C Number:	MG96005
Lock Date:	Not Entered.
Cage Range:	All
Date Range:	All
Reasons For Removal:	All
Removal Date Range:	All
Treatment Groups:	All
Study Gender:	Both
PWG Approval Date	NONE

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Disposition Summary				
Animals Initially In Study	**52**	**50**	**50**	**50**
Early Deaths				
Moribund	**8**		**11**	**4**
Natural Death	**11**	**7**	**5**	**8**
Survivors				
Moribund		**1**		
Natural Death			**1**	**2**
Terminal Sacrifice	**33**	**42**	**33**	**36**
Animals Examined Microscopically	**52**	**50**	**49**	**49**
ALIMENTARY SYSTEM				
Esophagus	(49)	(49)	(48)	(49)
Dilatation		1 (2%)		
Hyperkeratosis	2 (4%)	1 (2%)		1 (2%)
Intestine Large, Cecum	(41)	(43)	(46)	(45)
Autolysis				1 (2%)
Hyperplasia, Lymphoid	1 (2%)			
Inflammation, Suppurative				1 (2%)
Lymphatic, Ectasia				1 (2%)
Polyarteritis		1 (2%)		
Intestine Large, Colon	(41)	(43)	(46)	(45)
Hyperplasia, Lymphoid	1 (2%)			
Polyarteritis		1 (2%)		
Intestine Large, Rectum	(38)	(42)	(38)	(38)
Polyarteritis		1 (2%)		
Intestine Small, Duodenum	(41)	(43)	(46)	(43)
Cyst				1 (2%)
Intestine Small, Ileum	(40)	(42)	(45)	(43)
Hyperplasia, Lymphoid	1 (3%)			

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

Experiment Number: 99930-93
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a)
Test Compound: Endocrine disruptor (Genistein)
CAS Number: 446-72-0

Date Report Requested: 10/17/2014
Time Report Requested: 12:51:12
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Intestine Small, Jejunum	(40)	(43)	(45)	(41)
Liver	(49)	(47)	(47)	(48)
Angiectasis	6 (12%)	4 (9%)	2 (4%)	2 (4%)
Autolysis	4 (8%)	2 (4%)	1 (2%)	1 (2%)
Basophilic Focus		4 (9%)	3 (6%)	1 (2%)
Basophilic Focus, Multiple				1 (2%)
Bile Duct, Dilatation				1 (2%)
Bile Duct, Hyperplasia	14 (29%)	10 (21%)	10 (21%)	22 (46%)
Biliar Tract, Cyst				1 (2%)
Biliar Tract, Fibrosis	8 (16%)	2 (4%)	6 (13%)	10 (21%)
Capsule, Hemorrhage	1 (2%)			
Capsule, Hyperplasia				1 (2%)
Clear Cell Focus			2 (4%)	
Congestion				1 (2%)
Cyst			1 (2%)	
Degeneration, Cystic	4 (8%)	6 (13%)	5 (11%)	6 (13%)
Developmental Malformation	1 (2%)		1 (2%)	
Eosinophilic Focus	3 (6%)	2 (4%)	2 (4%)	
Eosinophilic Focus, Multiple	1 (2%)	2 (4%)	2 (4%)	1 (2%)
Fatty Change			1 (2%)	
Fibrosis				1 (2%)
Hematopoietic Cell Proliferation	2 (4%)	1 (2%)	2 (4%)	
Hemorrhage	1 (2%)		1 (2%)	
Hepatodiaphragmatic Nodule	1 (2%)	2 (4%)	1 (2%)	
Infiltration Cellular, Lymphocyte	7 (14%)	2 (4%)		5 (10%)
Inflammation, Chronic Active	8 (16%)	10 (21%)	5 (11%)	9 (19%)
Inflammation, Suppurative	1 (2%)			
Mixed Cell Focus			1 (2%)	
Necrosis	4 (8%)		3 (6%)	5 (10%)
Tension Lipidosis		2 (4%)	1 (2%)	4 (8%)

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

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Vacuolization Cytoplasmic	5 (10%)	1 (2%)	7 (15%)	1 (2%)
Mesentery	(0)	(1)	(0)	(0)
Fat, Necrosis		1 (100%)		
Pancreas	(45)	(47)	(48)	(47)
Acinar Cell, Degeneration	37 (82%)	38 (81%)	38 (79%)	35 (74%)
Autolysis	3 (7%)	1 (2%)		2 (4%)
Infiltration Cellular, Lymphocyte	1 (2%)			2 (4%)
Inflammation, Chronic Active				1 (2%)
Pigmentation	1 (2%)			
Polyarteritis		1 (2%)		
Salivary Glands	(49)	(47)	(47)	(48)
Acinar Cell, Degeneration	2 (4%)			1 (2%)
Autolysis	1 (2%)			
Hyperplasia		1 (2%)		
Hypertrophy				1 (2%)
Infiltration Cellular, Lymphocyte	1 (2%)			
Mineralization	2 (4%)	1 (2%)		
Stomach, Forestomach	(44)	(45)	(48)	(47)
Infiltration Cellular, Lymphocyte	1 (2%)			
Inflammation, Suppurative	1 (2%)			
Keratin Cyst				1 (2%)
Mucosa, Ulcer	1 (2%)			
Submucosa, Edema	1 (2%)			
Stomach, Glandular	(41)	(43)	(46)	(46)
Tongue	(0)	(0)	(1)	(0)
CARDIOVASCULAR SYSTEM				
Blood Vessel	(51)	(50)	(49)	(47)
Heart	(51)	(48)	(49)	(47)
Atrium, Dilatation	1 (2%)			
Autolysis	1 (2%)	1 (2%)		

