0 UG/KG	100 UG/KG	220 UG/KG	460 UG/KG	1000 UG/KG	4600 UG/KG
Cholangiofibrosis		2 (4%)	2 (4%)	3 (6%)	2 (4%)	22 (45%)
Clear Cell Focus	6 (12%)	3 (6%)	4 (8%)	5 (10%)	2 (4%)	
Clear Cell Focus, Multiple	9 (17%)	7 (14%)	3 (6%)	9 (17%)	3 (6%)	
Degeneration, Cystic	1 (2%)		1 (2%)			2 (4%)
Eosinophilic Focus	5 (10%)	5 (10%)	4 (8%)	4 (8%)	5 (10%)	
Eosinophilic Focus, Multiple		3 (6%)	5 (10%)	11 (21%)	20 (38%)	41 (84%)
Fatty Change, Focal	2 (4%)	1 (2%)	6 (12%)	4 (8%)	3 (6%)	
Fatty Change, Diffuse	1 (2%)	2 (4%)	1 (2%)	9 (17%)	39 (75%)	48 (98%)
Hematopoietic Cell Proliferation	19 (37%)	20 (39%)	21 (40%)	28 (54%)	19 (37%)	21 (43%)
Hepatodiaphragmatic Nodule		1 (2%)	2 (4%)	1 (2%)		
Hyperplasia, Nodular					12 (23%)	43 (88%)
Inflammation	21 (40%)	30 (59%)	35 (67%)	36 (69%)	43 (83%)	44 (90%)
Mixed Cell Focus	6 (12%)	5 (10%)	7 (13%)	6 (12%)	1 (2%)	1 (2%)
Mixed Cell Focus, Multiple	15 (29%)	14 (27%)	22 (42%)	30 (58%)	30 (58%)	6 (12%)
Necrosis	1 (2%)	2 (4%)	1 (2%)	2 (4%)	20 (38%)	22 (45%)
Pigmentation	1 (2%)	5 (10%)	12 (23%)	41 (79%)	50 (96%)	48 (98%)
Toxic Hepatopathy				14 (27%)	33 (63%)	46 (94%)
Bile Duct, Cyst	2 (4%)	3 (6%)	5 (10%)	6 (12%)	6 (12%)	21 (43%)
Bile Duct, Fibrosis	2 (4%)	1 (2%)		3 (6%)	2 (4%)	
Bile Duct, Hyperplasia	5 (10%)	6 (12%)	7 (13%)	8 (15%)	21 (40%)	40 (82%)
Capsule, Inflammation	1 (2%)					
Centrilobular, Degeneration	1 (2%)	2 (4%)	4 (8%)	3 (6%)	6 (12%)	1 (2%)
Hepatocyte, Hypertrophy		12 (24%)	15 (29%)	20 (38%)	44 (85%)	48 (98%)
Hepatocyte, Multinucleated		1 (2%)	3 (6%)	21 (40%)	40 (77%)	43 (88%)
Oval Cell, Hyperplasia		12 (24%)	9 (17%)	29 (56%)	40 (77%)	46 (94%)
Mesentery	(2)	(1)	(3)	(3)	(9)	(9)
Hemorrhage				1 (33%)		
Artery, Inflammation, Chronic Active	1 (50%)			2 (67%)	5 (56%)	8 (89%)
Artery, Thrombosis						1 (11%)
Fat, Necrosis					1 (11%)	1 (11%)
Oral Mucosa	(1)	(0)	(1)	(1)	(1)	(3)
Gingival, Cyst						1 (33%)
Gingival, Hyperplasia, Squamous				1 (100%)	1 (100%)	
Pancreas	(52)	(52)	(52)	(52)	(52)	(47)
Amyloid Deposition						
Degeneration	1 (2%)					
Inflammation, Chronic Active		1 (2%)	2 (4%)	2 (4%)	3 (6%)	2 (4%)
Acinus, Atrophy, Focal	4 (8%)	2 (4%)	3 (6%)	4 (8%)	3 (6%)	1 (2%)
Acinus, Atrophy, Diffuse						1 (2%)
Acinus, Hyperplasia		2 (4%)			1 (2%)	
Acinus, Vacuolization Cytoplasmic					4 (8%)	42 (89%)
Artery, Inflammation, Chronic Active	1 (2%)	2 (4%)	1 (2%)	7 (13%)	7 (13%)	12 (26%)
Duct, Dilatation						3 (6%)
Duct, Inflammation						2 (4%)
Duct, Necrosis						1 (2%)
Salivary Glands	(51)	(51)	(52)	(51)	(52)	(51)

