

Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014

Time Report Requested: 14:23:25

First Dose M/F: NA / NA

Lab: NCTR

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

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Disposition Summary						
Animals Initially In Study	54	50	50	50	50	50
Early Deaths						
Moribund	6	5	6	12	7	10
Natural Death	9	3		6	7	5
Survivors						
Moribund	2		1		2	1
Natural Death	1	1		1		2
Terminal Sacrifice	36	41	43	31	34	32
Animals Examined Microscopically	54	50	50	50	50	50
ALIMENTARY SYSTEM						
Esophagus	(53)	(50)	(50)	(50)	(50)	(47)
Dilatation				1 (2%)		
Hyperkeratosis	4 (8%)	1 (2%)		7 (14%)	2 (4%)	1 (2%)
Intestine Large, Cecum	(44)	(46)	(50)	(46)	(45)	(42)
Autolysis				1 (2%)		
Hyperplasia, Lymphoid Inflammation, Suppurative Lymphatic, Ectasia	2 (5%)		1 (2%)	1 (2%)		1 (2%)
Polyarteritis		1 (2%)		1 (2%)		
Intestine Large, Colon	(46)	(46)	(50)	(46)	(45)	(43)
Autolysis				1 (2%)		
Hyperplasia, Lymphoid Inflammation, Suppurative Polyarteritis	1 (2%)		1 (2%)	1 (2%)		
Polyarteritis				1 (2%)		
Intestine Large, Rectum	(37)	(42)	(43)	(34)	(37)	(33)
Polyarteritis						
Intestine Small, Duodenum	(46)	(45)	(50)	(46)	(45)	(43)
Autolysis				1 (2%)		

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Cyst						
Hemorrhage				1 (2%)		
Inflammation, Suppurative				1 (2%)		
Necrosis				1 (2%)		
Serosa, Polyarteritis	1 (2%)					
Intestine Small, Ileum	(43)	(47)	(50)	(44)	(44)	(42)
Autolysis			1 (2%)			
Hyperplasia, Lymphoid	1 (2%)	1 (2%)	1 (2%)			
Polyarteritis		1 (2%)		1 (2%)		
Intestine Small, Jejunum	(44)	(45)	(50)	(43)	(42)	(42)
Autolysis			1 (2%)			
Hyperplasia, Lymphoid	2 (5%)		1 (2%)			
Polyarteritis		1 (2%)		1 (2%)		
Liver	(51)	(48)	(50)	(48)	(49)	(47)
Adventitia, Hemorrhage				1 (2%)		
Angiectasis	2 (4%)	7 (15%)	3 (6%)	2 (4%)	4 (8%)	4 (9%)
Autolysis	3 (6%)			3 (6%)	2 (4%)	1 (2%)
Basophilic Focus	3 (6%)	5 (10%)	4 (8%)	5 (10%)	2 (4%)	4 (9%)
Basophilic Focus, Multiple		2 (4%)		1 (2%)		
Bile Duct, Dilatation						
Bile Duct, Hyperplasia	17 (33%)	13 (27%)	9 (18%)	19 (40%)	14 (29%)	8 (17%)
Biliar Tract, Cyst						
Biliar Tract, Fibrosis	7 (14%)	13 (27%)	7 (14%)	16 (33%)	12 (24%)	9 (19%)
Capsule, Fibrosis	1 (2%)		1 (2%)	1 (2%)		
Capsule, Hemorrhage		1 (2%)				
Capsule, Hyperplasia						
Capsule, Inflammation, Chronic			1 (2%)			
Cholangiofibrosis			1 (2%)			
Clear Cell Focus	1 (2%)	1 (2%)				
Clear Cell Focus, Multiple		1 (2%)		1 (2%)	1 (2%)	1 (2%)

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Congestion						
Cyst			2 (4%)	1 (2%)		1 (2%)
Degeneration, Cystic	2 (4%)	6 (13%)	4 (8%)	1 (2%)	3 (6%)	3 (6%)
Developmental Malformation	1 (2%)	1 (2%)			1 (2%)	
Eosinophilic Focus	1 (2%)	1 (2%)	2 (4%)			3 (6%)
Eosinophilic Focus, Multiple	3 (6%)	4 (8%)		1 (2%)	2 (4%)	1 (2%)
Fatty Change					1 (2%)	
Fibrosis						
Granuloma, Multiple			1 (2%)			
Hematopoietic Cell Proliferation	1 (2%)					1 (2%)
Hemorrhage	1 (2%)	2 (4%)		1 (2%)		
Hepatodiaphragmatic Nodule	2 (4%)	1 (2%)		3 (6%)		2 (4%)
Infiltration Cellular, Lymphocyte	8 (16%)	2 (4%)	2 (4%)	8 (17%)	1 (2%)	3 (6%)
Inflammation, Chronic Active	9 (18%)	7 (15%)	6 (12%)	6 (13%)	6 (12%)	9 (19%)
Inflammation, Suppurative						
Mineralization	1 (2%)					
Mixed Cell Focus						
Necrosis	3 (6%)		3 (6%)	3 (6%)		3 (6%)
Pigmentation		1 (2%)				
Polyarteritis		1 (2%)		1 (2%)		
Tension Lipidosis	2 (4%)	1 (2%)		1 (2%)	1 (2%)	1 (2%)
Vacuolization Cytoplasmic	5 (10%)	4 (8%)	6 (12%)	2 (4%)	3 (6%)	5 (11%)
Mesentery	(1)	(1)	(0)	(1)	(1)	(1)
Fat, Inflammation, Chronic						
Fat, Necrosis	1 (100%)	1 (100%)		1 (100%)	1 (100%)	1 (100%)
Oral Mucosa	(0)	(0)	(0)	(1)	(0)	(0)
Pancreas	(50)	(49)	(50)	(49)	(49)	(46)
Accessory Spleen						1 (2%)
Acinar Cell, Degeneration	33 (66%)	33 (67%)	34 (68%)	27 (55%)	32 (65%)	33 (72%)
Acinar Cell, Hyperplasia		1 (2%)	1 (2%)	1 (2%)		

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Adventitia, Polyarteritis						1 (2%)
Autolysis	3 (6%)			3 (6%)	2 (4%)	1 (2%)
Basophilic Focus	1 (2%)		2 (4%)			
Infiltration Cellular, Lymphocyte	1 (2%)		1 (2%)	2 (4%)		
Inflammation, Chronic				1 (2%)		2 (4%)
Inflammation, Chronic Active	3 (6%)					1 (2%)
Inflammation, Granulomatous	1 (2%)					
Pigmentation	2 (4%)	1 (2%)			1 (2%)	2 (4%)
Polyarteritis		1 (2%)		1 (2%)		
Salivary Glands	(49)	(49)	(50)	(47)	(49)	(46)
Acinar Cell, Degeneration						
Acinar Cell, Hyperplasia				1 (2%)	1 (2%)	
Atrophy					1 (2%)	
Autolysis						
Hyperplasia						
Hyperplasia, Lymphoid					1 (2%)	
Hypertrophy						
Infiltration Cellular, Lymphocyte						
Mineralization			1 (2%)			
Stomach, Forestomach	(45)	(46)	(50)	(46)	(47)	(45)
Cyst, Squamous	1 (2%)					
Epithelium, Hyperplasia			1 (2%)			
Hyperkeratosis		1 (2%)				
Hyperplasia	1 (2%)	2 (4%)				
Infiltration Cellular, Lymphocyte						
Inflammation, Chronic Active	1 (2%)					
Inflammation, Suppurative						
Keratin Cyst			1 (2%)			
Mucosa, Ulcer						
Polyarteritis					1 (2%)	