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

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Cardiomyopathy	27 (53%)	31 (65%)	37 (76%)	22 (47%)
Congestion		1 (2%)		
Endocardium, Hyperplasia		1 (2%)		
Metaplasia, Osseous		1 (2%)		
Mineralization	2 (4%)	1 (2%)	1 (2%)	
Pericardium, Hyperplasia				1 (2%)
Pericardium, Inflammation, Chronic Active	1 (2%)			
ENDOCRINE SYSTEM				
Adrenal Cortex	(48)	(47)	(47)	(47)
Accessory Adrenal Cortical Nodule	2 (4%)	4 (9%)	1 (2%)	2 (4%)
Angiectasis	1 (2%)		1 (2%)	4 (9%)
Autolysis	1 (2%)		1 (2%)	
Bilateral, Hyperplasia	1 (2%)		1 (2%)	
Capsule, Fibrosis	1 (2%)			
Cyst	1 (2%)		1 (2%)	
Degeneration, Cystic	3 (6%)	7 (15%)	5 (11%)	4 (9%)
Hyperplasia	4 (8%)	2 (4%)	5 (11%)	3 (6%)
Hypertrophy	4 (8%)	5 (11%)	8 (17%)	2 (4%)
Pigmentation				1 (2%)
Vacuolization Cytoplasmic	28 (58%)	26 (55%)	34 (72%)	25 (53%)
Adrenal Medulla	(48)	(46)	(47)	(45)
Bilateral, Hyperplasia	2 (4%)		1 (2%)	1 (2%)
Degeneration, Cystic		1 (2%)	1 (2%)	
Hyperplasia	9 (19%)	9 (20%)	10 (21%)	6 (13%)
Hypertrophy	1 (2%)			
Islets, Pancreatic	(45)	(49)	(48)	(48)
Autolysis		1 (2%)		
Hyperplasia	23 (51%)	23 (47%)	22 (46%)	27 (56%)
Parathyroid Gland	(41)	(46)	(48)	(43)
Bilateral, Hyperplasia	1 (2%)	3 (7%)	4 (8%)	2 (5%)

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

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Hyperplasia	3 (7%)	3 (7%)	7 (15%)	6 (14%)
Pituitary Gland	(49)	(46)	(48)	(48)
Autolysis	1 (2%)			
Pars Distalis, Cyst	3 (6%)	5 (11%)	5 (10%)	6 (13%)
Pars Distalis, Cyst, Multiple	2 (4%)			1 (2%)
Pars Distalis, Hyperplasia	19 (39%)	16 (35%)	13 (27%)	12 (25%)
Pars Intermed, Cyst	1 (2%)			
Pars Intermed, Dysplasia	1 (2%)			
Pars Nervosa, Infiltration Cellular, Lymphocyte			1 (2%)	
Thyroid Gland	(44)	(46)	(46)	(45)
Autolysis	2 (5%)			
C Cell, Hyperplasia	9 (20%)	5 (11%)	3 (7%)	7 (16%)
Cyst, Squamous	6 (14%)	4 (9%)	2 (4%)	4 (9%)
Follicular Cel, Hyperplasia			1 (2%)	
Infiltration Cellular, Lymphocyte	1 (2%)		1 (2%)	
GENERAL BODY SYSTEM				
Tissue NOS	(0)	(1)	(0)	(2)
GENITAL SYSTEM				
Coagulating Gland	(44)	(43)	(47)	(45)
Atrophy	3 (7%)	1 (2%)		6 (13%)
Autolysis	2 (5%)			
Degeneration			1 (2%)	
Developmental Malformation	1 (2%)	2 (5%)	2 (4%)	1 (2%)
Fibrosis			1 (2%)	
Inflammation, Chronic			1 (2%)	
Inflammation, Suppurative	1 (2%)			
Epididymis	(49)	(48)	(49)	(47)
Atrophy		2 (4%)		1 (2%)
Autolysis	1 (2%)	1 (2%)		

