

Experiment Number: 99920-94
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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:23:57

First Dose M/F: NA / NA

Lab: NCTR

C Number: MG96006
Lock Date: 12/02/2008
Cage Range: All
Date Range: All
Reasons For Removal: All
Removal Date Range: All
Treatment Groups: All
Study Gender: Both
PWG Approval Date: NONE

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CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Disposition Summary						
Animals Initially In Study	51	50	50	50	50	50
Early Deaths						
Moribund Sacrifice	9	13	17	12	15	7
Natural Death	7	6	3	4	4	10
Survivors						
Moribund Sacrifice				2		
Natural Death	1					
Terminal Sacrifice	34	31	30	32	31	33
Animals Examined Microscopically	51	50	50	50	50	50
ALIMENTARY SYSTEM						
Esophagus	(51)	(50)	(50)	(50)	(50)	(49)
Dilatation	1 (2%)					
Hyperkeratosis			3 (6%)	3 (6%)	2 (4%)	
Inflammation, Suppurative	1 (2%)					
Intestine Large, Cecum	(44)	(45)	(47)	(46)	(48)	(43)
Dilatation				1 (2%)	1 (2%)	
Hyperplasia, Lymphoid			1 (2%)			1 (2%)
Inflammation, Chronic Active			1 (2%)			1 (2%)
Inflammation, Suppurative						1 (2%)
Intestine Large, Colon	(45)	(47)	(48)	(47)	(49)	(43)
Dilatation					1 (2%)	
Hyperplasia, Lymphoid	1 (2%)					
Polyarteritis						
Intestine Large, Rectum	(45)	(45)	(47)	(46)	(49)	(42)
Dilatation					1 (2%)	
Intestine Small, Duodenum	(44)	(45)	(48)	(47)	(49)	(42)
Intestine Small, Ileum	(43)	(45)	(47)	(46)	(48)	(41)
Dilatation					1 (2%)	

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CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Intestine Small, Jejunum Dilatation Inflammation, Chronic Active	(43)	(45)	(46)	(46)	(48) 1 (2%)	(41) 1 (2%)
Liver	(49)	(49)	(50)	(49)	(50)	(48)
Angiectasis	3 (6%)	5 (10%)	1 (2%)	4 (8%)		
Basophilic Focus	1 (2%)	3 (6%)	3 (6%)	17 (35%)	3 (6%)	11 (23%)
Bile Duct, Hyperplasia	2 (4%)	9 (18%)	7 (14%)		3 (6%)	7 (15%)
Biliar Tract, Fibrosis	4 (8%)	2 (4%)	1 (2%)	1 (2%)	6 (12%)	2 (4%)
Capsule, Fibrosis					1 (2%)	
Clear Cell Focus	1 (2%)			1 (2%)		
Cyst						
Cyst Multilocular			1 (2%)			
Degeneration, Cystic	4 (8%)	3 (6%)	5 (10%)	8 (16%)	9 (18%)	10 (21%)
Eosinophilic Focus	3 (6%)	5 (10%)	8 (16%)	15 (31%)	11 (22%)	5 (10%)
Focal Cellular Change			1 (2%)			
Hematopoietic Cell Proliferation	2 (4%)	1 (2%)	1 (2%)	3 (6%)		5 (10%)
Hepatodiaphragmatic Nodule	6 (12%)	1 (2%)	4 (8%)	6 (12%)	2 (4%)	2 (4%)
Infiltration Cellular, Lymphocyte		3 (6%)		1 (2%)	1 (2%)	1 (2%)
Inflammation, Chronic			1 (2%)			
Inflammation, Chronic Active	13 (27%)	5 (10%)	8 (16%)	9 (18%)	9 (18%)	7 (15%)
Inflammation, Suppurative						1 (2%)
Left Lat Lobe, Developmental Malformation	1 (2%)					
Mixed Cell Focus			1 (2%)	1 (2%)	1 (2%)	
Necrosis		1 (2%)	2 (4%)	2 (4%)	2 (4%)	3 (6%)
Oval Cell, Hyperplasia		1 (2%)				
Tension Lipidosis			3 (6%)	3 (6%)		1 (2%)
Vacuolization Cytoplasmic	12 (24%)	4 (8%)	10 (20%)	13 (27%)	8 (16%)	16 (33%)
Mesentery	(1)	(1)	(2)	(1)	(1)	(2)
Fat, Necrosis		1 (100%)	2 (100%)	1 (100%)	1 (100%)	1 (50%)
Oral Mucosa	(3)	(2)	(4)	(9)	(5)	(1)

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CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Gingival, Inflammation, Chronic Active						1 (100%)
Keratin Cyst		1 (50%)		2 (22%)	1 (20%)	
Pancreas	(46)	(48)	(48)	(48)	(49)	(47)
Acinar Cell, Degeneration	40 (87%)	42 (88%)	40 (83%)	39 (81%)	46 (94%)	39 (83%)
Basophilic Focus				1 (2%)		
Polyarteritis						
Salivary Glands	(48)	(50)	(49)	(50)	(50)	(48)
Acinus, Degeneration				1 (2%)	1 (2%)	
Duct, Dilatation				1 (2%)		
Inflammation, Chronic Active				1 (2%)		
Inflammation, Suppurative			1 (2%)			
Stomach, Forestomach	(47)	(48)	(49)	(48)	(50)	(46)
Edema	1 (2%)	1 (2%)			1 (2%)	1 (2%)
Epithelium, Hyperplasia	2 (4%)				4 (8%)	1 (2%)
Hyperplasia, Basal Cell					1 (2%)	
Inflammation, Suppurative					1 (2%)	1 (2%)
Keratin Cyst	1 (2%)		1 (2%)			
Necrosis		1 (2%)				
Ulcer					1 (2%)	1 (2%)
Stomach, Glandular	(45)	(47)	(48)	(46)	(50)	(45)
Cyst		1 (2%)				
Edema				1 (2%)	1 (2%)	
Epithelium, Hyperplasia				1 (2%)		
Tongue	(0)	(0)	(0)	(0)	(0)	(0)
Inflammation, Chronic Active						
CARDIOVASCULAR SYSTEM						
Blood Vessel	(51)	(50)	(50)	(50)	(50)	(50)
Heart	(51)	(50)	(50)	(50)	(50)	(48)
Atrium, Dilatation		3 (6%)			2 (4%)	1 (2%)
Atrium, Thrombosis					1 (2%)	

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CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Cardiomyopathy	42 (82%)	34 (68%)	40 (80%)	37 (74%)	40 (80%)	41 (85%)
Endocardium, Hyperplasia			1 (2%)			1 (2%)
Inflammation, Suppurative				1 (2%)	1 (2%)	
Metaplasia, Osseous	1 (2%)				1 (2%)	
Ventricle, Dilatation					1 (2%)	1 (2%)
ENDOCRINE SYSTEM						
Adrenal Cortex	(47)	(50)	(50)	(50)	(49)	(45)
Accessory Adrenal Cortical Nodule	3 (6%)	1 (2%)	2 (4%)	1 (2%)	2 (4%)	2 (4%)
Angiectasis	1 (2%)	2 (4%)	3 (6%)	3 (6%)	4 (8%)	4 (9%)
Atrophy				1 (2%)	1 (2%)	
Cyst				1 (2%)		
Degeneration, Cystic	4 (9%)		4 (8%)	4 (8%)	6 (12%)	4 (9%)
Hyperplasia	8 (17%)	6 (12%)	7 (14%)	6 (12%)	1 (2%)	4 (9%)
Hypertrophy	3 (6%)	3 (6%)	1 (2%)	3 (6%)	4 (8%)	2 (4%)
Metaplasia, Osseous		1 (2%)				
Pigmentation				1 (2%)		
Vacuolization Cytoplasmic	11 (23%)	9 (18%)	10 (20%)	11 (22%)	11 (22%)	15 (33%)
Adrenal Medulla	(46)	(48)	(49)	(49)	(49)	(45)
Angiectasis		1 (2%)				
Atrophy					1 (2%)	
Bilateral, Hyperplasia	1 (2%)					
Cyst						1 (2%)
Hyperplasia	7 (15%)	4 (8%)	5 (10%)	13 (27%)	12 (24%)	16 (36%)
Islets, Pancreatic	(46)	(48)	(49)	(49)	(49)	(47)
Hyperplasia	12 (26%)	13 (27%)	5 (10%)	7 (14%)	10 (20%)	10 (21%)
Parathyroid Gland	(49)	(46)	(46)	(46)	(50)	(44)
Bilateral, Hyperplasia						
Hyperplasia	7 (14%)	5 (11%)	6 (13%)	9 (20%)	8 (16%)	7 (16%)
Pituitary Gland	(48)	(50)	(50)	(50)	(50)	(47)
Pars Distalis, Cyst	3 (6%)	1 (2%)	5 (10%)	6 (12%)	6 (12%)	1 (2%)

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Pars Distalis, Hyperplasia	11 (23%)	6 (12%)	12 (24%)	17 (34%)	8 (16%)	9 (19%)
Pars Intermed, Cyst		1 (2%)		1 (2%)	1 (2%)	1 (2%)
Pars Intermed, Hyperplasia		1 (2%)	1 (2%)			
Thyroid Gland	(47)	(49)	(50)	(49)	(50)	(47)
C Cell, Hyperplasia	6 (13%)	4 (8%)	6 (12%)	10 (20%)	2 (4%)	7 (15%)
Cyst, Squamous	5 (11%)		16 (32%)	8 (16%)	11 (22%)	11 (23%)
Follicular Cel, Hyperplasia			1 (2%)			
Infiltration Cellular, Lymphocyte					1 (2%)	
GENERAL BODY SYSTEM						
Tissue NOS	(1)	(0)	(1)	(0)	(1)	(0)
Degeneration, Cystic	1 (100%)					
Infiltration Cellular, Plasma Cell	1 (100%)					
GENITAL SYSTEM						
Coagulating Gland	(46)	(49)	(49)	(49)	(49)	(47)
Atrophy		2 (4%)	2 (4%)	1 (2%)	1 (2%)	
Degeneration, Cystic				1 (2%)		
Developmental Malformation	9 (20%)	10 (20%)	11 (22%)	14 (29%)	14 (29%)	8 (17%)
Hemorrhage					1 (2%)	
Inflammation, Chronic Active						1 (2%)
Inflammation, Suppurative				2 (4%)		2 (4%)
Lumen, Dilatation		2 (4%)		1 (2%)		
Ductus Deferens	(0)	(0)	(0)	(0)	(0)	(1)
Inflammation, Suppurative						1 (100%)
Epididymis	(51)	(50)	(50)	(50)	(50)	(49)
Atrophy	3 (6%)	5 (10%)	5 (10%)	2 (4%)	4 (8%)	4 (8%)
Granuloma Sperm		1 (2%)				
Hyperplasia					1 (2%)	
Hypospermia	3 (6%)	5 (10%)	6 (12%)	3 (6%)	4 (8%)	4 (8%)
Infiltration Cellular, Lymphocyte					1 (2%)	1 (2%)