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Submucosa, Edema					1 (2%)	
Ulcer		1 (2%)				
Stomach, Glandular	(45)	(47)	(50)	(44)	(46)	(44)
Epithelium, Hyperplasia		1 (2%)				
Polyarteritis				1 (2%)		
Tongue	(0)	(0)	(0)	(0)	(0)	(0)
CARDIOVASCULAR SYSTEM						
Blood Vessel	(53)	(50)	(50)	(50)	(50)	(48)
Polyarteritis		1 (2%)				
Thrombosis		1 (2%)				
Heart	(52)	(50)	(50)	(50)	(48)	(48)
Atrium, Dilatation						
Autolysis	1 (2%)			1 (2%)		1 (2%)
Bacterium						
Cardiomyopathy	13 (25%)	30 (60%)	29 (58%)	21 (42%)	23 (48%)	27 (56%)
Congestion						
Endocardium, Hyperplasia						1 (2%)
Endocardium, Inflammation, Chronic Active						1 (2%)
Epicardium, Hyperplasia	1 (2%)					
Inflammation, Suppurative						
Metaplasia, Osseous	1 (2%)		5 (10%)		2 (4%)	
Mineralization	1 (2%)					
Myocardium, Necrosis						
Pericardium, Hyperplasia						
Pericardium, Inflammation, Chronic Active						
Polyarteritis		1 (2%)		2 (4%)	1 (2%)	
Thrombosis						1 (2%)
ENDOCRINE SYSTEM						
Adrenal Cortex	(49)	(47)	(50)	(48)	(47)	(46)

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Accessory Adrenal Cortical Nodule	2 (4%)	2 (4%)		3 (6%)		3 (7%)
Angiectasis	1 (2%)		1 (2%)	2 (4%)	2 (4%)	
Atrophy			3 (6%)			
Autolysis					1 (2%)	
Bilateral, Hyperplasia		1 (2%)				
Capsule, Fibrosis			1 (2%)		1 (2%)	
Cyst		1 (2%)		1 (2%)		
Degeneration, Cystic	3 (6%)	1 (2%)	2 (4%)	2 (4%)	1 (2%)	6 (13%)
Hyperplasia	2 (4%)	7 (15%)	2 (4%)	2 (4%)	5 (11%)	3 (7%)
Hypertrophy	2 (4%)	7 (15%)	8 (16%)	3 (6%)	6 (13%)	7 (15%)
Infiltration Cellular, Lymphocyte			1 (2%)			
Metaplasia, Osseous						1 (2%)
Pigmentation			1 (2%)	1 (2%)		
Vacuolization Cytoplasmic	14 (29%)	25 (53%)	36 (72%)	13 (27%)	26 (55%)	22 (48%)
Adrenal Medulla	(47)	(49)	(50)	(49)	(47)	(46)
Bilateral, Hyperplasia	2 (4%)	2 (4%)	2 (4%)	1 (2%)		1 (2%)
Cyst	1 (2%)					
Degeneration, Cystic						
Hemorrhage						
Hyperplasia	6 (13%)	8 (16%)	11 (22%)	5 (10%)	6 (13%)	5 (11%)
Hyperplasia, Focal		1 (2%)				
Hypertrophy						
Infiltration Cellular, Lymphocyte						1 (2%)
Vacuolization Cytoplasmic						1 (2%)
Islets, Pancreatic	(49)	(49)	(50)	(49)	(49)	(46)
Autolysis						
Hyperplasia	23 (47%)	23 (47%)	18 (36%)	21 (43%)	19 (39%)	15 (33%)
Parathyroid Gland	(47)	(47)	(47)	(47)	(48)	(47)
Bilateral, Hyperplasia	2 (4%)	5 (11%)	2 (4%)		1 (2%)	2 (4%)
Hyperplasia	3 (6%)	6 (13%)	8 (17%)	2 (4%)	9 (19%)	8 (17%)

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Pituitary Gland	(49)	(46)	(50)	(49)	(49)	(48)
Autolysis				1 (2%)	2 (4%)	3 (6%)
Pars Distalis, Cyst	3 (6%)	6 (13%)	6 (12%)	5 (10%)	6 (12%)	3 (6%)
Pars Distalis, Cyst, Multiple	1 (2%)	2 (4%)	2 (4%)	1 (2%)	1 (2%)	1 (2%)
Pars Distalis, Hyperplasia	13 (27%)	17 (37%)	11 (22%)	13 (27%)	19 (39%)	19 (40%)
Pars Intermed, Cyst			1 (2%)			
Pars Intermed, Cyst, Multiple	1 (2%)	1 (2%)				
Pars Intermed, Dysplasia						
Pars Intermed, Hyperplasia						1 (2%)
Pars Nervosa, Infiltration Cellular, Lymphocyte						
Thyroid Gland	(49)	(47)	(50)	(46)	(46)	(44)
Autolysis	1 (2%)			1 (2%)		
C Cell, Hyperplasia	7 (14%)	1 (2%)	1 (2%)	9 (20%)	2 (4%)	
Cyst, Squamous	7 (14%)	8 (17%)	4 (8%)	3 (7%)	2 (4%)	4 (9%)
Follicular Cel, Cyst					2 (4%)	
Follicular Cel, Hyperplasia					1 (2%)	
Infiltration Cellular, Lymphocyte	2 (4%)					
Inflammation, Chronic	1 (2%)					
Polyarteritis		1 (2%)				
Vacuolization Cytoplasmic						2 (5%)
GENERAL BODY SYSTEM						
Tissue NOS	(0)	(0)	(1)	(1)	(0)	(0)
GENITAL SYSTEM						
Coagulating Gland	(47)	(49)	(50)	(45)	(45)	(45)
Adventitia, Polyarteritis		1 (2%)				
Atrophy	2 (4%)		2 (4%)	2 (4%)	3 (7%)	3 (7%)
Autolysis		1 (2%)			1 (2%)	
Concretion		1 (2%)				
Degeneration	1 (2%)					

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Developmental Malformation	4 (9%)	4 (8%)	4 (8%)	4 (9%)	2 (4%)	4 (9%)
Dilatation			1 (2%)			
Fibrosis						
Hyperplasia	1 (2%)				1 (2%)	
Infiltration Cellular, Lymphocyte				1 (2%)		
Inflammation, Chronic						
Inflammation, Suppurative						1 (2%)
Interstitial, Inflammation, Chronic		1 (2%)				
Epididymis	(51)	(48)	(50)	(49)	(50)	(47)
Adventitia, Polyarteritis		1 (2%)				
Atrophy	1 (2%)					
Autolysis	1 (2%)					
Degeneration	2 (4%)	4 (8%)	5 (10%)	7 (14%)	1 (2%)	5 (11%)
Granuloma Sperm		1 (2%)				
Hyperplasia						
Hypospermia	7 (14%)	4 (8%)	6 (12%)	4 (8%)	1 (2%)	7 (15%)
Infiltration Cellular, Lymphocyte	4 (8%)	5 (10%)	1 (2%)	2 (4%)	1 (2%)	4 (9%)
Inflammation						
Inflammation, Chronic Active			1 (2%)			
Inflammation, Suppurative						1 (2%)
Polyarteritis			1 (2%)	1 (2%)		
Penis	(0)	(1)	(0)	(0)	(1)	(0)
Concretion		1 (100%)			1 (100%)	
Hemorrhage					1 (100%)	
Preputial Gland	(49)	(48)	(49)	(49)	(50)	(48)
Abscess			1 (2%)	3 (6%)	1 (2%)	1 (2%)
Atrophy	1 (2%)				2 (4%)	1 (2%)
Autolysis	1 (2%)	1 (2%)		1 (2%)		1 (2%)
Cyst		1 (2%)				
Duct, Dilatation	4 (8%)	4 (8%)	7 (14%)	5 (10%)	8 (16%)	3 (6%)