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

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Degeneration	4 (8%)	5 (10%)	6 (12%)	4 (9%)
Hyperplasia				1 (2%)
Hypospermia	4 (8%)	10 (21%)	10 (20%)	5 (11%)
Infiltration Cellular, Lymphocyte	5 (10%)	6 (13%)	6 (12%)	3 (6%)
Inflammation	1 (2%)			
Preputial Gland	(48)	(48)	(47)	(47)
Abscess	1 (2%)		2 (4%)	
Atrophy	1 (2%)			
Autolysis	4 (8%)	1 (2%)		2 (4%)
Duct, Dilatation	4 (8%)	7 (15%)	7 (15%)	9 (19%)
Infiltration Cellular, Lymphocyte	19 (40%)	20 (42%)	15 (32%)	9 (19%)
Inflammation, Chronic Active		1 (2%)		
Inflammation, Suppurative	17 (35%)	16 (33%)	18 (38%)	26 (55%)
Parenchym Cell, Degeneration	16 (33%)	17 (35%)	13 (28%)	16 (34%)
Prostate	(6)	(8)	(6)	(4)
Prostate, Dorsal Lobe	(51)	(47)	(47)	(48)
Atrophy				1 (2%)
Autolysis	5 (10%)	2 (4%)		2 (4%)
Cyst	3 (6%)	1 (2%)		
Degeneration	1 (2%)			3 (6%)
Hyperplasia	2 (4%)			
Infiltration Cellular, Lymphocyte	3 (6%)		2 (4%)	2 (4%)
Inflammation, Suppurative	35 (69%)	38 (81%)	35 (74%)	34 (71%)
Polyarteritis		1 (2%)		
Prostate, Ventral Lobe	(48)	(46)	(48)	(47)
Atrophy				1 (2%)
Autolysis	3 (6%)	1 (2%)	1 (2%)	
Degeneration	10 (21%)	4 (9%)	7 (15%)	11 (23%)
Hyperplasia	7 (15%)	5 (11%)	6 (13%)	11 (23%)
Infiltration Cellular, Lymphocyte	8 (17%)	6 (13%)	14 (29%)	8 (17%)

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

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Infiltration Cellular, Plasma Cell	1 (2%)			
Inflammation, Chronic			1 (2%)	1 (2%)
Inflammation, Suppurative	5 (10%)	4 (9%)	9 (19%)	7 (15%)
Mineralization				1 (2%)
Rete Testes	(47)	(48)	(46)	(41)
Dilatation	2 (4%)	7 (15%)	5 (11%)	4 (10%)
Fibrosis		2 (4%)	2 (4%)	
Seminal Vesicle	(43)	(43)	(47)	(45)
Atrophy	4 (9%)	3 (7%)	5 (11%)	8 (18%)
Autolysis	2 (5%)		1 (2%)	
Degeneration	2 (5%)		1 (2%)	
Dilatation	1 (2%)		2 (4%)	1 (2%)
Hyperplasia			3 (6%)	
Inflammation, Chronic Active			1 (2%)	
Inflammation, Suppurative	2 (5%)		1 (2%)	1 (2%)
Testes	(50)	(50)	(48)	(49)
Artery, Mineralization				1 (2%)
Autolysis	3 (6%)	2 (4%)		2 (4%)
Edema			1 (2%)	
Fibrosis			1 (2%)	
Hemorrhage				1 (2%)
Inflammation, Granulomatous	1 (2%)			
Inflammation, Suppurative			1 (2%)	
Interstit Cell, Hyperplasia	1 (2%)			
Polyarteritis	2 (4%)	3 (6%)	1 (2%)	1 (2%)
Seminif Tub, Degeneration	23 (46%)	26 (52%)	30 (63%)	31 (63%)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(48)	(48)	(48)	(46)
Autolysis	2 (4%)	1 (2%)		1 (2%)
Depletion Cellular				1 (2%)

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

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Erythroid Cell, Hyperplasia	2 (4%)	1 (2%)	5 (10%)	3 (7%)
Hypocellularity			1 (2%)	2 (4%)
Myeloid Cell, Hyperplasia	6 (13%)	3 (6%)	7 (15%)	4 (9%)
Lymph Node	(13)	(9)	(18)	(12)
Axillary, Hyperplasia, Lymphoid	1 (8%)			
Axillary, Infiltration Cellular, Plasma Cell	1 (8%)			
Inguinal, Autolysis	1 (8%)			
Inguinal, Degeneration, Cystic			1 (6%)	
Inguinal, Infiltration Cellular, Plasma Cell			1 (6%)	
Lumbar, Congestion	1 (8%)			
Lumbar, Degeneration, Cystic	4 (31%)	5 (56%)	11 (61%)	5 (42%)
Lumbar, Hyperplasia, Lymphoid	2 (15%)	2 (22%)	4 (22%)	3 (25%)
Lumbar, Infiltration Cellular, Plasma Cell	7 (54%)	6 (67%)	13 (72%)	5 (42%)
Lumbar, Pigmentation			1 (6%)	
Mediastinal, Congestion	1 (8%)			
Mediastinal, Degeneration, Cystic		1 (11%)		
Mediastinal, Hemorrhage				1 (8%)
Mediastinal, Infiltration Cellular, Plasma Cell	1 (8%)			
Mediastinal, Pigmentation				1 (8%)
Pancreatic, Hemorrhage			1 (6%)	
Pancreatic, Hyperplasia, Lymphoid			1 (6%)	
Popliteal, Degeneration, Cystic		1 (11%)		
Popliteal, Hyperplasia, Lymphoid	1 (8%)	1 (11%)		
Popliteal, Infiltration Cellular, Plasma Cell		1 (11%)		
Renal, Congestion	1 (8%)			
Renal, Degeneration, Cystic	3 (23%)	4 (44%)	3 (17%)	3 (25%)
Renal, Hemorrhage		1 (11%)		
Renal, Hyperplasia, Lymphoid		2 (22%)	1 (6%)	
Renal, Infiltration Cellular, Plasma Cell	2 (15%)	3 (33%)	1 (6%)	3 (25%)
Renal, Inflammation, Suppurative		1 (11%)		