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CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Polyarteritis						
Penis	(0)	(1)	(0)	(0)	(1)	(1)
Dilatation						1 (100%)
Preputial Gland	(51)	(50)	(50)	(50)	(50)	(50)
Abscess	1 (2%)	1 (2%)	1 (2%)	2 (4%)		1 (2%)
Atrophy		2 (4%)	5 (10%)	4 (8%)	6 (12%)	3 (6%)
Cyst					1 (2%)	
Duct, Dilatation	14 (27%)	9 (18%)	15 (30%)	14 (28%)	12 (24%)	16 (32%)
Hyperplasia, Basal Cell			1 (2%)			
Infiltration Cellular, Lymphocyte	10 (20%)	17 (34%)	10 (20%)	10 (20%)	9 (18%)	9 (18%)
Inflammation, Chronic Active	2 (4%)		2 (4%)	2 (4%)	2 (4%)	
Inflammation, Suppurative	20 (39%)	21 (42%)	23 (46%)	25 (50%)	25 (50%)	28 (56%)
Keratin Cyst			1 (2%)			
Polyarteritis						
Prostate, Dorsal/Lateral Lobe	(36)	(37)	(45)	(41)	(38)	(42)
Atrophy		1 (3%)	1 (2%)			
Cyst	1 (3%)	1 (3%)			1 (3%)	
Degeneration						
Hemorrhage					1 (3%)	
Infiltration Cellular, Lymphocyte			1 (2%)			2 (5%)
Inflammation, Chronic Active	2 (6%)	2 (5%)	4 (9%)	2 (5%)	4 (11%)	2 (5%)
Inflammation, Suppurative	34 (94%)	33 (89%)	39 (87%)	38 (93%)	34 (89%)	37 (88%)
Prostate, Dorsal/lateral Lobe	(13)	(13)	(5)	(9)	(12)	(7)
Prostate, Ventral Lobe	(49)	(50)	(50)	(50)	(50)	(49)
Atrophy		1 (2%)	1 (2%)			
Degeneration		1 (2%)				
Hemorrhage					1 (2%)	
Hyperplasia	7 (14%)	4 (8%)	3 (6%)	3 (6%)	7 (14%)	5 (10%)
Infiltration Cellular, Lymphocyte	2 (4%)	1 (2%)	4 (8%)	3 (6%)	2 (4%)	4 (8%)
Inflammation, Chronic Active	1 (2%)	2 (4%)	2 (4%)	3 (6%)	6 (12%)	4 (8%)

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CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Inflammation, Suppurative	3 (6%)	3 (6%)	6 (12%)	3 (6%)	3 (6%)	5 (10%)
Rete Testes	(46)	(44)	(46)	(47)	(47)	(43)
Dilatation	2 (4%)		2 (4%)	3 (6%)	2 (4%)	2 (5%)
Fibrosis	1 (2%)		2 (4%)	1 (2%)	1 (2%)	2 (5%)
Seminal Vesicle	(43)	(46)	(47)	(47)	(49)	(43)
Atrophy	4 (9%)	4 (9%)	4 (9%)	4 (9%)	1 (2%)	1 (2%)
Dilatation					1 (2%)	
Epithelium, Hyperplasia		1 (2%)				
Hemorrhage					1 (2%)	
Inflammation, Suppurative		1 (2%)		1 (2%)		1 (2%)
Lumen, Dilatation	2 (5%)	5 (11%)	2 (4%)	4 (9%)	5 (10%)	5 (12%)
Testes	(48)	(50)	(50)	(50)	(50)	(48)
Granuloma Sperm					1 (2%)	
Interstit Cell, Hyperplasia			1 (2%)			
Malformation		1 (2%)				
Polyarteritis						
Seminif Tub, Degeneration	19 (40%)	19 (38%)	19 (38%)	20 (40%)	23 (46%)	29 (60%)
HEMATOPOIETIC SYSTEM						
Bone Marrow	(46)	(48)	(48)	(48)	(50)	(46)
Erythroid Cell, Hyperplasia		1 (2%)	1 (2%)	2 (4%)		
Hypocellularity	1 (2%)		2 (4%)	1 (2%)	1 (2%)	1 (2%)
Myeloid Cell, Hyperplasia	6 (13%)	7 (15%)	8 (17%)	7 (15%)	6 (12%)	7 (15%)
Lymph Node	(14)	(16)	(16)	(15)	(19)	(14)
Axillary, Hyperplasia, Lymphoid	1 (7%)	1 (6%)	1 (6%)	1 (7%)	1 (5%)	
Axillary, Infiltration Cellular, Plasma Cell			1 (6%)	2 (13%)	2 (11%)	1 (7%)
Degeneration, Cystic	1 (7%)	2 (13%)				
Hemal, Degeneration, Cystic						1 (7%)
Hemal, Inflammation, Chronic Active						1 (7%)
Hemal, Necrosis						1 (7%)
Inguinal, Degeneration, Cystic	1 (7%)					

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Inguinal, Hyperplasia, Lymphoid	1 (7%)			1 (7%)		1 (7%)
Inguinal, Infiltration Cellular, Plasma Cell	1 (7%)			2 (13%)	1 (5%)	1 (7%)
Lumbar, Degeneration, Cystic	8 (57%)	11 (69%)	8 (50%)	9 (60%)	9 (47%)	8 (57%)
Lumbar, Hyperplasia, Lymphoid	3 (21%)	2 (13%)	2 (13%)	1 (7%)	3 (16%)	6 (43%)
Lumbar, Infiltration Cellular, Plasma Cell	7 (50%)	5 (31%)	7 (44%)	5 (33%)	9 (47%)	10 (71%)
Mediastinal, Degeneration, Cystic						
Mediastinal, Infiltration Cellular, Histiocyte						
Mediastinal, Infiltration Cellular, Plasma Cell	1 (7%)	1 (6%)	1 (6%)			1 (7%)
Pancreatic, Degeneration, Cystic				1 (6%)		
Pancreatic, Hyperplasia, Lymphoid						
Popliteal, Degeneration, Cystic		1 (6%)				
Popliteal, Infiltration Cellular, Plasma Cell		1 (6%)		1 (7%)		
Renal, Degeneration, Cystic	1 (7%)	3 (19%)	3 (19%)	3 (20%)	1 (5%)	3 (21%)
Renal, Hyperplasia, Lymphoid				1 (7%)	1 (5%)	1 (7%)
Renal, Infiltration Cellular, Plasma Cell		1 (6%)		2 (13%)	2 (11%)	3 (21%)
Thoracic, Degeneration, Cystic			1 (6%)			
Thoracic, Infiltration Cellular, Plasma Cell						
Lymph Node, Mandibular	(49)	(50)	(50)	(48)	(50)	(47)
Degeneration, Cystic	10 (20%)	11 (22%)	6 (12%)	11 (23%)	6 (12%)	4 (9%)
Hyperplasia, Lymphoid	27 (55%)	26 (52%)	25 (50%)	29 (60%)	24 (48%)	26 (55%)
Infiltration Cellular, Plasma Cell	38 (78%)	33 (66%)	37 (74%)	32 (67%)	39 (78%)	32 (68%)
Lymph Node, Mesenteric	(45)	(46)	(49)	(47)	(50)	(44)
Degeneration, Cystic	1 (2%)	3 (7%)	1 (2%)		1 (2%)	1 (2%)
Hyperplasia, Lymphoid	3 (7%)	1 (2%)	1 (2%)	3 (6%)	1 (2%)	5 (11%)
Infiltration Cellular, Mast Cell						1 (2%)
Infiltration Cellular, Plasma Cell			1 (2%)			1 (2%)
Inflammation, Granulomatous	9 (20%)	15 (33%)	14 (29%)	9 (19%)	14 (28%)	10 (23%)
Spleen	(48)	(49)	(49)	(49)	(50)	(47)
Capsule, Cyst			1 (2%)			
Depletion Lymphoid	1 (2%)	1 (2%)	1 (2%)	1 (2%)	2 (4%)	