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Foreign Body			1 (2%)			
Infiltration Cellular, Lymphocyte	21 (43%)	21 (44%)	21 (43%)	10 (20%)	15 (30%)	16 (33%)
Inflammation, Chronic						1 (2%)
Inflammation, Chronic Active						
Inflammation, Suppurative	15 (31%)	16 (33%)	21 (43%)	22 (45%)	20 (40%)	22 (46%)
Keratin Cyst				1 (2%)		
Necrosis			1 (2%)			
Parenchym Cell, Degeneration	16 (33%)	20 (42%)	27 (55%)	18 (37%)	21 (42%)	23 (48%)
Prostate	(8)	(9)	(2)	(2)	(8)	(6)
Prostate, Dorsal Lobe	(48)	(49)	(50)	(49)	(49)	(50)
Atrophy						
Autolysis		1 (2%)		1 (2%)	2 (4%)	4 (8%)
Cyst			2 (4%)			
Degeneration	2 (4%)		4 (8%)	2 (4%)	1 (2%)	2 (4%)
Hyperplasia		1 (2%)				
Infiltration Cellular, Lymphocyte	2 (4%)	4 (8%)	2 (4%)		1 (2%)	2 (4%)
Inflammation, Suppurative	31 (65%)	31 (63%)	43 (86%)	41 (84%)	34 (69%)	40 (80%)
Interstitium, Fibrosis		1 (2%)				
Polyarteritis		1 (2%)		2 (4%)		
Prostate, Ventral Lobe	(48)	(49)	(50)	(48)	(49)	(48)
Atrophy						
Autolysis				1 (2%)	3 (6%)	2 (4%)
Degeneration	13 (27%)	9 (18%)	13 (26%)	7 (15%)	5 (10%)	5 (10%)
Hyperplasia	7 (15%)	4 (8%)	8 (16%)	9 (19%)	9 (18%)	4 (8%)
Infiltration Cellular, Lymphocyte	7 (15%)	4 (8%)	6 (12%)	4 (8%)	6 (12%)	4 (8%)
Infiltration Cellular, Plasma Cell						
Inflammation				1 (2%)		
Inflammation, Chronic						
Inflammation, Suppurative	6 (13%)	7 (14%)	6 (12%)	4 (8%)	6 (12%)	10 (21%)
Interstitium, Fibrosis		1 (2%)		1 (2%)		

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Mineralization						
Polyarteritis				1 (2%)		
Rete Testes	(44)	(47)	(47)	(44)	(50)	(46)
Dilatation	3 (7%)		3 (6%)	3 (7%)	3 (6%)	3 (7%)
Fibrosis	1 (2%)	1 (2%)	2 (4%)	1 (2%)		1 (2%)
Spermatocoele			1 (2%)			
Seminal Vesicle	(47)	(48)	(50)	(45)	(43)	(45)
Atrophy	3 (6%)	4 (8%)	5 (10%)	5 (11%)	2 (5%)	3 (7%)
Autolysis	1 (2%)	1 (2%)				1 (2%)
Degeneration						
Dilatation		2 (4%)	2 (4%)	2 (4%)	1 (2%)	1 (2%)
Fibrosis			1 (2%)			
Hyperplasia		3 (6%)	1 (2%)			1 (2%)
Inflammation, Chronic			1 (2%)		1 (2%)	
Inflammation, Chronic Active						1 (2%)
Inflammation, Suppurative		1 (2%)				1 (2%)
Testes	(50)	(50)	(50)	(49)	(49)	(47)
Artery, Mineralization				1 (2%)		
Autolysis	1 (2%)			1 (2%)		4 (9%)
Edema						
Fibrosis						
Hemorrhage						
Inflammation, Granulomatous						
Inflammation, Suppurative						
Interstit Cell, Hyperplasia	1 (2%)					
Polyarteritis	2 (4%)			1 (2%)	1 (2%)	1 (2%)
Seminif Tub, Degeneration	31 (62%)	26 (52%)	26 (52%)	17 (35%)	32 (65%)	23 (49%)
HEMATOPOIETIC SYSTEM						
Bone Marrow	(49)	(49)	(50)	(48)	(48)	(47)
Autolysis	1 (2%)	1 (2%)				1 (2%)

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First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Depletion Cellular						
Erythroid Cell, Hyperplasia		2 (4%)	1 (2%)	4 (8%)	1 (2%)	1 (2%)
Hypocellularity	2 (4%)	1 (2%)	2 (4%)	3 (6%)		1 (2%)
Myeloid Cell, Hyperplasia	3 (6%)	2 (4%)	3 (6%)	8 (17%)	3 (6%)	4 (9%)
Lymph Node	(15)	(13)	(16)	(8)	(14)	(14)
Adventitia, Pancreatic, Polyarteritis	1 (7%)					
Adventitia, Renal, Hemorrhage	1 (7%)					
Axillary, Hyperplasia, Lymphoid						
Axillary, Infiltration Cellular, Plasma Cell						
Deep Cervical, Autolysis	1 (7%)					
Degeneration, Cystic		1 (8%)				
Infiltration Cellular, Plasma Cell		1 (8%)				
Inguinal, Autolysis						
Inguinal, Degeneration, Cystic						
Inguinal, Hyperplasia, Lymphoid			1 (6%)			2 (14%)
Inguinal, Infiltration Cellular, Plasma Cell			2 (13%)			2 (14%)
Lumbar, Autolysis	1 (7%)					
Lumbar, Congestion						
Lumbar, Degeneration, Cystic	6 (40%)	4 (31%)	7 (44%)	4 (50%)	9 (64%)	7 (50%)
Lumbar, Hemorrhage	1 (7%)					
Lumbar, Hyperplasia, Lymphoid	3 (20%)	3 (23%)	4 (25%)		1 (7%)	7 (50%)
Lumbar, Infiltration Cellular, Plasma Cell	7 (47%)	5 (38%)	9 (56%)	4 (50%)	6 (43%)	10 (71%)
Lumbar, Pigmentation						
Mediastinal, Congestion						
Mediastinal, Degeneration, Cystic						
Mediastinal, Hemorrhage						
Mediastinal, Hyperplasia, Lymphoid					1 (7%)	
Mediastinal, Infiltration Cellular, Plasma Cell	1 (7%)	1 (8%)	1 (6%)			
Mediastinal, Pigmentation						
Pancreatic, Hemorrhage						1 (7%)

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

Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:28
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Pancreatic, Hyperplasia, Lymphoid	1 (7%)	3 (23%)	1 (6%)	1 (13%)	1 (7%)	
Pancreatic, Infiltration Cellular, Plasma Cell			1 (6%)	2 (25%)		1 (7%)
Pancreatic, Inflammation, Granulomatous	1 (7%)	1 (8%)			1 (7%)	
Pancreatic, Pigmentation						1 (7%)
Popliteal, Degeneration, Cystic					1 (7%)	
Popliteal, Hyperplasia, Lymphoid		1 (8%)	1 (6%)		2 (14%)	
Popliteal, Infiltration Cellular, Plasma Cell		1 (8%)	1 (6%)	1 (13%)	2 (14%)	
Renal, Autolysis	1 (7%)					
Renal, Congestion						
Renal, Degeneration, Cystic					1 (7%)	2 (14%)
Renal, Fibrosis						1 (7%)
Renal, Hemorrhage						
Renal, Hyperplasia, Lymphoid			1 (6%)		1 (7%)	1 (7%)
Renal, Infiltration Cellular, Plasma Cell			1 (6%)		1 (7%)	2 (14%)
Renal, Inflammation, Suppurative						
Renal, Necrosis						
Renal, Pigmentation	1 (7%)					
Lymph Node, Mandibular	(52)	(50)	(49)	(46)	(49)	(45)
Autolysis	3 (6%)	1 (2%)		1 (2%)		
Degeneration, Cystic	7 (13%)	4 (8%)	9 (18%)	7 (15%)	6 (12%)	4 (9%)
Depletion Lymphoid						
Hemorrhage				1 (2%)		
Hyperplasia, Lymphoid	23 (44%)	12 (24%)	13 (27%)	19 (41%)	17 (35%)	11 (24%)
Infiltration Cellular, Plasma Cell	30 (58%)	21 (42%)	31 (63%)	33 (72%)	28 (57%)	21 (47%)
Inflammation, Chronic Active						
Pigmentation				1 (2%)		
Lymph Node, Mesenteric	(48)	(50)	(50)	(46)	(47)	(45)
Autolysis		2 (4%)		1 (2%)	1 (2%)	
Congestion						
Degeneration, Cystic	3 (6%)	4 (8%)	1 (2%)	6 (13%)	1 (2%)	2 (4%)