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

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Renal, Necrosis		1 (11%)		
Renal, Pigmentation	1 (8%)			
Lymph Node, Mandibular	(48)	(48)	(48)	(48)
Autolysis	1 (2%)	1 (2%)		2 (4%)
Degeneration, Cystic	5 (10%)	7 (15%)	9 (19%)	7 (15%)
Depletion Lymphoid				1 (2%)
Hyperplasia, Lymphoid	22 (46%)	14 (29%)	17 (35%)	21 (44%)
Infiltration Cellular, Plasma Cell	31 (65%)	29 (60%)	26 (54%)	36 (75%)
Inflammation, Chronic Active			1 (2%)	
Lymph Node, Mesenteric	(45)	(46)	(47)	(47)
Autolysis		1 (2%)		1 (2%)
Congestion	1 (2%)			
Degeneration, Cystic	2 (4%)			
Hemorrhage			1 (2%)	
Hyperplasia, Lymphoid	9 (20%)	6 (13%)	5 (11%)	10 (21%)
Infiltration Cellular, Mast Cell	2 (4%)			2 (4%)
Infiltration Cellular, Plasma Cell	6 (13%)	1 (2%)	2 (4%)	3 (6%)
Inflammation, Chronic Active			1 (2%)	
Inflammation, Granulomatous	16 (36%)	21 (46%)	16 (34%)	25 (53%)
Spleen	(50)	(49)	(48)	(47)
Autolysis	5 (10%)	4 (8%)		2 (4%)
Capsule, Cyst, Multiple			1 (2%)	
Capsule, Degeneration, Cystic		1 (2%)		
Capsule, Fibrosis	1 (2%)	1 (2%)		1 (2%)
Congestion		1 (2%)		
Depletion Lymphoid	1 (2%)		1 (2%)	2 (4%)
Hematopoietic Cell Proliferation	9 (18%)	7 (14%)	13 (27%)	9 (19%)
Hematopoietic Cell Proliferation Granulocytic	1 (2%)			
Hyperplasia, Lymphoid	2 (4%)	1 (2%)	1 (2%)	3 (6%)
Hyperplasia, Stromal		2 (4%)	1 (2%)	2 (4%)

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

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Necrosis				1 (2%)
Pigmentation	29 (58%)	27 (55%)	22 (46%)	17 (36%)
Red Pulp, Hyperplasia		1 (2%)		
Thymus	(46)	(45)	(41)	(44)
Atrophy	41 (89%)	43 (96%)	41 (100%)	41 (93%)
Autolysis		1 (2%)		1 (2%)
Depletion Lymphoid				1 (2%)
Epithel Cell, Hyperplasia	1 (2%)	1 (2%)	1 (2%)	
Hemorrhage	1 (2%)			
Hyperplasia, Lymphoid	1 (2%)			
Polyarteritis				1 (2%)
INTEGUMENTARY SYSTEM				
Mammary Gland	(39)	(43)	(41)	(41)
Alveolus, Hyperplasia	4 (10%)	5 (12%)	6 (15%)	6 (15%)
Degeneration	16 (41%)	24 (56%)	10 (24%)	12 (29%)
Duct, Dilatation		1 (2%)		1 (2%)
Fibrosis		1 (2%)		
Infiltration Cellular, Lymphocyte	1 (3%)			
Lactation	2 (5%)	1 (2%)	4 (10%)	4 (10%)
Skin	(49)	(50)	(48)	(49)
Angiectasis				1 (2%)
Cyst Epithelial Inclusion	2 (4%)	1 (2%)	3 (6%)	1 (2%)
Epidermis, Hyperplasia	6 (12%)	2 (4%)	2 (4%)	2 (4%)
Hyperkeratosis	6 (12%)	2 (4%)	2 (4%)	2 (4%)
Inflammation, Chronic				3 (6%)
Inflammation, Chronic Active	3 (6%)	1 (2%)	5 (10%)	3 (6%)
Inflammation, Granulomatous			1 (2%)	
Inflammation, Suppurative	21 (43%)	22 (44%)	24 (50%)	21 (43%)
Lymphatic, Ectasia			1 (2%)	
Necrosis	2 (4%)		2 (4%)	1 (2%)