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SPRAGUE-DAWLEY RATS FEMALE	0 UG/KG	100 UG/KG	220 UG/KG	460 UG/KG	1000 UG/KG	4600 UG/KG
Degeneration					1 (2%)	
Stomach, Forestomach	(52)	(52)	(52)	(52)	(52)	(51)
Hyperplasia, Squamous		3 (6%)			2 (4%)	3 (6%)
Inflammation	2 (4%)	1 (2%)				1 (2%)
Ulcer	2 (4%)					
Artery, Inflammation, Chronic Active					1 (2%)	1 (2%)
Stomach, Glandular	(52)	(52)	(52)	(52)	(52)	(51)
Cyst	1 (2%)					
Erosion		1 (2%)		1 (2%)		
Mineralization					1 (2%)	
Artery, Inflammation, Chronic Active						1 (2%)
Artery, Mineralization		1 (2%)				
Glands, Cyst			1 (2%)			
Tongue	(0)	(0)	(0)	(0)	(0)	(0)
Degeneration						
Tooth	(10)	(5)	(5)	(5)	(4)	(7)
Peridental Tissue, Inflammation	7 (70%)	5 (100%)	5 (100%)	5 (100%)	4 (100%)	6 (86%)
CARDIOVASCULAR SYSTEM						
Blood Vessel	(52)	(52)	(52)	(52)	(52)	(51)
Aorta, Mineralization		1 (2%)				
Heart	(52)	(52)	(52)	(52)	(52)	(50)
Cardiomyopathy	13 (25%)	19 (37%)	14 (27%)	16 (31%)	19 (37%)	16 (32%)
Inflammation					1 (2%)	1 (2%)
Artery, Inflammation, Chronic Active					1 (2%)	1 (2%)
Artery, Mineralization		1 (2%)	1 (2%)	1 (2%)		
Coronary Artery, Thrombosis		1 (2%)				1 (2%)
Endocardium, Hyperplasia		1 (2%)			1 (2%)	2 (4%)
Endocardium, Infiltration Cellular		1 (2%)				
Epicardium, Fibrosis						1 (2%)
Epicardium, Inflammation		1 (2%)				
Myocardium, Mineralization		1 (2%)				
ENDOCRINE SYSTEM						
Adrenal Cortex	(52)	(52)	(52)	(51)	(52)	(49)
Angiectasis				1 (2%)		
Atrophy	1 (2%)			2 (4%)	9 (17%)	35 (71%)
Degeneration, Cystic	9 (17%)	8 (15%)	9 (17%)	12 (24%)	6 (12%)	8 (16%)
Fibrosis						
Hematopoietic Cell Proliferation	1 (2%)				1 (2%)	
Hyperplasia	14 (27%)	18 (35%)	13 (25%)	16 (31%)	13 (25%)	13 (27%)
Hypertrophy	37 (71%)	37 (71%)	39 (75%)	43 (84%)	44 (85%)	34 (69%)

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SPRAGUE-DAWLEY RATS FEMALE	0 UG/KG	100 UG/KG	220 UG/KG	460 UG/KG	1000 UG/KG	4600 UG/KG
Inflammation			1 (2%)			
Necrosis		1 (2%)	2 (4%)		3 (6%)	
Vacuolization Cytoplasmic	10 (19%)	12 (23%)	13 (25%)	12 (24%)	12 (23%)	18 (37%)
Adrenal Medulla	(52)	(52)	(52)	(52)	(52)	(49)
Hyperplasia	11 (21%)	12 (23%)	14 (27%)	16 (31%)	10 (19%)	1 (2%)
Necrosis					1 (2%)	
Islets, Pancreatic	(52)	(52)	(52)	(52)	(52)	(47)
Hyperplasia		1 (2%)				
Parathyroid Gland	(47)	(46)	(47)	(50)	(50)	(47)
Hyperplasia		1 (2%)				
Pituitary Gland	(52)	(52)	(52)	(52)	(52)	(52)
Angiectasis	1 (2%)	1 (2%)			1 (2%)	
Cyst		1 (2%)				
Vacuolization Cytoplasmic						
Pars Distalis, Cyst					1 (2%)	
Pars Distalis, Hyperplasia	10 (19%)	6 (12%)	13 (25%)	13 (25%)	16 (31%)	10 (19%)
Thyroid Gland	(51)	(51)	(51)	(51)	(52)	(49)
Infiltration Cellular, Lymphocyte					1 (2%)	1 (2%)
Inflammation	1 (2%)					
C-cell, Hyperplasia	10 (20%)	14 (27%)	10 (20%)	6 (12%)	12 (23%)	11 (22%)
Follicular Cell, Hyperplasia					1 (2%)	
Follicular Cell, Hypertrophy	6 (12%)	7 (14%)	13 (25%)	18 (35%)	21 (40%)	23 (47%)