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Hemorrhage			1 (2%)	1 (2%)		
Hyperplasia, Lymphoid	14 (29%)	6 (12%)	8 (16%)	11 (24%)	7 (15%)	4 (9%)
Infiltration Cellular, Mast Cell	2 (4%)			2 (4%)	2 (4%)	
Infiltration Cellular, Plasma Cell	3 (6%)	4 (8%)	2 (4%)	4 (9%)	1 (2%)	2 (4%)
Inflammation, Chronic Active						
Inflammation, Granulomatous	14 (29%)	17 (34%)	27 (54%)	17 (37%)	22 (47%)	22 (49%)
Pigmentation	1 (2%)					1 (2%)
Polyarteritis		1 (2%)		2 (4%)		
Spleen	(52)	(48)	(50)	(48)	(50)	(47)
Accessory Spleen	1 (2%)					
Adventitia, Polyarteritis				1 (2%)		
Autolysis	3 (6%)			3 (6%)	2 (4%)	3 (6%)
Capsule, Cyst, Multiple						
Capsule, Degeneration, Cystic						
Capsule, Fibrosis	1 (2%)			1 (2%)		
Congestion						
Depletion Lymphoid			1 (2%)	2 (4%)		1 (2%)
Hematopoietic Cell Proliferation	8 (15%)	12 (25%)	8 (16%)	9 (19%)	12 (24%)	13 (28%)
Hematopoietic Cell Proliferation Erythrocytic						
Hematopoietic Cell Proliferation Granulocytic						
Hyperplasia, Lymphoid	2 (4%)	1 (2%)	3 (6%)	3 (6%)	3 (6%)	2 (4%)
Hyperplasia, Stromal				1 (2%)		
Inflammation, Chronic Active						1 (2%)
Necrosis						1 (2%)
Pigmentation	30 (58%)	30 (63%)	24 (48%)	31 (65%)	35 (70%)	27 (57%)
Red Pulp, Hyperplasia			1 (2%)			
Thymus	(42)	(44)	(45)	(42)	(47)	(40)
Adventitia, Polyarteritis		1 (2%)				
Atrophy	36 (86%)	41 (93%)	43 (96%)	39 (93%)	41 (87%)	38 (95%)
Autolysis		1 (2%)		1 (2%)	1 (2%)	1 (3%)

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Depletion Lymphoid Epithel Cell, Hyperplasia Hemorrhage				1 (2%)	2 (4%)	
Hyperplasia, Lymphoid Polyarteritis	1 (2%)				1 (2%)	
INTEGUMENTARY SYSTEM						
Mammary Gland	(41)	(43)	(40)	(42)	(42)	(34)
Alveolus, Hyperplasia	3 (7%)	2 (5%)	6 (15%)	8 (19%)	1 (2%)	1 (3%)
Autolysis	1 (2%)					
Degeneration	21 (51%)	24 (56%)	12 (30%)	14 (33%)	17 (40%)	18 (53%)
Duct, Dilatation	1 (2%)	2 (5%)	3 (8%)	3 (7%)	2 (5%)	1 (3%)
Fibrosis						
Galactocele		1 (2%)	1 (3%)			
Hemorrhage		1 (2%)				
Hyperplasia, Mast Cell						
Infiltration Cellular, Lymphocyte						
Infiltration Cellular, Mast Cell						1 (3%)
Inflammation, Chronic						
Inflammation, Granulomatous		1 (2%)				
Inflammation, Suppurative		1 (2%)				
Lactation	3 (7%)	1 (2%)	3 (8%)	7 (17%)	3 (7%)	3 (9%)
Skin	(51)	(49)	(50)	(50)	(50)	(50)
Abscess	1 (2%)	1 (2%)	1 (2%)	1 (2%)		
Angiectasis			1 (2%)	1 (2%)		
Autolysis	1 (2%)					
Cyst		1 (2%)				
Cyst Epithelial Inclusion	2 (4%)		2 (4%)	2 (4%)	3 (6%)	
Dermis, Fibrosis						
Epidermis, Hyperplasia	5 (10%)	2 (4%)	2 (4%)	1 (2%)	6 (12%)	
Epidermis, Ulcer	1 (2%)					

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Fibrosis	1 (2%)	1 (2%)				1 (2%)
Foreign Body				1 (2%)		1 (2%)
Hemorrhage		1 (2%)	1 (2%)			1 (2%)
Hyperkeratosis	5 (10%)	2 (4%)	2 (4%)	1 (2%)	6 (12%)	
Inflammation, Chronic	2 (4%)	1 (2%)	1 (2%)	1 (2%)	1 (2%)	1 (2%)
Inflammation, Chronic Active	7 (14%)	8 (16%)	7 (14%)	5 (10%)	7 (14%)	10 (20%)
Inflammation, Granulomatous						1 (2%)
Inflammation, Pyogranulomat	1 (2%)			1 (2%)		
Inflammation, Suppurative	22 (43%)	21 (43%)	29 (58%)	19 (38%)	21 (42%)	24 (48%)
Lymphatic, Ectasia						
Necrosis	4 (8%)	2 (4%)	1 (2%)	4 (8%)	3 (6%)	3 (6%)
MUSCULOSKELETAL SYSTEM						
Bone	(0)	(0)	(0)	(0)	(0)	(0)
Bone, Cranium	(0)	(0)	(0)	(0)	(0)	(1)
Hemorrhage						
Hyperostosis						
Bone, Femur	(53)	(50)	(50)	(50)	(49)	(50)
Hyperostosis	1 (2%)					
Necrosis			1 (2%)			
Skeletal Muscle	(0)	(0)	(0)	(1)	(0)	(0)
Cyst						
Fibrosis						
NERVOUS SYSTEM						
Brain, Brain Stem	(50)	(48)	(50)	(48)	(50)	(48)
Autolysis	1 (2%)				1 (2%)	1 (2%)
Compression	7 (14%)	3 (6%)	5 (10%)	5 (10%)	4 (8%)	4 (8%)
Cyst						1 (2%)
Gliosis					1 (2%)	
Hemorrhage	1 (2%)			1 (2%)	1 (2%)	1 (2%)

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Brain, Cerebellum	(50)	(48)	(50)	(47)	(49)	(48)
Autolysis	1 (2%)				1 (2%)	
Gliosis	1 (2%)					
Hemorrhage	1 (2%)			2 (4%)	1 (2%)	
Hydrocephalus	1 (2%)	1 (2%)	1 (2%)		2 (4%)	1 (2%)
Brain, Cerebrum	(50)	(48)	(50)	(48)	(50)	(48)
Autolysis	1 (2%)				1 (2%)	
Compression						1 (2%)
Developmental Malformation						1 (2%)
Ectopic Tissue						1 (2%)
Gliosis						1 (2%)
Hemorrhage				1 (2%)	2 (4%)	1 (2%)
Hydrocephalus	3 (6%)	1 (2%)	1 (2%)	3 (6%)	2 (4%)	3 (6%)
Infiltration Cellular, Lymphocyte				1 (2%)		
Meninges, Congestion	1 (2%)					
Meninges, Fibrosis						
Meninges, Hemorrhage	1 (2%)					
Mineralization				1 (2%)		1 (2%)
Vacuolization Cytoplasmic						
RESPIRATORY SYSTEM						
Lung	(49)	(47)	(50)	(47)	(48)	(44)
Alveolar Epith, Hyperplasia	3 (6%)	3 (6%)	5 (10%)	1 (2%)	3 (6%)	2 (5%)
Artery, Mineralization	3 (6%)	6 (13%)	8 (16%)	9 (19%)	5 (10%)	3 (7%)
Autolysis	1 (2%)			2 (4%)	1 (2%)	
Congestion						
Cyst	1 (2%)					
Edema	1 (2%)					
Hemorrhage	3 (6%)		1 (2%)			1 (2%)
Infiltration Cellular, Histiocyte	15 (31%)	19 (40%)	20 (40%)	16 (34%)	21 (44%)	14 (32%)
Infiltration Cellular, Histiocytic		1 (2%)			1 (2%)	