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

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
MUSCULOSKELETAL SYSTEM				
Bone	(0)	(0)	(0)	(1)
Bone, Cranium	(2)	(0)	(0)	(0)
Hemorrhage	1 (50%)			
Hyperostosis	1 (50%)			
Bone, Femur	(50)	(50)	(48)	(49)
Skeletal Muscle	(1)	(0)	(0)	(1)
NERVOUS SYSTEM				
Brain, Brain Stem	(46)	(46)	(48)	(47)
Autolysis		1 (2%)		1 (2%)
Compression	6 (13%)	1 (2%)	3 (6%)	4 (9%)
Hemorrhage	1 (2%)		1 (2%)	
Brain, Cerebellum	(46)	(46)	(48)	(46)
Autolysis		1 (2%)		
Hydrocephalus	2 (4%)			
Brain, Cerebrum	(45)	(46)	(48)	(46)
Autolysis		1 (2%)		
Developmental Malformation	1 (2%)			
Gliosis		1 (2%)	1 (2%)	
Hemorrhage	1 (2%)			
Hydrocephalus	3 (7%)			1 (2%)
Infiltration Cellular, Lymphocyte		1 (2%)		
Vacuolization Cytoplasmic			1 (2%)	
RESPIRATORY SYSTEM				
Lung	(48)	(47)	(47)	(46)
Alveolar Epith, Hyperplasia	4 (8%)	3 (6%)		1 (2%)
Artery, Mineralization	3 (6%)	5 (11%)	12 (26%)	6 (13%)
Autolysis	4 (8%)	1 (2%)		1 (2%)
Congestion		1 (2%)		1 (2%)

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

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Hemorrhage				1 (2%)
Infiltration Cellular, Histiocyte	14 (29%)	12 (26%)	12 (26%)	17 (37%)
Infiltration Cellular, Lymphocyte		1 (2%)	2 (4%)	
Inflammation, Chronic	1 (2%)	1 (2%)		1 (2%)
Mediastinum, Bacterium	1 (2%)			
Mediastinum, Foreign Body	1 (2%)			
Mediastinum, Hemorrhage	1 (2%)			
Mediastinum, Inflammation, Suppurative	1 (2%)			
Mediastinum, Necrosis	1 (2%)			
Metaplasia, Osseous	3 (6%)	5 (11%)	5 (11%)	2 (4%)
Thrombosis	1 (2%)			
Nose	(46)	(45)	(49)	(45)
Autolysis	1 (2%)			
Foreign Body				1 (2%)
Goblet Cell, Hyperplasia	1 (2%)			
Goblet Cell, Metaplasia			1 (2%)	
Hyperkeratosis	2 (4%)			1 (2%)
Inflammation, Chronic	1 (2%)			2 (4%)
Inflammation, Chronic Active	2 (4%)		2 (4%)	
Inflammation, Suppurative	7 (15%)	2 (4%)	3 (6%)	3 (7%)
Metaplasia, Squamous			1 (2%)	
Respirat Epith, Hyperplasia			1 (2%)	
Upper Molar, Inflammation, Chronic Active			1 (2%)	
Upper Molar, Necrosis			1 (2%)	
Trachea	(45)	(44)	(48)	(44)
SPECIAL SENSES SYSTEM				
Eye	(37)	(43)	(38)	(39)
Autolysis		1 (2%)		1 (3%)
Bilateral, Retina, Atrophy	12 (32%)	11 (26%)	5 (13%)	12 (31%)
Cornea, Hyperplasia		2 (5%)	1 (3%)	

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

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Hemorrhage			1 (3%)	
Inflammation, Suppurative			1 (3%)	1 (3%)
Retina, Atrophy		2 (5%)		2 (5%)
Harderian Gland	(38)	(43)	(38)	(39)
Autolysis		1 (2%)		
Degeneration		1 (2%)		3 (8%)
Epithelium, Hyperplasia		1 (2%)		
Hyperplasia		2 (5%)		
Infiltration Cellular, Lymphocyte	6 (16%)	2 (5%)	2 (5%)	7 (18%)
Inflammation, Suppurative				1 (3%)
Pigmentation				1 (3%)
Lacrimal Gland	(0)	(2)	(2)	(1)
Ectopic Harderian		2 (100%)	2 (100%)	1 (100%)
Zymbal's Gland	(0)	(0)	(1)	(0)
URINARY SYSTEM				
Kidney	(46)	(49)	(47)	(47)
Accumulation, Hyaline Droplet	2 (4%)			
Autolysis	3 (7%)	5 (10%)	1 (2%)	2 (4%)
Capsule, Fatty Change		3 (6%)	2 (4%)	
Capsule, Fibrosis	1 (2%)			
Cortex, Cyst	23 (50%)	31 (63%)	22 (47%)	21 (45%)
Hyperplasia, Tubular			2 (4%)	1 (2%)
Infiltration Cellular, Lymphocyte	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Medulla, Cyst		1 (2%)		
Nephropathy, Chronic	39 (85%)	46 (94%)	43 (91%)	39 (83%)
Pelvis, Dilatation	2 (4%)	1 (2%)		
Pelvis, Hyperplasia	3 (7%)	1 (2%)	4 (9%)	5 (11%)
Pelvis, Inflammation, Suppurative	1 (2%)			
Pelvis, Mineralization		1 (2%)	1 (2%)	2 (4%)
Polycystic Kidney	1 (2%)		1 (2%)	