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CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Hematopoietic Cell Proliferation	29 (60%)	14 (29%)	23 (47%)	24 (49%)	16 (32%)	19 (40%)
Hyperplasia, Lymphoid	5 (10%)	1 (2%)	2 (4%)		5 (10%)	
Hyperplasia, Stromal			1 (2%)	2 (4%)		1 (2%)
Infiltration Cellular, Polymorphnuclr	1 (2%)	1 (2%)			1 (2%)	1 (2%)
Inflammation, Chronic Active		1 (2%)				
Necrosis		2 (4%)		1 (2%)		1 (2%)
Pigmentation	20 (42%)	21 (43%)	22 (45%)	30 (61%)	18 (36%)	18 (38%)
Red Pulp, Hyperplasia			1 (2%)			
Thymus	(45)	(44)	(46)	(44)	(46)	(40)
Atrophy	43 (96%)	40 (91%)	44 (96%)	41 (93%)	42 (91%)	39 (98%)
Cyst	1 (2%)		1 (2%)			
Cyst, Squamous					1 (2%)	
Degeneration, Cystic					1 (2%)	
Epithel Cell, Hyperplasia	2 (4%)	2 (5%)	2 (4%)	4 (9%)	2 (4%)	2 (5%)
INTEGUMENTARY SYSTEM						
Mammary Gland	(44)	(45)	(47)	(44)	(45)	(47)
Acinus, Degeneration	29 (66%)	19 (42%)	24 (51%)	11 (25%)	24 (53%)	17 (36%)
Alveolus, Hyperplasia	1 (2%)	4 (9%)	6 (13%)	18 (41%)	2 (4%)	6 (13%)
Atypical Focus		1 (2%)				1 (2%)
Duct, Dilatation			1 (2%)			
Duct, Ectasia			1 (2%)			
Duct, Hyperplasia			2 (4%)	3 (7%)		1 (2%)
Duct, Inflammation, Chronic Active			1 (2%)			
Ectasia	1 (2%)	3 (7%)	7 (15%)	4 (9%)	3 (7%)	12 (26%)
Fibrosis						
Lactation	3 (7%)	9 (20%)	10 (21%)	4 (9%)	5 (11%)	14 (30%)
Skin	(51)	(50)	(50)	(50)	(50)	(49)
Abscess			1 (2%)			1 (2%)
Cyst Epithelial Inclusion	2 (4%)	1 (2%)	2 (4%)	4 (8%)	2 (4%)	2 (4%)
Dermis, Fibrosis					1 (2%)	

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

Experiment Number: 99920-94
 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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:23:58
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat MALE	F1	0PPB	F1	2PPB	F1	10PPB	F1	50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Dermis, Inflammation, Chronic Active									1 (2%)	2 (4%)
Dermis, Necrosis									1 (2%)	
Epidermis, Hyperplasia	1 (2%)							1 (2%)		1 (2%)
Epidermis, Inflammation, Suppurative	1 (2%)							1 (2%)		
Epidermis, Necrosis			1 (2%)							
Fibrosis	1 (2%)				1 (2%)					
Foreign Body					1 (2%)					
Hair Follicle, Hemorrhage										1 (2%)
Hyperkeratosis	1 (2%)		1 (2%)					1 (2%)	2 (4%)	1 (2%)
Inflammation, Chronic Active	24 (47%)		14 (28%)		21 (42%)			16 (32%)	28 (56%)	28 (57%)
Inflammation, Pyogranulomat									1 (2%)	
Inflammation, Suppurative								2 (4%)	1 (2%)	1 (2%)
Keratin Cyst										
Ulcer								1 (2%)		
MUSCULOSKELETAL SYSTEM										
Bone		(2)		(0)		(0)		(1)	(0)	(0)
Bone, Femur		(51)		(50)		(50)		(50)	(50)	(50)
Skeletal Muscle		(1)		(1)		(1)		(2)	(2)	(0)
NERVOUS SYSTEM										
Brain, Brain Stem		(49)		(50)		(50)		(50)	(50)	(48)
Compression		5 (10%)		7 (14%)		9 (18%)		4 (8%)	7 (14%)	10 (21%)
Gliosis										1 (2%)
Hemorrhage						1 (2%)			1 (2%)	3 (6%)
Brain, Cerebellum		(49)		(50)		(50)		(50)	(50)	(48)
Angiectasis						1 (2%)				
Gliosis										
Hemorrhage										
Hydrocephalus									2 (4%)	
Brain, Cerebrum		(49)		(50)		(50)		(50)	(50)	(48)

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

Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:23:58
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Hydrocephalus	1 (2%)	3 (6%)	1 (2%)	1 (2%)	3 (6%)	4 (8%)
Infiltration Cellular Meninges, Hyperplasia				1 (2%)		
Peripheral Nerve	(0)	(1)	(1)	(2)	(2)	(0)
RESPIRATORY SYSTEM						
Lung	(46)	(46)	(48)	(48)	(50)	(45)
Alveolar Epith, Hyperplasia	7 (15%)	2 (4%)	4 (8%)	3 (6%)	6 (12%)	9 (20%)
Artery, Mineralization				2 (4%)	2 (4%)	3 (7%)
Congestion		1 (2%)				
Hemorrhage						
Infiltration Cellular, Histiocyte	18 (39%)	18 (39%)	13 (27%)	11 (23%)	23 (46%)	17 (38%)
Infiltration Cellular, Lymphocyte				1 (2%)		
Inflammation, Chronic					2 (4%)	
Inflammation, Chronic Active		1 (2%)	2 (4%)	1 (2%)	2 (4%)	1 (2%)
Mediastinum, Hemorrhage	1 (2%)					
Mediastinum, Inflammation, Suppurative	1 (2%)					
Mediastinum, Necrosis	1 (2%)					
Metaplasia, Osseous	1 (2%)	1 (2%)	3 (6%)	1 (2%)		2 (4%)
Thrombosis						1 (2%)
Nose	(48)	(49)	(50)	(49)	(49)	(48)
Exudate		1 (2%)			1 (2%)	
Foreign Body				1 (2%)		
Inflammation, Chronic Active	3 (6%)		1 (2%)		3 (6%)	3 (6%)
Inflammation, Suppurative	4 (8%)	6 (12%)	7 (14%)	7 (14%)	6 (12%)	2 (4%)
Metaplasia, Squamous		1 (2%)				
Mucosa, Hyperkeratosis	2 (4%)				2 (4%)	1 (2%)
Mucosa, Hyperplasia					1 (2%)	1 (2%)
Mucosa, Keratin Cyst			2 (4%)	1 (2%)	1 (2%)	1 (2%)
Polyp, Inflammatory		1 (2%)				
Vomeronas Org, Dilatation		3 (6%)	3 (6%)		1 (2%)	

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

Experiment Number: 99920-94
 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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:23:58
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Trachea	(49)	(50)	(50)	(50)	(50)	(46)
Epithelium, Hyperplasia				1 (2%)		
Infiltration Cellular, Lymphocyte				1 (2%)		
SPECIAL SENSES SYSTEM						
Eye	(46)	(46)	(47)	(46)	(49)	(45)
Bilateral, Cataract	2 (4%)					
Bilateral, Retina, Degeneration				1 (2%)		
Cataract	1 (2%)			1 (2%)		
Cornea, Inflammation, Chronic Active				1 (2%)		
Hemorrhage	1 (2%)					
Inflammation, Chronic Active				1 (2%)		
Inflammation, Suppurative	1 (2%)			2 (4%)	1 (2%)	
Retina, Degeneration						1 (2%)
Harderian Gland	(48)	(47)	(48)	(48)	(50)	(46)
Acinus, Degeneration			4 (8%)	1 (2%)	2 (4%)	
Degeneration			1 (2%)			
Infiltration Cellular, Lymphocyte	3 (6%)		1 (2%)	5 (10%)	3 (6%)	1 (2%)
Polyarteritis						
Lacrimal Gland	(0)	(0)	(0)	(2)	(0)	(1)
Ectopic Harderian				1 (50%)		1 (100%)
Zymbal's Gland	(1)	(0)	(0)	(2)	(1)	(0)
Inflammation, Suppurative					1 (100%)	
URINARY SYSTEM						
Kidney	(46)	(49)	(48)	(49)	(49)	(47)
Capsule, Inflammation, Chronic Active			1 (2%)			
Cyst	20 (43%)	18 (37%)	21 (44%)	19 (39%)	25 (51%)	24 (51%)
Hydronephrosis			1 (2%)		2 (4%)	2 (4%)
Inflammation, Suppurative					1 (2%)	1 (2%)
Medulla, Cyst	1 (2%)		1 (2%)		1 (2%)	

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

Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:23:58
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Mineralization			1 (2%)	4 (8%)	1 (2%)	
Nephropathy	42 (91%)	41 (84%)	46 (96%)	40 (82%)	47 (96%)	44 (94%)
Pelvis, Hemorrhage					1 (2%)	
Pelvis, Inflammation, Suppurative		2 (4%)	2 (4%)	1 (2%)	2 (4%)	
Polycystic Kidney			1 (2%)		1 (2%)	
Renal Tubule, Hyperplasia			1 (2%)	1 (2%)	1 (2%)	
Transit Epithe, Hyperplasia	3 (7%)	2 (4%)	5 (10%)		1 (2%)	
Urethra	(2)	(2)	(0)	(2)	(1)	(5)
Hemorrhage					1 (100%)	
Urinary Bladder	(45)	(48)	(49)	(49)	(49)	(45)
Dilatation	1 (2%)				2 (4%)	3 (7%)
Hemorrhage				2 (4%)	1 (2%)	1 (2%)
Inflammation, Chronic Active					1 (2%)	
Inflammation, Suppurative				2 (4%)	1 (2%)	1 (2%)
Transit Epithe, Hyperplasia				1 (2%)	2 (4%)	

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

Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:23:58
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Disposition Summary	
Animals Initially In Study	50
Early Deaths	
Moribund Sacrifice	14
Natural Death	3
Survivors	
Moribund Sacrifice	
Natural Death	
Terminal Sacrifice	33
Animals Examined Microscopically	50

ALIMENTARY SYSTEM

Esophagus	(50)
Dilatation	
Hyperkeratosis	
Inflammation, Suppurative	
Intestine Large, Cecum	(46)
Dilatation	
Hyperplasia, Lymphoid	
Inflammation, Chronic Active	
Inflammation, Suppurative	
Intestine Large, Colon	(48)
Dilatation	
Hyperplasia, Lymphoid	
Polyarteritis	1 (2%)
Intestine Large, Rectum	(48)
Dilatation	
Intestine Small, Duodenum	(47)
Intestine Small, Ileum	(45)
Dilatation	