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Infiltration Cellular, Lymphocyte	1 (2%)		1 (2%)		1 (2%)	
Inflammation, Chronic		1 (2%)			1 (2%)	
Inflammation, Suppurative				1 (2%)		
Mediastinum, Bacterium						
Mediastinum, Foreign Body						
Mediastinum, Hemorrhage						
Mediastinum, Inflammation, Suppurative						
Mediastinum, Necrosis						
Metaplasia, Osseous	2 (4%)	3 (6%)	6 (12%)	3 (6%)	3 (6%)	4 (9%)
Peribronchial, Hyperplasia, Lymphoid				1 (2%)		
Pigmentation				1 (2%)		
Pleura, Fibrosis			1 (2%)			
Pleura, Hyperplasia			1 (2%)			
Pleura, Inflammation, Chronic			1 (2%)			
Polyarteritis				2 (4%)		
Thrombosis						
Nose	(48)	(48)	(50)	(48)	(47)	(45)
Autolysis	1 (2%)			1 (2%)	1 (2%)	
Cyst						
Foreign Body			1 (2%)		1 (2%)	1 (2%)
Fungus					1 (2%)	
Goblet Cell, Hyperplasia						
Goblet Cell, Metaplasia						
Hemorrhage	1 (2%)					
Hyperkeratosis	1 (2%)					
Inflammation, Chronic						
Inflammation, Chronic Active	1 (2%)	1 (2%)	1 (2%)		3 (6%)	3 (7%)
Inflammation, Suppurative	3 (6%)	1 (2%)	4 (8%)	4 (8%)	5 (11%)	8 (18%)
Keratin Cyst	1 (2%)			1 (2%)		1 (2%)
Metaplasia, Osseous				1 (2%)		

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Metaplasia, Squamous Necrosis					2 (4%)	
Respirat Epith, Hyperplasia						
Squam Epithel, Hyperplasia	2 (4%)					
Squam Epithel, Metaplasia	1 (2%)					
Ulcer	1 (2%)					
Upper Molar, Inflammation, Chronic Active	2 (4%)			2 (4%)	2 (4%)	
Upper Molar, Necrosis						
Trachea	(47)	(47)	(50)	(46)	(47)	(46)
Cyst, Squamous Epithelium, Hyperplasia				1 (2%)		
SPECIAL SENSES SYSTEM						
Ear	(0)	(0)	(0)	(0)	(0)	(0)
Eye	(37)	(42)	(43)	(35)	(37)	(33)
Antr Chamber, Hemorrhage						1 (3%)
Antr Chamber, Inflammation, Suppurative						1 (3%)
Autolysis						
Bilateral, Retina, Atrophy	6 (16%)	4 (10%)	10 (23%)	6 (17%)	5 (14%)	4 (12%)
Cataract				2 (6%)	1 (3%)	
Cornea, Degeneration						1 (3%)
Cornea, Hyperplasia						
Cornea, Inflammation, Suppurative						1 (3%)
Cornea, Ulcer						1 (3%)
Hemorrhage						
Inflammation, Chronic	1 (3%)					
Inflammation, Chronic Active				1 (3%)		
Inflammation, Suppurative				1 (3%)		
Retina, Atrophy	5 (14%)	2 (5%)	1 (2%)	1 (3%)	2 (5%)	
Harderian Gland	(39)	(42)	(43)	(37)	(39)	(33)
Autolysis						

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Degeneration Epithelium, Hyperplasia Hyperplasia	1 (3%)	2 (5%)	1 (2%)	1 (3%)	1 (3%) 1 (3%)	
Infiltration Cellular, Lymphocyte Inflammation, Chronic Inflammation, Suppurative Pigmentation	5 (13%)	5 (12%)	3 (7%)	4 (11%)	1 (3%) 1 (3%)	3 (9%)
Lacrimal Gland Degeneration	(10)	(9)	(10)	(14)	(14) 1 (7%)	(12) 1 (8%)
Ectopic Harderian Infiltration Cellular, Lymphocyte Inflammation, Chronic Active	10 (100%)	9 (100%)	10 (100%)	14 (100%)	13 (93%) 1 (7%) 1 (7%)	12 (100%) 1 (8%)
Zymbal's Gland Inflammation, Suppurative	(0)	(1)	(0)	(1)	(0)	(1) 1 (100%)
URINARY SYSTEM						
Kidney	(48)	(48)	(50)	(48)	(48)	(46)
Accumulation, Hyaline Droplet Autolysis Bacterium Capsule, Fatty Change Capsule, Fibrosis Congestion Cortex, Cyst Fatty Change Fibrosis Hyperplasia, Tubular Infiltration Cellular, Lymphocyte Inflammation, Chronic Inflammation, Chronic Active Inflammation, Suppurative	1 (2%) 1 (2%) 1 (2%) 24 (50%) 1 (2%)	 1 (2%) 1 (2%) 1 (2%) 1 (2%) 1 (2%) 26 (54%) 1 (2%) 1 (2%) 1 (2%)	 3 (6%) 22 (44%) 1 (2%) 2 (4%) 2 (4%) 2 (4%) 2 (4%) 1 (2%)	 2 (4%) 29 (60%) 1 (2%) 5 (10%) 1 (2%) 1 (2%)	 2 (4%) 27 (56%) 1 (2%) 2 (4%) 1 (2%) 1 (2%)	 4 (9%) 4 (9%) 22 (48%) 1 (2%) 2 (4%) 1 (2%) 1 (2%)

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Medulla, Cyst	1 (2%)					
Mineralization			1 (2%)			
Nephropathy, Chronic	41 (85%)	41 (85%)	40 (80%)	37 (77%)	39 (81%)	38 (83%)
Pelvis, Dilatation	2 (4%)			1 (2%)	1 (2%)	3 (7%)
Pelvis, Hyperplasia	5 (10%)	4 (8%)	6 (12%)	2 (4%)	4 (8%)	5 (11%)
Pelvis, Inflammation, Suppurative					1 (2%)	2 (4%)
Pelvis, Mineralization		1 (2%)	1 (2%)		1 (2%)	
Polyarteritis				1 (2%)		
Polycystic Kidney					1 (2%)	
Renal Tubule, Dilatation	3 (6%)			2 (4%)	1 (2%)	
Renal Tubule, Inflammation, Suppurative	1 (2%)		1 (2%)	1 (2%)		1 (2%)
Renal Tubule, Mineralization	1 (2%)			4 (8%)		1 (2%)
Urethra	(0)	(0)	(1)	(1)	(1)	(1)
Congestion						1 (100%)
Urinary Bladder	(47)	(48)	(50)	(46)	(48)	(46)
Autolysis				1 (2%)	1 (2%)	1 (2%)
Dilatation		1 (2%)	1 (2%)			1 (2%)
Hemorrhage	1 (2%)			2 (4%)		1 (2%)
Inflammation, Chronic Active					1 (2%)	
Inflammation, Suppurative						
Transit Epithe, Hyperplasia					1 (2%)	
Transit Epithe, Hypertrophy						