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

CD Rat MALE	F3 0PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Renal Tubule, Inflammation, Suppurative		1 (2%)		
Urethra	(0)	(2)	(2)	(1)
Urinary Bladder	(45)	(43)	(47)	(46)
Dilatation	2 (4%)			3 (7%)
Hemorrhage	1 (2%)			1 (2%)
Inflammation, Suppurative	1 (2%)			
Transit Epithe, Hyperplasia	1 (2%)			
Transit Epithe, Hypertrophy				1 (2%)

END OF MALE DATA

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

CD Rat FEMALE	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Disposition Summary				
Animals Initially In Study	**53**	**50**	**50**	**50**
Early Deaths				
Moribund	**15**	**13**	**16**	**17**
Natural Death	**5**	**5**	**5**	**7**
Survivors				
Moribund		**1**		
Natural Death		**1**		**1**
Terminal Sacrifice	**33**	**30**	**29**	**25**
Animals Examined Microscopically	**53**	**50**	**50**	**50**
ALIMENTARY SYSTEM				
Esophagus	(53)	(50)	(50)	(48)
Intestine Large, Cecum	(52)	(50)	(50)	(49)
Intestine Large, Colon	(53)	(50)	(50)	(49)
Intestine Large, Rectum	(42)	(40)	(40)	(37)
Intestine Small, Duodenum	(52)	(50)	(50)	(49)
Intestine Small, Ileum	(51)	(48)	(47)	(48)
Intestine Small, Jejunum	(51)	(49)	(49)	(48)
Liver	(53)	(50)	(50)	(49)
Angiectasis	2 (4%)	2 (4%)	1 (2%)	3 (6%)
Atypical Cells				1 (2%)
Basophilic Focus	5 (9%)	7 (14%)	6 (12%)	5 (10%)
Bile Duct, Hyperplasia	16 (30%)	18 (36%)	14 (28%)	16 (33%)
Biliar Tract, Fibrosis	2 (4%)	7 (14%)	4 (8%)	
Clear Cell Focus	1 (2%)			1 (2%)
Congestion				2 (4%)
Cyst	1 (2%)		3 (6%)	1 (2%)
Degeneration, Cystic	1 (2%)	3 (6%)		1 (2%)
Developmental Malformation		1 (2%)	1 (2%)	1 (2%)

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

CD Rat FEMALE	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Eosinophilic Focus			1 (2%)	4 (8%)
Hematopoietic Cell Proliferation	1 (2%)	3 (6%)	4 (8%)	3 (6%)
Hemorrhage			1 (2%)	
Hepatodiaphragmatic Nodule	1 (2%)	1 (2%)	1 (2%)	3 (6%)
Infiltration Cellular, Lymphocyte	4 (8%)	2 (4%)	4 (8%)	3 (6%)
Inflammation, Chronic Active	4 (8%)	3 (6%)	3 (6%)	5 (10%)
Mixed Cell Focus			1 (2%)	
Necrosis	2 (4%)	1 (2%)		2 (4%)
Oval Cell, Hyperplasia				1 (2%)
Pigmentation			1 (2%)	
Vacuolization Cytoplasmic	7 (13%)	5 (10%)	9 (18%)	4 (8%)
Vacuolization Cytoplasmic, Focal	4 (8%)		1 (2%)	
Mesentery	(0)	(1)	(1)	(0)
Fat, Necrosis			1 (100%)	
Polyarteritis		1 (100%)		
Oral Mucosa	(1)	(0)	(1)	(1)
Keratin Cyst			1 (100%)	
Pancreas	(52)	(50)	(50)	(49)
Acinar Cell, Degeneration	25 (48%)	23 (46%)	19 (38%)	18 (37%)
Polyarteritis	1 (2%)			1 (2%)
Salivary Glands	(53)	(49)	(50)	(49)
Atrophy			1 (2%)	2 (4%)
Stomach	(0)	(1)	(0)	(0)
Dilatation		1 (100%)		
Stomach, Forestomach	(52)	(49)	(49)	(49)
Hyperplasia	1 (2%)	3 (6%)	1 (2%)	1 (2%)
Inflammation	2 (4%)	1 (2%)		
Keratin Cyst		1 (2%)		
Ulcer			3 (6%)	
Stomach, Glandular	(53)	(50)	(50)	(49)

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

CD Rat FEMALE	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Erosion	1 (2%)			1 (2%)
Mineralization	1 (2%)		1 (2%)	
CARDIOVASCULAR SYSTEM				
Blood Vessel	(53)	(50)	(50)	(49)
Mineralization	1 (2%)		2 (4%)	1 (2%)
Heart	(53)	(50)	(50)	(49)
Atrium Lft, Thrombosis	1 (2%)			1 (2%)
Atrium Rgt, Dilatation				1 (2%)
Cardiomyopathy	38 (72%)	32 (64%)	25 (50%)	26 (53%)
Mineralization			2 (4%)	
ENDOCRINE SYSTEM				
Adrenal Cortex	(53)	(50)	(50)	(49)
Accessory Adrenal Cortical Nodule	1 (2%)	1 (2%)		
Angiectasis	2 (4%)		1 (2%)	
Atrophy		1 (2%)		1 (2%)
Degeneration, Cystic	48 (91%)	48 (96%)	45 (90%)	47 (96%)
Hematopoietic Cell Proliferation			1 (2%)	
Hyperplasia	14 (26%)	14 (28%)	13 (26%)	16 (33%)
Hypertrophy	21 (40%)	21 (42%)	22 (44%)	23 (47%)
Vacuolization Cytoplasmic	6 (11%)			2 (4%)
Adrenal Medulla	(53)	(46)	(50)	(48)
Hyperplasia, Focal	10 (19%)	1 (2%)	7 (14%)	7 (15%)
Islets, Pancreatic	(52)	(50)	(50)	(49)
Hyperplasia	3 (6%)	3 (6%)	3 (6%)	1 (2%)
Parathyroid Gland	(53)	(41)	(47)	(46)
Hyperplasia, Diffuse	1 (2%)		1 (2%)	
Hyperplasia, Focal	1 (2%)		2 (4%)	
Pituitary Gland	(53)	(50)	(50)	(50)
Cyst	1 (2%)		2 (4%)	