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Clitoral Gland	(52)	(52)	(51)	(52)	(51)	(49)
Hyperplasia, Squamous			1 (2%)			
Inflammation	41 (79%)	38 (73%)	39 (76%)	40 (77%)	35 (69%)	13 (27%)
Duct, Cyst	26 (50%)	39 (75%)	31 (61%)	35 (67%)	37 (73%)	30 (61%)
Ovary	(52)	(52)	(52)	(52)	(52)	(48)
Cyst	8 (15%)	10 (19%)	13 (25%)	14 (27%)	14 (27%)	7 (15%)
Fibrosis				1 (2%)		
Inflammation				2 (4%)	1 (2%)	2 (4%)
Pigmentation				1 (2%)		
Bilateral, Cyst			1 (2%)			
Uterus	(52)	(52)	(52)	(52)	(52)	(49)
Adenomyosis				1 (2%)		1 (2%)
Cyst			1 (2%)	1 (2%)		1 (2%)
Hemorrhage					1 (2%)	1 (2%)
Inflammation	4 (8%)	6 (12%)	6 (12%)	8 (15%)	8 (15%)	4 (8%)

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SPRAGUE-DAWLEY RATS FEMALE	0 UG/KG	100 UG/KG	220 UG/KG	460 UG/KG	1000 UG/KG	4600 UG/KG
Metaplasia, Squamous	29 (56%)	26 (50%)	27 (52%)	34 (65%)	35 (67%)	5 (10%)
Thrombosis	1 (2%)			2 (4%)	1 (2%)	
Ulcer					2 (4%)	
Artery, Inflammation, Chronic Active				1 (2%)		
Cervix, Cyst					1 (2%)	
Endometrium, Hyperplasia, Cystic	28 (54%)	27 (52%)	22 (42%)	23 (44%)	13 (25%)	9 (18%)
Epithelium, Hyperplasia					1 (2%)	
Vagina	(7)	(0)	(0)	(1)	(1)	(0)
HEMATOPOIETIC SYSTEM						
Bone Marrow	(52)	(52)	(52)	(52)	(52)	(52)
Atrophy	4 (8%)	1 (2%)	1 (2%)		1 (2%)	
Hyperplasia	31 (60%)	30 (58%)	30 (58%)	32 (62%)	34 (65%)	47 (90%)
Myelofibrosis			1 (2%)			
Necrosis						1 (2%)
Lymph Node	(0)	(2)	(1)	(1)	(0)	(2)
Bronchial, Ectasia						1 (50%)
Bronchial, Hemorrhage						1 (50%)
Mediastinal, Hemorrhage		1 (50%)				
Lymph Node, Mandibular	(51)	(51)	(52)	(51)	(52)	(51)
Atrophy					1 (2%)	1 (2%)
Hyperplasia, Lymphoid			1 (2%)	1 (2%)	1 (2%)	1 (2%)
Hyperplasia, Plasma Cell	24 (47%)	34 (67%)	36 (69%)	33 (65%)	30 (58%)	19 (37%)
Lymph Node, Mesenteric	(52)	(51)	(52)	(52)	(52)	(47)
Atrophy	1 (2%)	1 (2%)			1 (2%)	
Ectasia						1 (2%)
Hemorrhage					1 (2%)	
Hyperplasia, Plasma Cell	1 (2%)					
Spleen	(52)	(52)	(52)	(52)	(52)	(47)
Hematopoietic Cell Proliferation	42 (81%)	39 (75%)	39 (75%)	39 (75%)	32 (62%)	34 (72%)
Hemorrhage	1 (2%)					
Necrosis	1 (2%)			1 (2%)		
Pigmentation	39 (75%)	35 (67%)	31 (60%)	36 (69%)	40 (77%)	28 (60%)
Capsule, Hemorrhage				1 (2%)		
Lymphoid Follicle, Atrophy	3 (6%)	4 (8%)	2 (4%)	2 (4%)	3 (6%)	3 (6%)
Red Pulp, Atrophy		2 (4%)	2 (4%)	1 (2%)	1 (2%)	3 (6%)
Thymus	(51)	(51)	(51)	(50)	(50)	(49)
Atrophy	41 (80%)	38 (75%)	44 (86%)	44 (88%)	46 (92%)	44 (90%)
Cyst		2 (4%)	1 (2%)			
Hemorrhage		1 (2%)	1 (2%)		1 (2%)	3 (6%)
Inflammation		1 (2%)				
Artery, Inflammation, Chronic Active						2 (4%)