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CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Disposition Summary					
Animals Initially In Study	50	52	50	50	50
Early Deaths					
Moribund	5	6		8	3
Natural Death	7	9	6	5	8
Survivors					
Moribund		2	1	3	1
Natural Death		2	1	1	2
Terminal Sacrifice	38	33	42	33	36
Animals Examined Microscopically	50	52	50	49	49
ALIMENTARY SYSTEM					
Esophagus	(49)	(49)	(49)	(48)	(49)
Dilatation			1 (2%)		
Hyperkeratosis	3 (6%)	2 (4%)	1 (2%)		1 (2%)
Intestine Large, Cecum	(44)	(41)	(43)	(46)	(45)
Autolysis					1 (2%)
Hyperplasia, Lymphoid	2 (5%)	1 (2%)			
Inflammation, Suppurative					1 (2%)
Lymphatic, Ectasia					1 (2%)
Polyarteritis			1 (2%)		
Intestine Large, Colon	(46)	(41)	(43)	(46)	(45)
Autolysis	1 (2%)				
Hyperplasia, Lymphoid	2 (4%)	1 (2%)			
Inflammation, Suppurative	1 (2%)				
Polyarteritis	1 (2%)		1 (2%)		
Intestine Large, Rectum	(39)	(38)	(42)	(38)	(38)
Polyarteritis			1 (2%)		
Intestine Small, Duodenum	(45)	(41)	(43)	(46)	(43)
Autolysis					

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

Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:30
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Cyst					1 (2%)
Hemorrhage					
Inflammation, Suppurative					
Necrosis					
Serosa, Polyarteritis					
Intestine Small, Ileum	(43)	(40)	(42)	(45)	(43)
Autolysis					
Hyperplasia, Lymphoid	2 (5%)	1 (3%)			
Polyarteritis					
Intestine Small, Jejunum	(42)	(40)	(43)	(45)	(41)
Autolysis					
Hyperplasia, Lymphoid					
Polyarteritis					
Liver	(48)	(49)	(47)	(47)	(48)
Adventitia, Hemorrhage					
Angiectasis	7 (15%)	6 (12%)	4 (9%)	2 (4%)	2 (4%)
Autolysis		4 (8%)	2 (4%)	1 (2%)	1 (2%)
Basophilic Focus	1 (2%)		4 (9%)	3 (6%)	1 (2%)
Basophilic Focus, Multiple					1 (2%)
Bile Duct, Dilatation					1 (2%)
Bile Duct, Hyperplasia	13 (27%)	14 (29%)	10 (21%)	10 (21%)	22 (46%)
Biliar Tract, Cyst					1 (2%)
Biliar Tract, Fibrosis	9 (19%)	8 (16%)	2 (4%)	6 (13%)	10 (21%)
Capsule, Fibrosis	1 (2%)				
Capsule, Hemorrhage		1 (2%)			
Capsule, Hyperplasia					1 (2%)
Capsule, Inflammation, Chronic					
Cholangiofibrosis					
Clear Cell Focus				2 (4%)	
Clear Cell Focus, Multiple					

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

Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:30
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Congestion					1 (2%)
Cyst	1 (2%)			1 (2%)	
Degeneration, Cystic	2 (4%)	4 (8%)	6 (13%)	5 (11%)	6 (13%)
Developmental Malformation		1 (2%)		1 (2%)	
Eosinophilic Focus	1 (2%)	3 (6%)	2 (4%)	2 (4%)	
Eosinophilic Focus, Multiple	2 (4%)	1 (2%)	2 (4%)	2 (4%)	1 (2%)
Fatty Change				1 (2%)	
Fibrosis					1 (2%)
Granuloma, Multiple					
Hematopoietic Cell Proliferation	2 (4%)	2 (4%)	1 (2%)	2 (4%)	
Hemorrhage	1 (2%)	1 (2%)		1 (2%)	
Hepatodiaphragmatic Nodule	2 (4%)	1 (2%)	2 (4%)	1 (2%)	
Infiltration Cellular, Lymphocyte	7 (15%)	7 (14%)	2 (4%)		5 (10%)
Inflammation, Chronic Active	10 (21%)	8 (16%)	10 (21%)	5 (11%)	9 (19%)
Inflammation, Suppurative		1 (2%)			
Mineralization					
Mixed Cell Focus	1 (2%)			1 (2%)	
Necrosis	4 (8%)	4 (8%)		3 (6%)	5 (10%)
Pigmentation					
Polyarteritis					
Tension Lipidosis			2 (4%)	1 (2%)	4 (8%)
Vacuolization Cytoplasmic	4 (8%)	5 (10%)	1 (2%)	7 (15%)	1 (2%)
Mesentery	(1)	(0)	(1)	(0)	(0)
Fat, Inflammation, Chronic	1 (100%)				
Fat, Necrosis			1 (100%)		
Oral Mucosa	(0)	(0)	(0)	(0)	(0)
Pancreas	(48)	(45)	(47)	(48)	(47)
Accessory Spleen					
Acinar Cell, Degeneration	30 (63%)	37 (82%)	38 (81%)	38 (79%)	35 (74%)
Acinar Cell, Hyperplasia					

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:31
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Adventitia, Polyarteritis					
Autolysis	2 (4%)	3 (7%)	1 (2%)		2 (4%)
Basophilic Focus					
Infiltration Cellular, Lymphocyte		1 (2%)			2 (4%)
Inflammation, Chronic					
Inflammation, Chronic Active					1 (2%)
Inflammation, Granulomatous					
Pigmentation	2 (4%)	1 (2%)			
Polyarteritis	1 (2%)		1 (2%)		
Salivary Glands	(50)	(49)	(47)	(47)	(48)
Acinar Cell, Degeneration		2 (4%)			1 (2%)
Acinar Cell, Hyperplasia					
Atrophy					
Autolysis		1 (2%)			
Hyperplasia			1 (2%)		
Hyperplasia, Lymphoid					
Hypertrophy					1 (2%)
Infiltration Cellular, Lymphocyte		1 (2%)			
Mineralization		2 (4%)	1 (2%)		
Stomach, Forestomach	(49)	(44)	(45)	(48)	(47)
Cyst, Squamous					
Epithelium, Hyperplasia					
Hyperkeratosis					
Hyperplasia					
Infiltration Cellular, Lymphocyte		1 (2%)			
Inflammation, Chronic Active					
Inflammation, Suppurative		1 (2%)			
Keratin Cyst					1 (2%)
Mucosa, Ulcer		1 (2%)			
Polyarteritis					

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
Route: DOSED FEED
Species/Strain: Rat/CD

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Test Compound: Endocrine disruptor (Genistein)
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Date Report Requested: 10/22/2014
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Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Submucosa, Edema Ulcer		1 (2%)			
Stomach, Glandular Epithelium, Hyperplasia Polyarteritis	(45)	(41)	(43)	(46)	(46)
Tongue	(0)	(0)	(0)	(1)	(0)
CARDIOVASCULAR SYSTEM					
Blood Vessel Polyarteritis Thrombosis	(49)	(51)	(50)	(49)	(47)
Heart Atrium, Dilatation Autolysis	(50)	(51)	(48)	(49)	(47)
Bacterium	1 (2%)				
Cardiomyopathy	16 (32%)	27 (53%)	31 (65%)	37 (76%)	22 (47%)
Congestion			1 (2%)		
Endocardium, Hyperplasia			1 (2%)		
Endocardium, Inflammation, Chronic Active					
Epicardium, Hyperplasia					
Inflammation, Suppurative	1 (2%)				
Metaplasia, Osseous			1 (2%)		
Mineralization		2 (4%)	1 (2%)	1 (2%)	
Myocardium, Necrosis	1 (2%)				
Pericardium, Hyperplasia					1 (2%)
Pericardium, Inflammation, Chronic Active		1 (2%)			
Polyarteritis					
Thrombosis	1 (2%)				
ENDOCRINE SYSTEM					
Adrenal Cortex	(46)	(48)	(47)	(47)	(47)