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

CD Rat FEMALE	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Infiltration Cellular, Histiocyte				1 (2%)
Pars Distalis, Hyperplasia	7 (13%)	3 (6%)	4 (8%)	6 (12%)
Thyroid Gland	(53)	(50)	(50)	(49)
C Cell, Hyperplasia	2 (4%)			3 (6%)
Cyst, Squamous	10 (19%)	8 (16%)	7 (14%)	5 (10%)
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Clitoral Gland	(49)	(47)	(49)	(48)
Duct, Dilatation	9 (18%)	5 (11%)	8 (16%)	8 (17%)
Hyperplasia		1 (2%)	2 (4%)	3 (6%)
Inflammation	24 (49%)	18 (38%)	29 (59%)	32 (67%)
Parenchym Cell, Degeneration	4 (8%)	1 (2%)	1 (2%)	8 (17%)
Vacuolization Cytoplasmic				1 (2%)
Ovary	(53)	(50)	(49)	(49)
Atrophy	28 (53%)	35 (70%)	32 (65%)	39 (80%)
Cyst	9 (17%)	15 (30%)	16 (33%)	16 (33%)
Hyperplasia, Stromal	21 (40%)	30 (60%)	27 (55%)	24 (49%)
Oviduct	(53)	(49)	(49)	(49)
Atrophy			1 (2%)	
Cyst		1 (2%)		
Hyperplasia, Stromal			1 (2%)	
Uterus	(53)	(50)	(50)	(49)
Adenomyosis		2 (4%)	1 (2%)	2 (4%)
Angiectasis	1 (2%)			
Hemorrhage			1 (2%)	
Hyperplasia, Cystic	16 (30%)	24 (48%)	24 (48%)	24 (49%)
Hyperplasia, Focal	3 (6%)			
Metaplasia	1 (2%)	6 (12%)	5 (10%)	6 (12%)

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

CD Rat FEMALE	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Vagina	(52)	(49)	(49)	(48)
Inflammation	9 (17%)	4 (8%)	5 (10%)	7 (15%)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(53)	(50)	(50)	(49)
Hypocellularity			1 (2%)	4 (8%)
Myeloid Cell, Hyperplasia		1 (2%)	1 (2%)	1 (2%)
Lymph Node	(18)	(9)	(8)	(12)
Lumbar, Degeneration, Cystic	9 (50%)	5 (56%)	4 (50%)	4 (33%)
Lumbar, Hyperplasia, Lymphoid	1 (6%)			
Lumbar, Infiltration Cellular, Plasma Cell	11 (61%)	7 (78%)	6 (75%)	10 (83%)
Mediastinal, Hemorrhage				1 (8%)
Mediastinal, Infiltration Cellular, Plasma Cell	1 (6%)			2 (17%)
Pancreatic, Hemorrhage		1 (11%)		2 (17%)
Popliteal, Degeneration, Cystic	1 (6%)			
Popliteal, Infiltration Cellular, Plasma Cell	1 (6%)			1 (8%)
Renal, Degeneration, Cystic		1 (11%)	1 (13%)	
Renal, Hyperplasia, Lymphoid	1 (6%)			
Renal, Infiltration Cellular, Plasma Cell	1 (6%)	1 (11%)	1 (13%)	1 (8%)
Lymph Node, Mandibular	(53)	(49)	(50)	(49)
Cyst		1 (2%)		
Degeneration, Cystic	2 (4%)			3 (6%)
Hemorrhage	1 (2%)		1 (2%)	
Infiltration Cellular, Plasma Cell	43 (81%)	40 (82%)	42 (84%)	42 (86%)
Lymph Node, Mesenteric	(53)	(50)	(50)	(49)
Degeneration, Cystic			1 (2%)	1 (2%)
Hemorrhage	1 (2%)	1 (2%)		1 (2%)
Infiltration Cellular, Plasma Cell	1 (2%)			1 (2%)
Inflammation, Granulomatous	48 (91%)	47 (94%)	45 (90%)	44 (90%)
Spleen	(53)	(50)	(50)	(49)
Hematopoietic Cell Proliferation	17 (32%)	8 (16%)	7 (14%)	10 (20%)