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INTEGUMENTARY SYSTEM						
Mammary Gland	(52)	(51)	(52)	(52)	(52)	(50)
Cyst	1 (2%)	2 (4%)		2 (4%)		
Hyperplasia	4 (8%)	5 (10%)	4 (8%)	5 (10%)		1 (2%)
Inflammation, Granulomatous			2 (4%)	1 (2%)		
Inflammation, Chronic Active		1 (2%)				
Skin	(52)	(51)	(52)	(52)	(52)	(51)
Cyst Epithelial Inclusion			1 (2%)	1 (2%)		
Hyperkeratosis		1 (2%)				
Hyperplasia, Squamous		2 (4%)				
Inflammation		3 (6%)				
MUSCULOSKELETAL SYSTEM						
Bone	(52)	(52)	(52)	(52)	(52)	(52)
Fracture						
Skeletal Muscle	(0)	(1)	(0)	(0)	(1)	(0)
NERVOUS SYSTEM						
Brain	(52)	(52)	(52)	(52)	(52)	(52)
Angiectasis			1 (2%)			
Gliosis	1 (2%)			1 (2%)		
Hemorrhage	3 (6%)			1 (2%)		
Hydrocephalus	1 (2%)	2 (4%)	1 (2%)			
Necrosis	2 (4%)					
Vacuolization Cytoplasmic		1 (2%)				
Meninges, Inflammation				1 (2%)		
Spinal Cord	(0)	(0)	(1)	(0)	(0)	(1)
Nerve, Degeneration						1 (100%)
RESPIRATORY SYSTEM						
Lung	(51)	(52)	(52)	(52)	(52)	(50)
Congestion					1 (2%)	
Hemorrhage				1 (2%)		1 (2%)
Inflammation	5 (10%)	3 (6%)	5 (10%)	3 (6%)	2 (4%)	2 (4%)
Metaplasia, Squamous	1 (2%)			1 (2%)	1 (2%)	13 (26%)
Pigmentation			1 (2%)			1 (2%)
Proteinosis	1 (2%)					
Alveolar Epithelium, Hyperplasia	4 (8%)	2 (4%)				
Alveolar Epithelium, Metaplasia, Bronchiolar	6 (12%)	7 (13%)	14 (27%)	18 (35%)	24 (46%)	40 (80%)