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
Route: DOSED FEED
Species/Strain: Rat/CD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a)
Test Compound: Endocrine disruptor (Genistein)
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Date Report Requested: 10/22/2014
Time Report Requested: 14:23:31
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Accessory Adrenal Cortical Nodule	1 (2%)	2 (4%)	4 (9%)	1 (2%)	2 (4%)
Angiectasis	1 (2%)	1 (2%)		1 (2%)	4 (9%)
Atrophy	1 (2%)				
Autolysis		1 (2%)		1 (2%)	
Bilateral, Hyperplasia		1 (2%)		1 (2%)	
Capsule, Fibrosis		1 (2%)			
Cyst		1 (2%)		1 (2%)	
Degeneration, Cystic	7 (15%)	3 (6%)	7 (15%)	5 (11%)	4 (9%)
Hyperplasia	1 (2%)	4 (8%)	2 (4%)	5 (11%)	3 (6%)
Hypertrophy	3 (7%)	4 (8%)	5 (11%)	8 (17%)	2 (4%)
Infiltration Cellular, Lymphocyte					
Metaplasia, Osseous					
Pigmentation	1 (2%)				1 (2%)
Vacuolization Cytoplasmic	17 (37%)	28 (58%)	26 (55%)	34 (72%)	25 (53%)
Adrenal Medulla	(45)	(48)	(46)	(47)	(45)
Bilateral, Hyperplasia		2 (4%)		1 (2%)	1 (2%)
Cyst					
Degeneration, Cystic			1 (2%)	1 (2%)	
Hemorrhage	1 (2%)				
Hyperplasia	2 (4%)	9 (19%)	9 (20%)	10 (21%)	6 (13%)
Hyperplasia, Focal					
Hypertrophy		1 (2%)			
Infiltration Cellular, Lymphocyte					
Vacuolization Cytoplasmic					
Islets, Pancreatic	(48)	(45)	(49)	(48)	(48)
Autolysis	1 (2%)		1 (2%)		
Hyperplasia	23 (48%)	23 (51%)	23 (47%)	22 (46%)	27 (56%)
Parathyroid Gland	(46)	(41)	(46)	(48)	(43)
Bilateral, Hyperplasia		1 (2%)	3 (7%)	4 (8%)	2 (5%)
Hyperplasia	6 (13%)	3 (7%)	3 (7%)	7 (15%)	6 (14%)

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Date Report Requested: 10/22/2014
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CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Pituitary Gland	(48)	(49)	(46)	(48)	(48)
Autolysis		1 (2%)			
Pars Distalis, Cyst	4 (8%)	3 (6%)	5 (11%)	5 (10%)	6 (13%)
Pars Distalis, Cyst, Multiple	1 (2%)	2 (4%)			1 (2%)
Pars Distalis, Hyperplasia	20 (42%)	19 (39%)	16 (35%)	13 (27%)	12 (25%)
Pars Intermed, Cyst		1 (2%)			
Pars Intermed, Cyst, Multiple					
Pars Intermed, Dysplasia		1 (2%)			
Pars Intermed, Hyperplasia					
Pars Nervosa, Infiltration Cellular, Lymphocyte				1 (2%)	
Thyroid Gland	(48)	(44)	(46)	(46)	(45)
Autolysis		2 (5%)			
C Cell, Hyperplasia	5 (10%)	9 (20%)	5 (11%)	3 (7%)	7 (16%)
Cyst, Squamous	2 (4%)	6 (14%)	4 (9%)	2 (4%)	4 (9%)
Follicular Cel, Cyst					
Follicular Cel, Hyperplasia				1 (2%)	
Infiltration Cellular, Lymphocyte		1 (2%)		1 (2%)	
Inflammation, Chronic					
Polyarteritis					
Vacuolization Cytoplasmic					
GENERAL BODY SYSTEM					
Tissue NOS	(0)	(0)	(1)	(0)	(2)
GENITAL SYSTEM					
Coagulating Gland	(47)	(44)	(43)	(47)	(45)
Adventitia, Polyarteritis					
Atrophy	5 (11%)	3 (7%)	1 (2%)		6 (13%)
Autolysis	1 (2%)	2 (5%)			
Concretion					
Degeneration	1 (2%)			1 (2%)	

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
Route: DOSED FEED
Species/Strain: Rat/CD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a)
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First Dose M/F: NA / NA
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CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Developmental Malformation	2 (4%)	1 (2%)	2 (5%)	2 (4%)	1 (2%)
Dilatation					
Fibrosis				1 (2%)	
Hyperplasia					
Infiltration Cellular, Lymphocyte					
Inflammation, Chronic				1 (2%)	
Inflammation, Suppurative	2 (4%)	1 (2%)			
Interstitial, Inflammation, Chronic					
Epididymis	(49)	(49)	(48)	(49)	(47)
Adventitia, Polyarteritis					
Atrophy	1 (2%)			2 (4%)	1 (2%)
Autolysis		1 (2%)	1 (2%)		
Degeneration	5 (10%)	4 (8%)	5 (10%)	6 (12%)	4 (9%)
Granuloma Sperm	1 (2%)				
Hyperplasia					1 (2%)
Hypospermia	4 (8%)	4 (8%)	10 (21%)	10 (20%)	5 (11%)
Infiltration Cellular, Lymphocyte	1 (2%)	5 (10%)	6 (13%)	6 (12%)	3 (6%)
Inflammation		1 (2%)			
Inflammation, Chronic Active					
Inflammation, Suppurative					
Polyarteritis	1 (2%)				
Penis	(0)	(0)	(0)	(0)	(0)
Concretion					
Hemorrhage					
Preputial Gland	(49)	(48)	(48)	(47)	(47)
Abscess	1 (2%)	1 (2%)		2 (4%)	
Atrophy	1 (2%)	1 (2%)			
Autolysis		4 (8%)	1 (2%)		2 (4%)
Cyst					
Duct, Dilatation	6 (12%)	4 (8%)	7 (15%)	7 (15%)	9 (19%)

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
Route: DOSED FEED
Species/Strain: Rat/CD

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CAS Number: 446-72-0

Date Report Requested: 10/22/2014
Time Report Requested: 14:23:32
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Foreign Body					
Infiltration Cellular, Lymphocyte	15 (31%)	19 (40%)	20 (42%)	15 (32%)	9 (19%)
Inflammation, Chronic					
Inflammation, Chronic Active	2 (4%)		1 (2%)		
Inflammation, Suppurative	16 (33%)	17 (35%)	16 (33%)	18 (38%)	26 (55%)
Keratin Cyst					
Necrosis					
Parenchym Cell, Degeneration	16 (33%)	16 (33%)	17 (35%)	13 (28%)	16 (34%)
Prostate	(3)	(6)	(8)	(6)	(4)
Prostate, Dorsal Lobe	(49)	(51)	(47)	(47)	(48)
Atrophy					1 (2%)
Autolysis	2 (4%)	5 (10%)	2 (4%)		2 (4%)
Cyst	2 (4%)	3 (6%)	1 (2%)		
Degeneration	1 (2%)	1 (2%)			3 (6%)
Hyperplasia		2 (4%)			
Infiltration Cellular, Lymphocyte	1 (2%)	3 (6%)		2 (4%)	2 (4%)
Inflammation, Suppurative	40 (82%)	35 (69%)	38 (81%)	35 (74%)	34 (71%)
Interstitialium, Fibrosis					
Polyarteritis			1 (2%)		
Prostate, Ventral Lobe	(48)	(48)	(46)	(48)	(47)
Atrophy					1 (2%)
Autolysis	2 (4%)	3 (6%)	1 (2%)	1 (2%)	
Degeneration	9 (19%)	10 (21%)	4 (9%)	7 (15%)	11 (23%)
Hyperplasia	11 (23%)	7 (15%)	5 (11%)	6 (13%)	11 (23%)
Infiltration Cellular, Lymphocyte	4 (8%)	8 (17%)	6 (13%)	14 (29%)	8 (17%)
Infiltration Cellular, Plasma Cell		1 (2%)			
Inflammation					
Inflammation, Chronic				1 (2%)	1 (2%)
Inflammation, Suppurative	7 (15%)	5 (10%)	4 (9%)	9 (19%)	7 (15%)
Interstitialium, Fibrosis					