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:23:59

First Dose M/F: NA / NA

Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Intestine Small, Jejunum	(48)
Dilatation	
Inflammation, Chronic Active	
Liver	(49)
Angiectasis	1 (2%)
Basophilic Focus	6 (12%)
Bile Duct, Hyperplasia	4 (8%)
Biliar Tract, Fibrosis	
Capsule, Fibrosis	
Clear Cell Focus	
Cyst	2 (4%)
Cyst Multilocular	
Degeneration, Cystic	10 (20%)
Eosinophilic Focus	10 (20%)
Focal Cellular Change	
Hematopoietic Cell Proliferation	2 (4%)
Hepatodiaphragmatic Nodule	3 (6%)
Infiltration Cellular, Lymphocyte	2 (4%)
Inflammation, Chronic	
Inflammation, Chronic Active	12 (24%)
Inflammation, Suppurative	
Left Lat Lobe, Developmental Malformation	
Mixed Cell Focus	
Necrosis	1 (2%)
Oval Cell, Hyperplasia	
Tension Lipidosis	2 (4%)
Vacuolization Cytoplasmic	12 (24%)
Mesentery	(0)
Fat, Necrosis	
Oral Mucosa	(6)

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

Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:23:59
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Gingival, Inflammation, Chronic Active	
Keratin Cyst	1 (17%)
Pancreas	(50)
Acinar Cell, Degeneration	46 (92%)
Basophilic Focus	
Polyarteritis	1 (2%)
Salivary Glands	(49)
Acinus, Degeneration	
Duct, Dilatation	
Inflammation, Chronic Active	
Inflammation, Suppurative	
Stomach, Forestomach	(49)
Edema	
Epithelium, Hyperplasia	2 (4%)
Hyperplasia, Basal Cell	
Inflammation, Suppurative	
Keratin Cyst	
Necrosis	
Ulcer	
Stomach, Glandular	(49)
Cyst	
Edema	
Epithelium, Hyperplasia	
Tongue	(1)
Inflammation, Chronic Active	1 (100%)
<hr/>	
CARDIOVASCULAR SYSTEM	
Blood Vessel	(50)
Heart	(50)
Atrium, Dilatation	2 (4%)
Atrium, Thrombosis	

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:23:59

First Dose M/F: NA / NA

Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Cardiomyopathy	41 (82%)
Endocardium, Hyperplasia	
Inflammation, Suppurative	
Metaplasia, Osseous	1 (2%)
Ventricle, Dilatation	1 (2%)

ENDOCRINE SYSTEM

Adrenal Cortex	(50)
Accessory Adrenal Cortical Nodule	
Angiectasis	2 (4%)
Atrophy	1 (2%)
Cyst	
Degeneration, Cystic	6 (12%)
Hyperplasia	14 (28%)
Hypertrophy	6 (12%)
Metaplasia, Osseous	
Pigmentation	
Vacuolization Cytoplasmic	15 (30%)
Adrenal Medulla	(50)
Angiectasis	
Atrophy	
Bilateral, Hyperplasia	
Cyst	
Hyperplasia	7 (14%)
Islets, Pancreatic	(50)
Hyperplasia	7 (14%)
Parathyroid Gland	(50)
Bilateral, Hyperplasia	1 (2%)
Hyperplasia	6 (12%)
Pituitary Gland	(49)
Pars Distalis, Cyst	1 (2%)

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

Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:23:59
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Pars Distalis, Hyperplasia	10 (20%)
Pars Intermed, Cyst	1 (2%)
Pars Intermed, Hyperplasia	
Thyroid Gland	(49)
C Cell, Hyperplasia	7 (14%)
Cyst, Squamous	8 (16%)
Follicular Cel, Hyperplasia	
Infiltration Cellular, Lymphocyte	
<hr/>	
GENERAL BODY SYSTEM	
Tissue NOS	(0)
Degeneration, Cystic	
Infiltration Cellular, Plasma Cell	
<hr/>	
GENITAL SYSTEM	
Coagulating Gland	(48)
Atrophy	2 (4%)
Degeneration, Cystic	
Developmental Malformation	8 (17%)
Hemorrhage	
Inflammation, Chronic Active	
Inflammation, Suppurative	1 (2%)
Lumen, Dilatation	3 (6%)
Ductus Deferens	(0)
Inflammation, Suppurative	
Epididymis	(50)
Atrophy	8 (16%)
Granuloma Sperm	
Hyperplasia	
Hypospermia	8 (16%)
Infiltration Cellular, Lymphocyte	

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:23:59

First Dose M/F: NA / NA

Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Polyarteritis	1 (2%)
Penis	(0)
Dilatation	
Preputial Gland	(50)
Abscess	1 (2%)
Atrophy	6 (12%)
Cyst	
Duct, Dilatation	12 (24%)
Hyperplasia, Basal Cell	
Infiltration Cellular, Lymphocyte	8 (16%)
Inflammation, Chronic Active	3 (6%)
Inflammation, Suppurative	23 (46%)
Keratin Cyst	2 (4%)
Polyarteritis	1 (2%)
Prostate, Dorsal/Lateral Lobe	(38)
Atrophy	1 (3%)
Cyst	
Degeneration	1 (3%)
Hemorrhage	
Infiltration Cellular, Lymphocyte	
Inflammation, Chronic Active	3 (8%)
Inflammation, Suppurative	35 (92%)
Prostate, Dorsal/lateral Lobe	(12)
Prostate, Ventral Lobe	(50)
Atrophy	
Degeneration	
Hemorrhage	
Hyperplasia	3 (6%)
Infiltration Cellular, Lymphocyte	2 (4%)
Inflammation, Chronic Active	4 (8%)

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

Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:23:59
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Inflammation, Suppurative	3 (6%)
Rete Testes	(46)
Dilatation	5 (11%)
Fibrosis	
Seminal Vesicle	(48)
Atrophy	5 (10%)
Dilatation	
Epithelium, Hyperplasia	1 (2%)
Hemorrhage	
Inflammation, Suppurative	2 (4%)
Lumen, Dilatation	
Testes	(50)
Granuloma Sperm	
Interstit Cell, Hyperplasia	
Malformation	
Polyarteritis	1 (2%)
Seminif Tub, Degeneration	23 (46%)

HEMATOPOIETIC SYSTEM

Bone Marrow	(49)
Erythroid Cell, Hyperplasia	1 (2%)
Hypocellularity	
Myeloid Cell, Hyperplasia	7 (14%)
Lymph Node	(19)
Axillary, Hyperplasia, Lymphoid	2 (11%)
Axillary, Infiltration Cellular, Plasma Cell	2 (11%)
Degeneration, Cystic	
Hemal, Degeneration, Cystic	
Hemal, Inflammation, Chronic Active	
Hemal, Necrosis	
Inguinal, Degeneration, Cystic	1 (5%)

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Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:23:59

First Dose M/F: NA / NA

Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Inguinal, Hyperplasia, Lymphoid	1 (5%)
Inguinal, Infiltration Cellular, Plasma Cell	
Lumbar, Degeneration, Cystic	17 (89%)
Lumbar, Hyperplasia, Lymphoid	4 (21%)
Lumbar, Infiltration Cellular, Plasma Cell	9 (47%)
Mediastinal, Degeneration, Cystic	1 (5%)
Mediastinal, Infiltration Cellular, Histiocyte	1 (5%)
Mediastinal, Infiltration Cellular, Plasma Cell	
Pancreatic, Degeneration, Cystic	
Pancreatic, Hyperplasia, Lymphoid	1 (5%)
Popliteal, Degeneration, Cystic	
Popliteal, Infiltration Cellular, Plasma Cell	1 (5%)
Renal, Degeneration, Cystic	4 (21%)
Renal, Hyperplasia, Lymphoid	
Renal, Infiltration Cellular, Plasma Cell	2 (11%)
Thoracic, Degeneration, Cystic	
Thoracic, Infiltration Cellular, Plasma Cell	1 (5%)
Lymph Node, Mandibular	(50)
Degeneration, Cystic	15 (30%)
Hyperplasia, Lymphoid	29 (58%)
Infiltration Cellular, Plasma Cell	33 (66%)
Lymph Node, Mesenteric	(48)
Degeneration, Cystic	2 (4%)
Hyperplasia, Lymphoid	8 (17%)
Infiltration Cellular, Mast Cell	
Infiltration Cellular, Plasma Cell	
Inflammation, Granulomatous	7 (15%)
Spleen	(50)
Capsule, Cyst	
Depletion Lymphoid	2 (4%)

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Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a)
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Date Report Requested: 10/23/2014
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First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Hematopoietic Cell Proliferation	21 (42%)
Hyperplasia, Lymphoid	2 (4%)
Hyperplasia, Stromal	
Infiltration Cellular, Polymorphnuclr	1 (2%)
Inflammation, Chronic Active	
Necrosis	
Pigmentation	16 (32%)
Red Pulp, Hyperplasia	
Thymus	(47)
Atrophy	47 (100%)
Cyst	
Cyst, Squamous	
Degeneration, Cystic	
Epithel Cell, Hyperplasia	1 (2%)
INTEGUMENTARY SYSTEM	
Mammary Gland	(48)
Acinus, Degeneration	11 (23%)
Alveolus, Hyperplasia	14 (29%)
Atypical Focus	1 (2%)
Duct, Dilatation	1 (2%)
Duct, Ectasia	
Duct, Hyperplasia	3 (6%)
Duct, Inflammation, Chronic Active	
Ectasia	4 (8%)
Fibrosis	1 (2%)
Lactation	9 (19%)
Skin	(50)
Abscess	1 (2%)
Cyst Epithelial Inclusion	4 (8%)
Dermis, Fibrosis	

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:23:59

First Dose M/F: NA / NA

Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Dermis, Inflammation, Chronic Active	
Dermis, Necrosis	
Epidermis, Hyperplasia	
Epidermis, Inflammation, Suppurative	
Epidermis, Necrosis	
Fibrosis	
Foreign Body	
Hair Follicle, Hemorrhage	
Hyperkeratosis	
Inflammation, Chronic Active	29 (58%)
Inflammation, Pyogranulomat	
Inflammation, Suppurative	1 (2%)
Keratin Cyst	1 (2%)
Ulcer	
<hr/>	
MUSCULOSKELETAL SYSTEM	
Bone	(1)
Bone, Femur	(50)
Skeletal Muscle	(1)
<hr/>	
NERVOUS SYSTEM	
Brain, Brain Stem	(50)
Compression	7 (14%)
Gliosis	
Hemorrhage	
Brain, Cerebellum	(50)
Angiectasis	
Gliosis	1 (2%)
Hemorrhage	1 (2%)
Hydrocephalus	
Brain, Cerebrum	(50)