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Alveolus, Infiltration Cellular, Histiocyte Artery, Mediastinum, Inflammation, Chronic Active	36 (71%)	35 (67%)	37 (71%)	39 (75%)	34 (65%)	40 (80%) 1 (2%)
Serosa, Inflammation		1 (2%)				
Nose	(52)	(52)	(52)	(52)	(52)	(52)
Cyst	1 (2%)					
Inflammation	1 (2%)	5 (10%)	5 (10%)	3 (6%)	5 (10%)	23 (44%)
Glands, Cyst						1 (2%)
Nasolacrimal Duct, Inflammation, Suppurative						1 (2%)
Olfactory Epithelium, Degeneration	1 (2%)	1 (2%)				1 (2%)
Olfactory Epithelium, Metaplasia						1 (2%)
Respiratory Epithelium, Degeneration, Focal	1 (2%)					
Respiratory Epithelium, Hyperplasia	5 (10%)	5 (10%)	7 (13%)	7 (13%)	14 (27%)	27 (52%)
Respiratory Epithelium, Metaplasia, Squamous						
Respiratory Epithelium, Necrosis				1 (2%)		
Trachea	(51)	(52)	(52)	(52)	(52)	(52)
Inflammation						1 (2%)
SPECIAL SENSES SYSTEM						
Eye	(52)	(52)	(52)	(52)	(52)	(52)
Cornea, Inflammation	1 (2%)	1 (2%)	1 (2%)	1 (2%)		
Retina, Atrophy	1 (2%)				1 (2%)	6 (12%)
Harderian Gland	(52)	(52)	(52)	(52)	(52)	(52)
Hyperplasia		1 (2%)	2 (4%)			
Infiltration Cellular, Mononuclear Cell	7 (13%)	10 (19%)	3 (6%)	10 (19%)	4 (8%)	13 (25%)
Vacuolization Cytoplasmic					1 (2%)	
URINARY SYSTEM						
Kidney	(52)	(52)	(52)	(52)	(52)	(50)
Accumulation, Hyaline Droplet	1 (2%)		1 (2%)			
Amyloid Deposition						
Calculus Micro Observation Only	3 (6%)			2 (4%)	1 (2%)	
Cyst		2 (4%)				1 (2%)
Dilatation				1 (2%)		
Inflammation					1 (2%)	
Mineralization	25 (48%)	28 (54%)	30 (58%)	18 (35%)	22 (42%)	25 (50%)
Necrosis			1 (2%)			
Nephropathy	42 (81%)	40 (77%)	46 (88%)	44 (85%)	44 (85%)	46 (92%)
Pigmentation	2 (4%)	3 (6%)	3 (6%)	4 (8%)	6 (12%)	42 (84%)
Artery, Inflammation, Chronic Active	1 (2%)				1 (2%)	
Capsule, Inflammation, Chronic Active					1 (2%)	

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SPRAGUE-DAWLEY RATS FEMALE	0 UG/KG	100 UG/KG	220 UG/KG	460 UG/KG	1000 UG/KG	4600 UG/KG
Pelvis, Dilatation		1 (2%)		1 (2%)	1 (2%)	
Pelvis, Inflammation		1 (2%)			2 (4%)	2 (4%)
Renal Tubule, Hyperplasia				1 (2%)		
Transitional Epithelium, Hyperplasia					3 (6%)	3 (6%)
Ureter	(0)	(0)	(0)	(0)	(1)	(0)
Cyst						
Urinary Bladder	(52)	(52)	(52)	(52)	(52)	(50)
Hyperplasia		1 (2%)				
Inflammation		1 (2%)			1 (2%)	

TDMS No. 20304 - 01
Test Type: CHRONIC
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Species/Strain: RATS/SD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)
TEF evaluation (PCB 118)
CAS Number: 31508-00-6

Date Report Requested: 06/26/2008
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Lab: BAT

SPRAGUE-DAWLEY RATS FEMALE

4600 UG/KG STOP

Disposition Summary

Animals Initially in Study	50
Early Deaths	
Accidently Killed	1
Dosing Accident	
Moribund Sacrifice	18
Natural Death	6
Survivors	
Moribund Sacrifice	1
Terminal Sacrifice	24
Animals Examined Microscopically	50

ALIMENTARY SYSTEM

Esophagus	(50)
Ulcer	
Muscularis, Degeneration	
Muscularis, Inflammation	1 (2%)
Intestine Large, Cecum	(49)
Degeneration, Fatty	
Inflammation	
Ulcer	
Artery, Inflammation, Chronic Active	2 (4%)
Intestine Large, Colon	(49)
Parasite Metazoan	1 (2%)
Artery, Inflammation, Chronic Active	2 (4%)
Intestine Large, Rectum	(49)
Inflammation	
Parasite Metazoan	2 (4%)
Artery, Inflammation, Chronic Active	5 (10%)
Intestine Small, Duodenum	(49)
Inflammation	
Ulcer	
Intestine Small, Ileum	(49)
Artery, Inflammation, Chronic Active	
Intestine Small, Jejunum	(49)
Inflammation, Chronic Active	
Artery, Inflammation, Chronic Active	
Liver	(49)
Angiectasis	1 (2%)
Basophilic Focus	5 (10%)
Basophilic Focus, Multiple	4 (8%)