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

CD Rat FEMALE	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Lymphocyte, Atrophy	3 (6%)		2 (4%)	3 (6%)
Pigmentation	21 (40%)	32 (64%)	32 (64%)	30 (61%)
Red Pulp, Atrophy				1 (2%)
Thymus	(48)	(45)	(46)	(47)
Atrophy	12 (25%)	7 (16%)	10 (22%)	9 (19%)
Cyst	18 (38%)	15 (33%)	13 (28%)	17 (36%)
Ectopic Thyroid			1 (2%)	
Epithel Cell, Hyperplasia	2 (4%)	4 (9%)		2 (4%)
Hemorrhage		1 (2%)		2 (4%)
INTEGUMENTARY SYSTEM				
Mammary Gland	(53)	(49)	(50)	(50)
Alveolus, Degeneration	3 (6%)	1 (2%)	1 (2%)	5 (10%)
Alveolus, Hyperplasia	19 (36%)	14 (29%)	18 (36%)	17 (34%)
Atypical Focus	6 (11%)	7 (14%)	4 (8%)	5 (10%)
Galactocele	1 (2%)	6 (12%)	1 (2%)	3 (6%)
Hyperplasia	1 (2%)			1 (2%)
Lactation	32 (60%)	38 (78%)	43 (86%)	33 (66%)
Skin	(53)	(50)	(50)	(50)
Angiectasis	1 (2%)			
Cyst Epithelial Inclusion			1 (2%)	1 (2%)
Foot, Inflammation, Chronic	39 (74%)	36 (72%)	37 (74%)	35 (70%)
MUSCULOSKELETAL SYSTEM				
Bone	(0)	(0)	(1)	(0)
Bone, Femur	(53)	(50)	(50)	(49)
Fibrous Osteodystrophy			1 (2%)	
Bone, Joint	(1)	(0)	(0)	(0)
Inflammation	1 (100%)			
Skeletal Muscle	(1)	(0)	(0)	(0)
Cyst	1 (100%)			

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

CD Rat FEMALE	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
NERVOUS SYSTEM				
Brain, Brain Stem	(53)	(50)	(50)	(49)
Compression	23 (43%)	26 (52%)	28 (56%)	29 (59%)
Brain, Cerebellum	(53)	(50)	(50)	(49)
Brain, Cerebrum	(53)	(50)	(50)	(49)
Hydrocephalus	1 (2%)		1 (2%)	3 (6%)
RESPIRATORY SYSTEM				
Lung	(53)	(50)	(50)	(49)
Alveolar Epith, Hyperplasia		1 (2%)	1 (2%)	
Atelectasis		1 (2%)		
Hemorrhage			1 (2%)	
Infiltration Cellular, Histiocyte	16 (30%)	10 (20%)	13 (26%)	14 (29%)
Inflammation	1 (2%)	3 (6%)	3 (6%)	1 (2%)
Mineralization	1 (2%)			
Polyarteritis	1 (2%)			
Nose	(53)	(50)	(50)	(49)
Inflammation	3 (6%)	2 (4%)	3 (6%)	3 (6%)
Keratin Cyst			1 (2%)	
Nasolacrim Dct, Inflammation	4 (8%)	2 (4%)	1 (2%)	3 (6%)
Upper Molar, Inflammation	2 (4%)	6 (12%)		1 (2%)
Trachea	(53)	(50)	(50)	(49)
SPECIAL SENSES SYSTEM				
Eye	(43)	(41)	(40)	(38)
Bilateral, Lens, Cataract	1 (2%)			1 (3%)
Bilateral, Retina, Degeneration	5 (12%)	9 (22%)	6 (15%)	3 (8%)
Lens, Cataract				1 (3%)
Retina, Degeneration	6 (14%)	4 (10%)	1 (3%)	5 (13%)
Harderian Gland	(43)	(40)	(40)	(38)
Epithelium, Degeneration	16 (37%)	17 (43%)	10 (25%)	21 (55%)

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

CD Rat FEMALE	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Hypertrophy	3 (7%)	5 (13%)	5 (13%)	2 (5%)
Inflammation	1 (2%)			
Lacrimal Gland	(0)	(1)	(0)	(0)
Metaplasia		1 (100%)		
URINARY SYSTEM				
Kidney	(53)	(50)	(50)	(49)
Accumulation, Hyaline Droplet	1 (2%)			
Cyst	19 (36%)	17 (34%)	19 (38%)	12 (24%)
Epithelium, Pelvis, Hyperplasia				1 (2%)
Hydronephrosis		1 (2%)	1 (2%)	1 (2%)
Infarct			1 (2%)	1 (2%)
Inflammation	2 (4%)	1 (2%)		5 (10%)
Nephropathy	19 (36%)	14 (28%)	21 (42%)	18 (37%)
Pelvis, Mineralization	17 (32%)	19 (38%)	28 (56%)	24 (49%)
Renal Tubule, Mineralization	43 (81%)	33 (66%)	43 (86%)	27 (55%)
Urinary Bladder	(53)	(47)	(48)	(47)
Hyperplasia	2 (4%)			1 (2%)
Inflammation				1 (2%)

** END OF REPORT **

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