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

Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:23:59
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Hydrocephalus	4 (8%)
Infiltration Cellular Meninges, Hyperplasia	1 (2%)
Peripheral Nerve	(0)

RESPIRATORY SYSTEM

Lung	(50)
Alveolar Epith, Hyperplasia	3 (6%)
Artery, Mineralization	2 (4%)
Congestion	
Hemorrhage	1 (2%)
Infiltration Cellular, Histiocyte	11 (22%)
Infiltration Cellular, Lymphocyte	
Inflammation, Chronic	
Inflammation, Chronic Active	1 (2%)
Mediastinum, Hemorrhage	
Mediastinum, Inflammation, Suppurative	
Mediastinum, Necrosis	
Metaplasia, Osseous	1 (2%)
Thrombosis	
Nose	(50)
Exudate	
Foreign Body	
Inflammation, Chronic Active	
Inflammation, Suppurative	5 (10%)
Metaplasia, Squamous	
Mucosa, Hyperkeratosis	
Mucosa, Hyperplasia	
Mucosa, Keratin Cyst	
Polyp, Inflammatory	
Vomeronas Org, Dilatation	

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

Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:23:59
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Trachea	(50)
Epithelium, Hyperplasia	
Infiltration Cellular, Lymphocyte	
SPECIAL SENSES SYSTEM	
Eye	(48)
Bilateral, Cataract	
Bilateral, Retina, Degeneration	
Cataract	2 (4%)
Cornea, Inflammation, Chronic Active	
Hemorrhage	
Inflammation, Chronic Active	1 (2%)
Inflammation, Suppurative	
Retina, Degeneration	1 (2%)
Harderian Gland	(50)
Acinus, Degeneration	5 (10%)
Degeneration	
Infiltration Cellular, Lymphocyte	8 (16%)
Polyarteritis	1 (2%)
Lacrimal Gland	(1)
Ectopic Harderian	
Zymbal's Gland	(0)
Inflammation, Suppurative	
URINARY SYSTEM	
Kidney	(49)
Capsule, Inflammation, Chronic Active	
Cyst	23 (47%)
Hydronephrosis	
Inflammation, Suppurative	
Medulla, Cyst	

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Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
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First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL
Mineralization	4 (8%)
Nephropathy	46 (94%)
Pelvis, Hemorrhage	
Pelvis, Inflammation, Suppurative	1 (2%)
Polycystic Kidney	
Renal Tubule, Hyperplasia	1 (2%)
Transit Epithe, Hyperplasia	2 (4%)
Urethra	(1)
Hemorrhage	
Urinary Bladder	(49)
Dilatation	
Hemorrhage	
Inflammation, Chronic Active	
Inflammation, Suppurative	
Transit Epithe, Hyperplasia	

END OF MALE DATA

Experiment Number: 99920-94
 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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
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 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Disposition Summary										
Animals Initially In Study		51		50		50		50		50
Early Deaths										
Moribund Sacrifice		24		22		27		17		26
Natural Death				5		3		8		7
Survivors										
Moribund Sacrifice		1				1				1
Terminal Sacrifice		26		23		19		25		16
Animals Examined Microscopically		51		50		50		50		50
ALIMENTARY SYSTEM										
Esophagus		(51)		(50)		(49)		(50)		(50)
Hemorrhage								1 (2%)		
Inflammation				2 (4%)		1 (2%)		1 (2%)		1 (2%)
Necrosis										1 (2%)
Intestine Large, Cecum		(51)		(50)		(49)		(49)		(50)
Dilatation										1 (2%)
Erosion										1 (2%)
Inflammation, Chronic				1 (2%)						1 (2%)
Intestine Large, Colon		(51)		(50)		(49)		(49)		(50)
Developmental Malformation						1 (2%)				
Inflammation				1 (2%)						
Lymphoid Tiss, Inflammation				1 (2%)						
Mineralization						1 (2%)				
Muscularis, Inflammation, Chronic						1 (2%)				
Intestine Large, Rectum		(51)		(50)		(49)		(50)		(50)
Inflammation, Chronic				1 (2%)						
Intestine Small, Duodenum		(51)		(50)		(49)		(49)		(50)
Autolysis								1 (2%)		
Dilatation						1 (2%)				

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Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

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First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Intestine Small, Ileum		(51)		(50)		(48)		(49)	(48)	(50)
Autolysis								1 (2%)		
Intestine Small, Jejunum		(51)		(50)		(47)		(47)	(48)	(50)
Autolysis								1 (2%)		
Inflammation, Chronic				1 (2%)						
Liver		(51)		(50)		(49)		(50)	(50)	(50)
Angiectasis	2 (4%)		1 (2%)		1 (2%)		1 (2%)	1 (2%)	2 (4%)	4 (8%)
Basophilic Focus	1 (2%)		1 (2%)		1 (2%)		1 (2%)	1 (2%)	1 (2%)	1 (2%)
Bile Duct, Hyperplasia	13 (25%)		15 (30%)		10 (20%)		10 (20%)	10 (20%)	7 (14%)	16 (32%)
Capsule, Hemorrhage, Focal	2 (4%)								1 (2%)	
Caudate Lobe, Developmental Malformation										
Centrilobular, Necrosis						1 (2%)				
Cyst				1 (2%)					2 (4%)	2 (4%)
Cyst Multilocular	3 (6%)					1 (2%)			2 (4%)	1 (2%)
Degeneration, Cystic	1 (2%)							2 (4%)	3 (6%)	5 (10%)
Eosinophilic Focus	1 (2%)		1 (2%)		1 (2%)		5 (10%)		2 (4%)	5 (10%)
Eosinophilic Focus, Multiple										
Hematopoietic Cell Proliferation	2 (4%)		4 (8%)		3 (6%)		1 (2%)		2 (4%)	1 (2%)
Hepatodiaphragmatic Nodule	1 (2%)						1 (2%)		2 (4%)	
Infiltration Cellular, Lymphocyte	3 (6%)		2 (4%)		1 (2%)		1 (2%)			1 (2%)
Inflammation, Chronic Active	6 (12%)		1 (2%)		6 (12%)		5 (10%)		3 (6%)	6 (12%)
Left Lat Lobe, Developmental Malformation										
Median Lobe, Developmental Malformation									1 (2%)	
Mixed Cell Focus										
Necrosis									2 (4%)	
Oval Cell, Hyperplasia									1 (2%)	
Periportal, Inflammation, Chronic	3 (6%)		7 (14%)		5 (10%)		5 (10%)		3 (6%)	5 (10%)
Right Lat Lobe, Developmental Malformation			1 (2%)							
Tension Lipidosis						1 (2%)		1 (2%)		

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Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:24:00

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Vacuolization Cytoplasmic Mesentery Cyst	12 (24%) (2)	8 (16%) (2)	4 (8%) (0)	2 (4%) (1)	9 (18%) (2)	11 (22%) (1)
Fat, Necrosis	2 (100%)	1 (50%)		1 (100%)	2 (100%)	
Oral Mucosa	(3)	(1)	(4)	(4)	(5)	(7)
Gingival, Inflammation				1 (25%)		
Keratin Cyst			3 (75%)	2 (50%)	2 (40%)	4 (57%)
Pancreas	(51)	(50)	(49)	(49)	(50)	(50)
Acinar Cell, Degeneration	20 (39%)	24 (48%)	20 (41%)	24 (49%)	19 (38%)	26 (52%)
Acinar Cell, Hyperplasia				1 (2%)		1 (2%)
Artery, Inflammation, Chronic						1 (2%)
Artery, Mineralization			1 (2%)			
Inflammation, Chronic		7 (14%)		1 (2%)	1 (2%)	
Lipomatosis	1 (2%)	1 (2%)	1 (2%)	2 (4%)	1 (2%)	3 (6%)
Salivary Glands	(51)	(49)	(49)	(50)	(50)	(50)
Artery, Mineralization			1 (2%)			
Inflammation, Chronic	1 (2%)	2 (4%)			2 (4%)	1 (2%)
Stomach, Forestomach	(51)	(50)	(49)	(50)	(50)	(50)
Edema	1 (2%)		1 (2%)	2 (4%)	3 (6%)	
Hyperplasia	2 (4%)	2 (4%)		1 (2%)	4 (8%)	
Inflammation	1 (2%)	4 (8%)	1 (2%)		2 (4%)	
Keratin Cyst					1 (2%)	
Ulcer				1 (2%)		1 (2%)
Stomach, Glandular	(51)	(50)	(49)	(50)	(50)	(50)
Glands, Dilatation			1 (2%)			
Infiltration Cellular, Lymphocyte		1 (2%)			1 (2%)	
Inflammation				1 (2%)	1 (2%)	
Mineralization			1 (2%)			
Tooth	(0)	(0)	(0)	(0)	(1)	(0)
Dysplasia					1 (100%)	

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Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:24:00
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
CARDIOVASCULAR SYSTEM						
Blood Vessel	(51)	(50)	(49)	(50)	(50)	(50)
Mineralization			1 (2%)		1 (2%)	
Heart	(51)	(50)	(49)	(50)	(50)	(50)
Artery, Mineralization			1 (2%)			
Cardiomyopathy	23 (45%)	18 (36%)	10 (20%)	12 (24%)	22 (44%)	16 (32%)
Endocardium, Hyperplasia						
Myocardium, Necrosis		1 (2%)				
ENDOCRINE SYSTEM						
Adrenal Cortex	(51)	(50)	(49)	(50)	(50)	(50)
Angiectasis	2 (4%)	1 (2%)		2 (4%)	1 (2%)	3 (6%)
Atrophy	2 (4%)		2 (4%)		1 (2%)	
Cyst				1 (2%)		
Degeneration, Cystic	46 (90%)	43 (86%)	43 (88%)	45 (90%)	43 (86%)	44 (88%)
Hematopoietic Cell Proliferation				1 (2%)		1 (2%)
Hyperplasia	1 (2%)	3 (6%)	1 (2%)			
Hypertrophy	5 (10%)	11 (22%)	7 (14%)	7 (14%)	2 (4%)	2 (4%)
Metaplasia, Osseous	1 (2%)					
Vacuolization Cytoplasmic	1 (2%)		1 (2%)			
Adrenal Medulla	(48)	(50)	(49)	(50)	(49)	(48)
Hyperplasia					1 (2%)	1 (2%)
Islets, Pancreatic	(51)	(50)	(49)	(49)	(50)	(50)
Hyperplasia	1 (2%)	1 (2%)	3 (6%)		1 (2%)	
Parathyroid Gland	(48)	(47)	(46)	(43)	(46)	(44)
Hyperplasia		2 (4%)	1 (2%)	1 (2%)	1 (2%)	
Pituitary Gland	(51)	(50)	(50)	(50)	(50)	(50)
Angiectasis	2 (4%)					2 (4%)
Cyst			1 (2%)			
Pars Distalis, Cyst	2 (4%)	2 (4%)	1 (2%)	1 (2%)	1 (2%)	1 (2%)