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Cholangiofibrosis	10 (20%)
Clear Cell Focus	3 (6%)
Clear Cell Focus, Multiple	10 (20%)
Degeneration, Cystic	4 (8%)
Eosinophilic Focus	7 (14%)
Eosinophilic Focus, Multiple	13 (27%)
Fatty Change, Focal	9 (18%)
Fatty Change, Diffuse	8 (16%)
Hematopoietic Cell Proliferation	31 (63%)
Hepatodiaphragmatic Nodule	1 (2%)
Hyperplasia, Nodular	4 (8%)
Inflammation	47 (96%)
Mixed Cell Focus	2 (4%)
Mixed Cell Focus, Multiple	34 (69%)
Necrosis	14 (29%)
Pigmentation	43 (88%)
Toxic Hepatopathy	36 (73%)
Bile Duct, Cyst	14 (29%)
Bile Duct, Fibrosis	7 (14%)
Bile Duct, Hyperplasia	25 (51%)
Capsule, Inflammation	
Centrilobular, Degeneration	2 (4%)
Hepatocyte, Hypertrophy	30 (61%)
Hepatocyte, Multinucleated	32 (65%)
Oval Cell, Hyperplasia	29 (59%)
Mesentery	(9)
Hemorrhage	
Artery, Inflammation, Chronic Active	5 (56%)
Artery, Thrombosis	
Fat, Necrosis	
Oral Mucosa	(0)
Gingival, Cyst	
Gingival, Hyperplasia, Squamous	
Pancreas	(49)
Amyloid Deposition	1 (2%)
Degeneration	
Inflammation, Chronic Active	4 (8%)
Acinus, Atrophy, Focal	4 (8%)
Acinus, Atrophy, Diffuse	
Acinus, Hyperplasia	
Acinus, Vacuolization Cytoplasmic	10 (20%)
Artery, Inflammation, Chronic Active	5 (10%)
Duct, Dilatation	
Duct, Inflammation	
Duct, Necrosis	
Salivary Glands	(50)

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SPRAGUE-DAWLEY RATS FEMALE **4600 UG/KG STOP**

Degeneration	
Stomach, Forestomach	(49)
Hyperplasia, Squamous	5 (10%)
Inflammation	4 (8%)
Ulcer	3 (6%)
Artery, Inflammation, Chronic Active	1 (2%)
Stomach, Glandular	(49)
Cyst	
Erosion	2 (4%)
Mineralization	1 (2%)
Artery, Inflammation, Chronic Active	
Artery, Mineralization	
Glands, Cyst	
Tongue	(1)
Degeneration	1 (100%)
Tooth	(7)
Peridental Tissue, Inflammation	7 (100%)

CARDIOVASCULAR SYSTEM

Blood Vessel	(50)
Aorta, Mineralization	
Heart	(50)
Cardiomyopathy	19 (38%)
Inflammation	
Artery, Inflammation, Chronic Active	
Artery, Mineralization	
Coronary Artery, Thrombosis	
Endocardium, Hyperplasia	
Endocardium, Infiltration Cellular	
Epicardium, Fibrosis	
Epicardium, Inflammation	
Myocardium, Mineralization	

ENDOCRINE SYSTEM

Adrenal Cortex	(49)
Angiectasis	
Atrophy	4 (8%)
Degeneration, Cystic	12 (24%)
Fibrosis	1 (2%)
Hematopoietic Cell Proliferation	
Hyperplasia	21 (43%)
Hypertrophy	38 (78%)

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SPRAGUE-DAWLEY RATS FEMALE

4600 UG/KG STOP

Inflammation	
Necrosis	4 (8%)
Vacuolization Cytoplasmic	21 (43%)
Adrenal Medulla	(49)
Hyperplasia	16 (33%)
Necrosis	
Islets, Pancreatic	(49)
Hyperplasia	
Parathyroid Gland	(49)
Hyperplasia	
Pituitary Gland	(50)
Angiectasis	
Cyst	
Vacuolization Cytoplasmic	1 (2%)
Pars Distalis, Cyst	
Pars Distalis, Hyperplasia	10 (20%)
Thyroid Gland	(50)
Infiltration Cellular, Lymphocyte	
Inflammation	
C-cell, Hyperplasia	9 (18%)
Follicular Cell, Hyperplasia	
Follicular Cell, Hypertrophy	12 (24%)

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

Clitoral Gland	(48)
Hyperplasia, Squamous	1 (2%)
Inflammation	29 (60%)
Duct, Cyst	28 (58%)
Ovary	(49)
Cyst	10 (20%)
Fibrosis	
Inflammation	1 (2%)
Pigmentation	
Bilateral, Cyst	
Uterus	(49)
Adenomyosis	
Cyst	
Hemorrhage	2 (4%)
Inflammation	10 (20%)