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Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

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Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Pars Distalis, Hyperplasia	4 (8%)	3 (6%)	3 (6%)	2 (4%)	2 (4%)	4 (8%)
Pars Intermed, Cyst	1 (2%)	3 (6%)			1 (2%)	
Pigmentation						1 (2%)
Thyroid Gland	(51)	(50)	(49)	(50)	(50)	(50)
C Cell, Hyperplasia	7 (14%)	4 (8%)	3 (6%)	4 (8%)		3 (6%)
Follicle, Cyst						1 (2%)
Follicular Cel, Hyperplasia				1 (2%)	1 (2%)	2 (4%)
Infiltration Cellular, Lymphocyte	1 (2%)				1 (2%)	
Inflammation, Chronic	1 (2%)	1 (2%)		2 (4%)		1 (2%)
Ultimobranchial Cyst	2 (4%)	4 (8%)	1 (2%)	5 (10%)	1 (2%)	2 (4%)
GENERAL BODY SYSTEM						
Tissue NOS	(0)	(0)	(1)	(0)	(0)	(0)
GENITAL SYSTEM						
Clitoral Gland	(50)	(49)	(48)	(50)	(50)	(49)
Atrophy		6 (12%)	4 (8%)	2 (4%)	3 (6%)	1 (2%)
Duct, Dilatation	11 (22%)	12 (24%)	10 (21%)	9 (18%)	17 (34%)	9 (18%)
Duct, Hyperplasia, Squamous	2 (4%)	1 (2%)	2 (4%)		1 (2%)	1 (2%)
Hyperplasia		2 (4%)	2 (4%)			1 (2%)
Infiltration Cellular, Lymphocyte					1 (2%)	
Inflammation	34 (68%)	33 (67%)	32 (67%)	28 (56%)	32 (64%)	29 (59%)
Keratin Cyst						
Ovary	(51)	(50)	(49)	(50)	(50)	(50)
Angiectasis		1 (2%)				
Atrophy	49 (96%)	47 (94%)	46 (94%)	46 (92%)	46 (92%)	45 (90%)
Corpus Luteum, Cyst	1 (2%)	2 (4%)	1 (2%)	2 (4%)	1 (2%)	
Cyst	15 (29%)	9 (18%)	17 (35%)	22 (44%)	12 (24%)	15 (30%)
Granulosa Cell, Hyperplasia				1 (2%)		
Hyperplasia, Sertoliform	23 (45%)	17 (34%)	13 (27%)	23 (46%)	20 (40%)	19 (38%)
Interstit Cell, Hyperplasia		1 (2%)	2 (4%)		2 (4%)	2 (4%)

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Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:24:00

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Oviduct	(51)	(50)	(49)	(50)	(50)	(50)
Pigmentation					1 (2%)	
Uterus	(51)	(50)	(49)	(50)	(50)	(50)
Atrophy	4 (8%)	1 (2%)	2 (4%)		1 (2%)	2 (4%)
Cervix, Hyperplasia						1 (2%)
Cervix, Muscularis, Hypertrophy						
Dilatation	1 (2%)					
Endometrium, Hyperplasia	2 (4%)	7 (14%)	3 (6%)	12 (24%)	2 (4%)	5 (10%)
Endometrium, Hyperplasia, Cystic	15 (29%)	14 (28%)	20 (41%)	17 (34%)	23 (46%)	12 (24%)
Hemorrhage		1 (2%)				
Hyperplasia, Atypical, Focal	6 (12%)	14 (28%)	16 (33%)	20 (40%)	10 (20%)	7 (14%)
Hypoplasia		1 (2%)			1 (2%)	
Inflammation	2 (4%)	1 (2%)		1 (2%)	3 (6%)	2 (4%)
Metaplasia, Squamous	2 (4%)	6 (12%)	8 (16%)	13 (26%)	6 (12%)	6 (12%)
Pigmentation, Focal	1 (2%)					
Vagina	(51)	(50)	(49)	(49)	(50)	(48)
Hemorrhage					1 (2%)	
Inflammation	12 (24%)	22 (44%)	18 (37%)	17 (35%)	17 (34%)	15 (31%)
Mucocyte, Hyperplasia	43 (84%)	33 (66%)	35 (71%)	33 (67%)	33 (66%)	33 (69%)
HEMATOPOIETIC SYSTEM						
Bone Marrow	(51)	(50)	(49)	(50)	(50)	(50)
Hyperplasia	1 (2%)	1 (2%)				1 (2%)
Myeloid Cell, Hyperplasia		1 (2%)			2 (4%)	
Lymph Node	(16)	(14)	(6)	(10)	(15)	(12)
Axillary, Degeneration, Cystic	1 (6%)					
Axillary, Hyperplasia, Lymphoid						1 (8%)
Axillary, Infiltration Cellular, Plasma Cell	2 (13%)					1 (8%)
Deep Cervical, Hyperplasia, Lymphoid				1 (10%)		
Deep Cervical, Infiltration Cellular, Plasma Cell	1 (6%)			1 (10%)		

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Experiment Number: 99920-94
 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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
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 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Degeneration, Cystic									1 (7%)	
Hyperplasia, Lymphoid	1 (6%)									
Infiltration Cellular, Plasma Cell	1 (6%)								3 (20%)	
Inguinal, Degeneration, Cystic										
Inguinal, Hyperplasia, Lymphoid	1 (6%)									1 (8%)
Inguinal, Infiltration Cellular, Plasma Cell	1 (6%)		1 (7%)						1 (7%)	1 (8%)
Lumbar, Degeneration, Cystic	12 (75%)		11 (79%)		3 (50%)		5 (50%)		7 (47%)	9 (75%)
Lumbar, Hemorrhage									1 (7%)	
Lumbar, Hyperplasia, Lymphoid	5 (31%)		10 (71%)		3 (50%)		3 (30%)		4 (27%)	7 (58%)
Lumbar, Infiltration Cellular, Plasma Cell	10 (63%)		12 (86%)		5 (83%)		5 (50%)		7 (47%)	10 (83%)
Mediastinal, Hemorrhage					1 (17%)		1 (10%)			1 (8%)
Mediastinal, Hyperplasia, Lymphoid	1 (6%)									1 (8%)
Mediastinal, Infiltration Cellular, Plasma Cell										
Mediastinal, Pigmentation	1 (6%)						1 (10%)			
Mediastinal, Sinus, Dilatation										1 (8%)
Pancreatic, Hemorrhage							1 (10%)			
Pancreatic, Hyperplasia, Lymphoid									1 (7%)	
Pancreatic, Pigmentation	1 (6%)						1 (10%)			
Popliteal, Degeneration, Cystic	1 (6%)				1 (17%)		1 (10%)			
Popliteal, Hyperplasia, Lymphoid	2 (13%)				2 (33%)					
Popliteal, Infiltration Cellular, Plasma Cell	2 (13%)		1 (7%)		2 (33%)		1 (10%)			
Renal, Degeneration, Cystic	1 (6%)		1 (7%)							
Renal, Hyperplasia, Lymphoid			1 (7%)						1 (7%)	
Renal, Infiltration Cellular, Plasma Cell	1 (6%)		1 (7%)							
Thoracic, Infiltration Cellular, Plasma Cell	1 (6%)									
Lymph Node, Mandibular	(51)		(50)		(49)		(50)		(50)	(49)
Degeneration, Cystic	16 (31%)		9 (18%)		8 (16%)		8 (16%)		8 (16%)	6 (12%)
Hemorrhage	1 (2%)									
Hyperplasia, Lymphoid	4 (8%)		14 (28%)		11 (22%)		5 (10%)		10 (20%)	11 (22%)
Infiltration Cellular, Plasma Cell	43 (84%)		40 (80%)		43 (88%)		39 (78%)		40 (80%)	41 (84%)

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:24:00

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Inflammation, Suppurative								1 (2%)	1 (2%)	
Lymph Node, Mesenteric	(51)		(50)		(47)		(50)		(50)	(50)
Degeneration, Cystic	1 (2%)				1 (2%)		1 (2%)		1 (2%)	
Depletion Lymphoid	1 (2%)		1 (2%)				1 (2%)		1 (2%)	
Hemorrhage			1 (2%)				2 (4%)		1 (2%)	1 (2%)
Hyperplasia, Lymphoid	5 (10%)		3 (6%)		1 (2%)		2 (4%)		3 (6%)	4 (8%)
Infiltration Cellular, Plasma Cell	5 (10%)		3 (6%)		1 (2%)		1 (2%)		1 (2%)	1 (2%)
Pigmentation	2 (4%)		1 (2%)							
Sinus, Dilatation							1 (2%)			
Spleen	(51)		(50)		(49)		(50)		(50)	(50)
Hematopoietic Cell Proliferation	15 (29%)		22 (44%)		10 (20%)		6 (12%)		13 (26%)	17 (34%)
Hyperplasia, Lymphoid										1 (2%)
Hyperplasia, Stromal			1 (2%)							
Lymphocyte, Atrophy			1 (2%)							
Pigmentation	33 (65%)		31 (62%)		34 (69%)		43 (86%)		28 (56%)	25 (50%)
Red Pulp, Atrophy	1 (2%)									
Thymus	(51)		(44)		(45)		(48)		(44)	(46)
Cyst	17 (33%)		18 (41%)		21 (47%)		17 (35%)		13 (30%)	22 (48%)
Hemorrhage							1 (2%)		1 (2%)	
Hyperplasia, Lymphoid									1 (2%)	
Inflammation, Chronic			1 (2%)						1 (2%)	
INTEGUMENTARY SYSTEM										
Mammary Gland	(51)		(49)		(49)		(50)		(49)	(50)
Alveolus, Hyperplasia	42 (82%)		38 (78%)		42 (86%)		40 (80%)		36 (73%)	43 (86%)
Atypical Focus	19 (37%)		23 (47%)		21 (43%)		23 (46%)		13 (27%)	19 (38%)
Duct, Dilatation	3 (6%)		5 (10%)				4 (8%)			1 (2%)
Duct, Inflammation										
Fibrosis										
Galactocele	2 (4%)		2 (4%)		4 (8%)		6 (12%)		3 (6%)	4 (8%)
Lactation	26 (51%)		32 (65%)		31 (63%)		30 (60%)		29 (59%)	29 (58%)