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Metaplasia, Squamous	23 (47%)
Thrombosis	
Ulcer	
Artery, Inflammation, Chronic Active	
Cervix, Cyst	
Endometrium, Hyperplasia, Cystic	21 (43%)
Epithelium, Hyperplasia	
Vagina	(0)
<hr/>	
HEMATOPOIETIC SYSTEM	
Bone Marrow	(50)
Atrophy	
Hyperplasia	43 (86%)
Myelofibrosis	
Necrosis	
Lymph Node	(1)
Bronchial, Ectasia	
Bronchial, Hemorrhage	
Mediastinal, Hemorrhage	
Lymph Node, Mandibular	(50)
Atrophy	
Hyperplasia, Lymphoid	
Hyperplasia, Plasma Cell	22 (44%)
Lymph Node, Mesenteric	(49)
Atrophy	1 (2%)
Ectasia	
Hemorrhage	2 (4%)
Hyperplasia, Plasma Cell	
Spleen	(49)
Hematopoietic Cell Proliferation	43 (88%)
Hemorrhage	
Necrosis	
Pigmentation	31 (63%)
Capsule, Hemorrhage	
Lymphoid Follicle, Atrophy	1 (2%)
Red Pulp, Atrophy	
Thymus	(50)
Atrophy	46 (92%)
Cyst	
Hemorrhage	
Inflammation	
Artery, Inflammation, Chronic Active	

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INTEGUMENTARY SYSTEM

Mammary Gland	(50)
Cyst	5 (10%)
Hyperplasia	4 (8%)
Inflammation, Granulomatous	4 (8%)
Inflammation, Chronic Active	
Skin	(50)
Cyst Epithelial Inclusion	
Hyperkeratosis	
Hyperplasia, Squamous	
Inflammation	

MUSCULOSKELETAL SYSTEM

Bone	(50)
Fracture	1 (2%)
Skeletal Muscle	(2)

NERVOUS SYSTEM

Brain	(50)
Angiectasis	
Gliosis	
Hemorrhage	1 (2%)
Hydrocephalus	
Necrosis	
Vacuolization Cytoplasmic	
Meninges, Inflammation	
Spinal Cord	(0)
Nerve, Degeneration	

RESPIRATORY SYSTEM

Lung	(50)
Congestion	
Hemorrhage	
Inflammation	2 (4%)
Metaplasia, Squamous	
Pigmentation	
Proteinosis	
Alveolar Epithelium, Hyperplasia	3 (6%)
Alveolar Epithelium, Metaplasia, Bronchiolar	32 (64%)

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Alveolus, Infiltration Cellular, Histiocyte Artery, Mediastinum, Inflammation, Chronic Active	40 (80%)
Serosa, Inflammation	
Nose	(50)
Cyst	
Inflammation	8 (16%)
Glands, Cyst	1 (2%)
Nasolacrimal Duct, Inflammation, Suppurative	
Olfactory Epithelium, Degeneration	
Olfactory Epithelium, Metaplasia	1 (2%)
Respiratory Epithelium, Degeneration, Focal	
Respiratory Epithelium, Hyperplasia	11 (22%)
Respiratory Epithelium, Metaplasia, Squamous	1 (2%)
Respiratory Epithelium, Necrosis	
Trachea	(50)
Inflammation	

SPECIAL SENSES SYSTEM

Eye	(50)
Cornea, Inflammation	
Retina, Atrophy	
Harderian Gland	(50)
Hyperplasia	
Infiltration Cellular, Mononuclear Cell	11 (22%)
Vacuolization Cytoplasmic	

URINARY SYSTEM

Kidney	(49)
Accumulation, Hyaline Droplet	2 (4%)
Amyloid Deposition	1 (2%)
Calculus Micro Observation Only	
Cyst	1 (2%)
Dilatation	
Inflammation	
Mineralization	28 (57%)
Necrosis	
Nephropathy	48 (98%)
Pigmentation	6 (12%)
Artery, Inflammation, Chronic Active	1 (2%)
Capsule, Inflammation, Chronic Active	

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Pelvis, Dilatation	3 (6%)
Pelvis, Inflammation	2 (4%)
Renal Tubule, Hyperplasia	
Transitional Epithelium, Hyperplasia	
Ureter	(2)
Cyst	2 (100%)
Urinary Bladder	(49)
Hyperplasia	
Inflammation	1 (2%)

*** END OF REPORT ***