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

Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:24:00
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Lobules, Hyperplasia						1 (2%)				
Skin	(51)		(50)		(49)		(50)		(50)	(50)
Abscess	1 (2%)									
Cyst Epithelial Inclusion									1 (2%)	
Hyperkeratosis									1 (2%)	
Inflammation	23 (45%)		16 (32%)		9 (18%)		7 (14%)		23 (46%)	22 (44%)
MUSCULOSKELETAL SYSTEM										
Bone, Femur	(51)		(50)		(49)		(50)		(50)	(50)
Fibrous Osteodystrophy					1 (2%)					
Osteopetrosis										1 (2%)
Skeletal Muscle	(1)		(0)		(1)		(1)		(0)	(4)
Head, Hyalinization, Focal					1 (100%)					
NERVOUS SYSTEM										
Brain, Brain Stem	(51)		(50)		(49)		(50)		(50)	(50)
Compression	26 (51%)		26 (52%)		23 (47%)		26 (52%)		23 (46%)	18 (36%)
Hemorrhage			1 (2%)		1 (2%)		1 (2%)		2 (4%)	1 (2%)
Hydrocephalus					1 (2%)					
Brain, Cerebellum	(51)		(50)		(49)		(50)		(50)	(50)
Hemorrhage									1 (2%)	
Hydrocephalus	2 (4%)						2 (4%)		3 (6%)	
Brain, Cerebrum	(51)		(50)		(49)		(50)		(50)	(50)
Hemorrhage									1 (2%)	
Hydrocephalus	2 (4%)		2 (4%)		6 (12%)		5 (10%)		3 (6%)	2 (4%)
Peripheral Nerve	(1)		(0)		(0)		(0)		(0)	(2)
RESPIRATORY SYSTEM										
Lung	(51)		(50)		(49)		(50)		(50)	(50)
Alveolar Epith, Hyperplasia	1 (2%)		1 (2%)		2 (4%)		1 (2%)		1 (2%)	1 (2%)
Artery, Mineralization			1 (2%)				3 (6%)		3 (6%)	1 (2%)
Autolysis									1 (2%)	

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:24:01

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1	0PPB	F1	2PPB	F1	10 PPB	F1	50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Edema				1 (2%)						
Hemorrhage		1 (2%)						2 (4%)	1 (2%)	
Infiltration Cellular, Histiocyte		11 (22%)		10 (20%)		10 (20%)		16 (32%)	7 (14%)	4 (8%)
Infiltration Cellular, Lymphocyte						1 (2%)		1 (2%)		
Inflammation		3 (6%)		1 (2%)		4 (8%)		3 (6%)	3 (6%)	2 (4%)
Peribronchial, Inflammation, Chronic				1 (2%)		1 (2%)			1 (2%)	
Perivascular, Inflammation				1 (2%)		3 (6%)		1 (2%)	1 (2%)	
Nose		(51)		(50)		(49)		(50)	(50)	(50)
Fibrous Osteodystrophy						1 (2%)				
Foreign Body				1 (2%)				1 (2%)		1 (2%)
Goblet Cell, Hyperplasia		1 (2%)		2 (4%)		2 (4%)			1 (2%)	1 (2%)
Hemorrhage				1 (2%)						
Inflammation		4 (8%)		5 (10%)		5 (10%)		2 (4%)	9 (18%)	4 (8%)
Nasolacrim Dct, Inflammation		29 (57%)		29 (58%)		31 (63%)		30 (60%)	25 (50%)	29 (58%)
Olfactory Epi, Hyaline Droplet		4 (8%)		5 (10%)		1 (2%)		6 (12%)		3 (6%)
Osteopetrosis										1 (2%)
Respirat Epith, Hyaline Droplet									1 (2%)	
Respirat Epith, Hyperplasia		1 (2%)							1 (2%)	
Trachea		(51)		(50)		(49)		(50)	(50)	(50)
Inflammation		2 (4%)				3 (6%)		3 (6%)	1 (2%)	1 (2%)
SPECIAL SENSES SYSTEM										
Ear		(0)		(1)		(0)		(0)	(0)	(0)
Eye		(51)		(49)		(48)		(49)	(50)	(50)
Bilateral, Cataract								1 (2%)	2 (4%)	
Bilateral, Retina, Degeneration		2 (4%)		5 (10%)		1 (2%)		4 (8%)	1 (2%)	6 (12%)
Cataract				1 (2%)		1 (2%)		1 (2%)	2 (4%)	2 (4%)
Cornea, Inflammation		1 (2%)								
Retina, Autolysis									2 (4%)	
Retina, Degeneration		3 (6%)		1 (2%)		5 (10%)			2 (4%)	3 (6%)
Harderian Gland		(51)		(49)		(49)		(50)	(50)	(50)

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

Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:24:01
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Atrophy, Focal Epithelium, Degeneration	2 (4%)				1 (2%)	
Hyperplasia	3 (6%)	2 (4%)	4 (8%)	5 (10%)	2 (4%)	1 (2%)
Infiltration Cellular, Lymphocyte	3 (6%)	2 (4%)	2 (4%)	1 (2%)	2 (4%)	1 (2%)
Inflammation	7 (14%)	10 (20%)	10 (20%)	4 (8%)	7 (14%)	9 (18%)
Zymbal's Gland	(0)	(0)	(0)	(0)	(0)	(0)
URINARY SYSTEM						
Kidney	(51)	(50)	(49)	(50)	(50)	(50)
Bilateral, Hydronephrosis						1 (2%)
Cyst	15 (29%)	16 (32%)	8 (16%)	7 (14%)	11 (22%)	16 (32%)
Degeneration, Mucoid			1 (2%)	1 (2%)	1 (2%)	1 (2%)
Epithelium, Pelvis, Hyperplasia	1 (2%)					1 (2%)
Hemorrhage	1 (2%)			1 (2%)		
Hydronephrosis			1 (2%)	1 (2%)		1 (2%)
Infiltration Cellular, Lymphocyte				1 (2%)		
Inflammation	1 (2%)	1 (2%)			1 (2%)	
Mineralization	31 (61%)	33 (66%)	27 (55%)	34 (68%)	30 (60%)	36 (72%)
Nephropathy	27 (53%)	21 (42%)	18 (37%)	17 (34%)	19 (38%)	19 (38%)
Polycystic Kidney			1 (2%)	1 (2%)		
Renal Tubule, Accumulation, Hyaline Droplet						1 (2%)
Renal Tubule, Hyperplasia, Focal						
Urinary Bladder	(51)	(49)	(49)	(48)	(48)	(50)
Dilatation				1 (2%)		
Hemorrhage				1 (2%)		
Infiltration Cellular, Lymphocyte	2 (4%)					
Inflammation						1 (2%)

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Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:24:01
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL
Disposition Summary	
Animals Initially In Study	50
Early Deaths	
Moribund Sacrifice	22
Natural Death	6
Survivors	
Moribund Sacrifice	
Terminal Sacrifice	22
Animals Examined Microscopically	50
<hr/>	
ALIMENTARY SYSTEM	
Esophagus	(50)
Hemorrhage	
Inflammation	
Necrosis	
Intestine Large, Cecum	(50)
Dilatation	
Erosion	
Inflammation, Chronic	
Intestine Large, Colon	(50)
Developmental Malformation	
Inflammation	
Lymphoid Tiss, Inflammation	
Mineralization	
Muscularis, Inflammation, Chronic	
Intestine Large, Rectum	(50)
Inflammation, Chronic	
Intestine Small, Duodenum	(50)
Autolysis	
Dilatation	

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:24:01

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL
Intestine Small, Ileum	(49)
Autolysis	
Intestine Small, Jejunum	(50)
Autolysis	
Inflammation, Chronic	
Liver	(50)
Angiectasis	3 (6%)
Basophilic Focus	6 (12%)
Bile Duct, Hyperplasia	8 (16%)
Capsule, Hemorrhage, Focal	
Caudate Lobe, Developmental Malformation	1 (2%)
Centrilobular, Necrosis	
Cyst	
Cyst Multilocular	1 (2%)
Degeneration, Cystic	1 (2%)
Eosinophilic Focus	3 (6%)
Eosinophilic Focus, Multiple	1 (2%)
Hematopoietic Cell Proliferation	3 (6%)
Hepatodiaphragmatic Nodule	1 (2%)
Infiltration Cellular, Lymphocyte	2 (4%)
Inflammation, Chronic Active	4 (8%)
Left Lat Lobe, Developmental Malformation	1 (2%)
Median Lobe, Developmental Malformation	
Mixed Cell Focus	1 (2%)
Necrosis	
Oval Cell, Hyperplasia	
Periportal, Inflammation, Chronic	2 (4%)
Right Lat Lobe, Developmental Malformation	
Tension Lipidosis	

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:24:01

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL
Vacuolization Cytoplasmic	13 (26%)
Mesentery	(0)
Cyst	
Fat, Necrosis	
Oral Mucosa	(4)
Gingival, Inflammation	
Keratin Cyst	3 (75%)
Pancreas	(50)
Acinar Cell, Degeneration	23 (46%)
Acinar Cell, Hyperplasia	
Artery, Inflammation, Chronic	
Artery, Mineralization	
Inflammation, Chronic	2 (4%)
Lipomatosis	1 (2%)
Salivary Glands	(50)
Artery, Mineralization	
Inflammation, Chronic	1 (2%)
Stomach, Forestomach	(50)
Edema	1 (2%)
Hyperplasia	
Inflammation	1 (2%)
Keratin Cyst	1 (2%)
Ulcer	
Stomach, Glandular	(50)
Glands, Dilatation	
Infiltration Cellular, Lymphocyte	
Inflammation	
Mineralization	
Tooth	(0)
Dysplasia	

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Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:24:01
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL
CARDIOVASCULAR SYSTEM	
Blood Vessel	(50)
Mineralization	
Heart	(50)
Artery, Mineralization	
Cardiomyopathy	26 (52%)
Endocardium, Hyperplasia	1 (2%)
Myocardium, Necrosis	
<hr/>	
ENDOCRINE SYSTEM	
Adrenal Cortex	(50)
Angiectasis	1 (2%)
Atrophy	1 (2%)
Cyst	
Degeneration, Cystic	42 (84%)
Hematopoietic Cell Proliferation	
Hyperplasia	1 (2%)
Hypertrophy	5 (10%)
Metaplasia, Osseous	
Vacuolization Cytoplasmic	
Adrenal Medulla	(49)
Hyperplasia	2 (4%)
Islets, Pancreatic	(50)
Hyperplasia	
Parathyroid Gland	(46)
Hyperplasia	
Pituitary Gland	(49)
Angiectasis	1 (2%)
Cyst	
Pars Distalis, Cyst	2 (4%)

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:24:01

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL
Pars Distalis, Hyperplasia	1 (2%)
Pars Intermed, Cyst	1 (2%)
Pigmentation	
Thyroid Gland	(50)
C Cell, Hyperplasia	4 (8%)
Follicle, Cyst	
Follicular Cel, Hyperplasia	
Infiltration Cellular, Lymphocyte	
Inflammation, Chronic	1 (2%)
Ultimobranchial Cyst	2 (4%)

GENERAL BODY SYSTEM

Tissue NOS	(0)
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GENITAL SYSTEM

Clitoral Gland	(49)
Atrophy	2 (4%)
Duct, Dilatation	9 (18%)
Duct, Hyperplasia, Squamous	5 (10%)
Hyperplasia	3 (6%)
Infiltration Cellular, Lymphocyte	
Inflammation	34 (69%)
Keratin Cyst	2 (4%)
Ovary	(50)
Angiectasis	
Atrophy	42 (84%)
Corpus Luteum, Cyst	2 (4%)
Cyst	17 (34%)
Granulosa Cell, Hyperplasia	
Hyperplasia, Sertoliform	28 (56%)
Interstit Cell, Hyperplasia	

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:24:01

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL
Oviduct	(50)
Pigmentation	
Uterus	(50)
Atrophy	
Cervix, Hyperplasia	
Cervix, Muscularis, Hypertrophy	1 (2%)
Dilatation	
Endometrium, Hyperplasia	4 (8%)
Endometrium, Hyperplasia, Cystic	22 (44%)
Hemorrhage	
Hyperplasia, Atypical, Focal	9 (18%)
Hypoplasia	
Inflammation	3 (6%)
Metaplasia, Squamous	1 (2%)
Pigmentation, Focal	
Vagina	(50)
Hemorrhage	1 (2%)
Inflammation	18 (36%)
Mucocyte, Hyperplasia	39 (78%)
<hr/>	
HEMATOPOIETIC SYSTEM	
Bone Marrow	(50)
Hyperplasia	1 (2%)
Myeloid Cell, Hyperplasia	1 (2%)
Lymph Node	(13)
Axillary, Degeneration, Cystic	
Axillary, Hyperplasia, Lymphoid	
Axillary, Infiltration Cellular, Plasma Cell	
Deep Cervical, Hyperplasia, Lymphoid	
Deep Cervical, Infiltration Cellular, Plasma Cell	

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:24:01

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL
Degeneration, Cystic	
Hyperplasia, Lymphoid	
Infiltration Cellular, Plasma Cell	
Inguinal, Degeneration, Cystic	2 (15%)
Inguinal, Hyperplasia, Lymphoid	2 (15%)
Inguinal, Infiltration Cellular, Plasma Cell	2 (15%)
Lumbar, Degeneration, Cystic	5 (38%)
Lumbar, Hemorrhage	
Lumbar, Hyperplasia, Lymphoid	7 (54%)
Lumbar, Infiltration Cellular, Plasma Cell	9 (69%)
Mediastinal, Hemorrhage	1 (8%)
Mediastinal, Hyperplasia, Lymphoid	
Mediastinal, Infiltration Cellular, Plasma Cell	2 (15%)
Mediastinal, Pigmentation	
Mediastinal, Sinus, Dilatation	
Pancreatic, Hemorrhage	
Pancreatic, Hyperplasia, Lymphoid	
Pancreatic, Pigmentation	
Popliteal, Degeneration, Cystic	
Popliteal, Hyperplasia, Lymphoid	
Popliteal, Infiltration Cellular, Plasma Cell	1 (8%)
Renal, Degeneration, Cystic	3 (23%)
Renal, Hyperplasia, Lymphoid	2 (15%)
Renal, Infiltration Cellular, Plasma Cell	4 (31%)
Thoracic, Infiltration Cellular, Plasma Cell	
Lymph Node, Mandibular	(50)
Degeneration, Cystic	12 (24%)
Hemorrhage	1 (2%)
Hyperplasia, Lymphoid	5 (10%)
Infiltration Cellular, Plasma Cell	41 (82%)

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

Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:24:01
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL
Inflammation, Suppurative	
Lymph Node, Mesenteric	(50)
Degeneration, Cystic	5 (10%)
Depletion Lymphoid	1 (2%)
Hemorrhage	
Hyperplasia, Lymphoid	7 (14%)
Infiltration Cellular, Plasma Cell	5 (10%)
Pigmentation	
Sinus, Dilatation	
Spleen	(50)
Hematopoietic Cell Proliferation	10 (20%)
Hyperplasia, Lymphoid	
Hyperplasia, Stromal	
Lymphocyte, Atrophy	
Pigmentation	30 (60%)
Red Pulp, Atrophy	
Thymus	(48)
Cyst	17 (35%)
Hemorrhage	
Hyperplasia, Lymphoid	
Inflammation, Chronic	

INTEGUMENTARY SYSTEM

Mammary Gland	(50)
Alveolus, Hyperplasia	45 (90%)
Atypical Focus	18 (36%)
Duct, Dilatation	4 (8%)
Duct, Inflammation	1 (2%)
Fibrosis	1 (2%)
Galactocele	3 (6%)
Lactation	20 (40%)

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Experiment Number: 99920-94
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(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:24:01
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL
Lobules, Hyperplasia	
Skin	(50)
Abscess	
Cyst Epithelial Inclusion	
Hyperkeratosis	
Inflammation	29 (58%)
MUSCULOSKELETAL SYSTEM	
Bone, Femur	(50)
Fibrous Osteodystrophy	
Osteopetrosis	
Skeletal Muscle	(1)
Head, Hyalinization, Focal	
NERVOUS SYSTEM	
Brain, Brain Stem	(50)
Compression	19 (38%)
Hemorrhage	
Hydrocephalus	1 (2%)
Brain, Cerebellum	(50)
Hemorrhage	1 (2%)
Hydrocephalus	2 (4%)
Brain, Cerebrum	(50)
Hemorrhage	
Hydrocephalus	3 (6%)
Peripheral Nerve	(0)
RESPIRATORY SYSTEM	
Lung	(50)
Alveolar Epith, Hyperplasia	
Artery, Mineralization	1 (2%)
Autolysis	

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:24:01

First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL
Edema	1 (2%)
Hemorrhage	1 (2%)
Infiltration Cellular, Histiocyte	8 (16%)
Infiltration Cellular, Lymphocyte	1 (2%)
Inflammation	3 (6%)
Peribronchial, Inflammation, Chronic	
Perivascular, Inflammation	
Nose	(50)
Fibrous Osteodystrophy	
Foreign Body	1 (2%)
Goblet Cell, Hyperplasia	
Hemorrhage	
Inflammation	5 (10%)
Nasolacrim Dct, Inflammation	33 (66%)
Olfactory Epi, Hyaline Droplet	2 (4%)
Osteopetrosis	
Respirat Epith, Hyaline Droplet	
Respirat Epith, Hyperplasia	
Trachea	(50)
Inflammation	6 (12%)

SPECIAL SENSES SYSTEM

Ear	(0)
Eye	(47)
Bilateral, Cataract	
Bilateral, Retina, Degeneration	3 (6%)
Cataract	
Cornea, Inflammation	2 (4%)
Retina, Autolysis	
Retina, Degeneration	2 (4%)
Harderian Gland	(50)

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

Experiment Number: 99920-94

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(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

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First Dose M/F: NA / NA

Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL
Atrophy, Focal	
Epithelium, Degeneration	
Hyperplasia	4 (8%)
Infiltration Cellular, Lymphocyte	1 (2%)
Inflammation	8 (16%)
Zymbal's Gland	(1)

URINARY SYSTEM

Kidney	(50)
Bilateral, Hydronephrosis	
Cyst	9 (18%)
Degeneration, Mucoid	
Epithelium, Pelvis, Hyperplasia	
Hemorrhage	
Hydronephrosis	
Infiltration Cellular, Lymphocyte	1 (2%)
Inflammation	
Mineralization	35 (70%)
Nephropathy	20 (40%)
Polycystic Kidney	1 (2%)
Renal Tubule, Accumulation, Hyaline Droplet	
Renal Tubule, Hyperplasia, Focal	1 (2%)
Urinary Bladder	(49)
Dilatation	
Hemorrhage	
Infiltration Cellular, Lymphocyte	
Inflammation	

**** END OF REPORT ****