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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Species/Strain: Rat/CD

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Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Mineralization					1 (2%)
Polyarteritis					
Rete Testes	(49)	(47)	(48)	(46)	(41)
Dilatation	3 (6%)	2 (4%)	7 (15%)	5 (11%)	4 (10%)
Fibrosis			2 (4%)	2 (4%)	
Spermatocele					
Seminal Vesicle	(47)	(43)	(43)	(47)	(45)
Atrophy	9 (19%)	4 (9%)	3 (7%)	5 (11%)	8 (18%)
Autolysis	1 (2%)	2 (5%)		1 (2%)	
Degeneration		2 (5%)		1 (2%)	
Dilatation	1 (2%)	1 (2%)		2 (4%)	1 (2%)
Fibrosis					
Hyperplasia	1 (2%)			3 (6%)	
Inflammation, Chronic					
Inflammation, Chronic Active				1 (2%)	
Inflammation, Suppurative	1 (2%)	2 (5%)		1 (2%)	1 (2%)
Testes	(50)	(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%)	1 (2%)			
Polyarteritis	1 (2%)	2 (4%)	3 (6%)	1 (2%)	1 (2%)
Seminif Tub, Degeneration	26 (52%)	23 (46%)	26 (52%)	30 (63%)	31 (63%)
HEMATOPOIETIC SYSTEM					
Bone Marrow	(49)	(48)	(48)	(48)	(46)
Autolysis		2 (4%)	1 (2%)		1 (2%)

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CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Depletion Cellular					1 (2%)
Erythroid Cell, Hyperplasia	3 (6%)	2 (4%)	1 (2%)	5 (10%)	3 (7%)
Hypocellularity	2 (4%)			1 (2%)	2 (4%)
Myeloid Cell, Hyperplasia	3 (6%)	6 (13%)	3 (6%)	7 (15%)	4 (9%)
Lymph Node	(9)	(13)	(9)	(18)	(12)
Adventitia, Pancreatic, Polyarteritis					
Adventitia, Renal, Hemorrhage					
Axillary, Hyperplasia, Lymphoid		1 (8%)			
Axillary, Infiltration Cellular, Plasma Cell		1 (8%)			
Deep Cervical, Autolysis					
Degeneration, Cystic					
Infiltration Cellular, Plasma Cell	1 (11%)				
Inguinal, Autolysis		1 (8%)			
Inguinal, Degeneration, Cystic				1 (6%)	
Inguinal, Hyperplasia, Lymphoid					
Inguinal, Infiltration Cellular, Plasma Cell				1 (6%)	
Lumbar, Autolysis					
Lumbar, Congestion		1 (8%)			
Lumbar, Degeneration, Cystic	3 (33%)	4 (31%)	5 (56%)	11 (61%)	5 (42%)
Lumbar, Hemorrhage					
Lumbar, Hyperplasia, Lymphoid		2 (15%)	2 (22%)	4 (22%)	3 (25%)
Lumbar, Infiltration Cellular, Plasma Cell	5 (56%)	7 (54%)	6 (67%)	13 (72%)	5 (42%)
Lumbar, Pigmentation				1 (6%)	
Mediastinal, Congestion		1 (8%)			
Mediastinal, Degeneration, Cystic			1 (11%)		
Mediastinal, Hemorrhage	1 (11%)				1 (8%)
Mediastinal, Hyperplasia, Lymphoid					
Mediastinal, Infiltration Cellular, Plasma Cell		1 (8%)			
Mediastinal, Pigmentation					1 (8%)
Pancreatic, Hemorrhage				1 (6%)	

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First Dose M/F: NA / NA
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CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Pancreatic, Hyperplasia, Lymphoid				1 (6%)	
Pancreatic, Infiltration Cellular, Plasma Cell					
Pancreatic, Inflammation, Granulomatous					
Pancreatic, Pigmentation					
Popliteal, Degeneration, Cystic			1 (11%)		
Popliteal, Hyperplasia, Lymphoid		1 (8%)	1 (11%)		
Popliteal, Infiltration Cellular, Plasma Cell			1 (11%)		
Renal, Autolysis					
Renal, Congestion		1 (8%)			
Renal, Degeneration, Cystic	1 (11%)	3 (23%)	4 (44%)	3 (17%)	3 (25%)
Renal, Fibrosis					
Renal, Hemorrhage			1 (11%)		
Renal, Hyperplasia, Lymphoid			2 (22%)	1 (6%)	
Renal, Infiltration Cellular, Plasma Cell	1 (11%)	2 (15%)	3 (33%)	1 (6%)	3 (25%)
Renal, Inflammation, Suppurative			1 (11%)		
Renal, Necrosis			1 (11%)		
Renal, Pigmentation		1 (8%)			
Lymph Node, Mandibular	(48)	(48)	(48)	(48)	(48)
Autolysis		1 (2%)	1 (2%)		2 (4%)
Degeneration, Cystic	6 (13%)	5 (10%)	7 (15%)	9 (19%)	7 (15%)
Depletion Lymphoid					1 (2%)
Hemorrhage					
Hyperplasia, Lymphoid	20 (42%)	22 (46%)	14 (29%)	17 (35%)	21 (44%)
Infiltration Cellular, Plasma Cell	28 (58%)	31 (65%)	29 (60%)	26 (54%)	36 (75%)
Inflammation, Chronic Active				1 (2%)	
Pigmentation					
Lymph Node, Mesenteric	(46)	(45)	(46)	(47)	(47)
Autolysis			1 (2%)		1 (2%)
Congestion		1 (2%)			
Degeneration, Cystic	4 (9%)	2 (4%)			

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First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Hemorrhage	1 (2%)			1 (2%)	
Hyperplasia, Lymphoid	14 (30%)	9 (20%)	6 (13%)	5 (11%)	10 (21%)
Infiltration Cellular, Mast Cell	5 (11%)	2 (4%)			2 (4%)
Infiltration Cellular, Plasma Cell	3 (7%)	6 (13%)	1 (2%)	2 (4%)	3 (6%)
Inflammation, Chronic Active				1 (2%)	
Inflammation, Granulomatous	16 (35%)	16 (36%)	21 (46%)	16 (34%)	25 (53%)
Pigmentation	1 (2%)				
Polyarteritis					
Spleen	(49)	(50)	(49)	(48)	(47)
Accessory Spleen					
Adventitia, Polyarteritis					
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	3 (6%)	1 (2%)		1 (2%)	2 (4%)
Hematopoietic Cell Proliferation	11 (22%)	9 (18%)	7 (14%)	13 (27%)	9 (19%)
Hematopoietic Cell Proliferation Erythrocytic	1 (2%)				
Hematopoietic Cell Proliferation Granulocytic		1 (2%)			
Hyperplasia, Lymphoid	2 (4%)	2 (4%)	1 (2%)	1 (2%)	3 (6%)
Hyperplasia, Stromal	1 (2%)		2 (4%)	1 (2%)	2 (4%)
Inflammation, Chronic Active					
Necrosis					1 (2%)
Pigmentation	28 (57%)	29 (58%)	27 (55%)	22 (46%)	17 (36%)
Red Pulp, Hyperplasia			1 (2%)		
Thymus	(45)	(46)	(45)	(41)	(44)
Adventitia, Polyarteritis					
Atrophy	44 (98%)	41 (89%)	43 (96%)	41 (100%)	41 (93%)
Autolysis			1 (2%)		1 (2%)

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

Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:33
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
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	(45)	(39)	(43)	(41)	(41)
Alveolus, Hyperplasia	9 (20%)	4 (10%)	5 (12%)	6 (15%)	6 (15%)
Autolysis					
Degeneration	20 (44%)	16 (41%)	24 (56%)	10 (24%)	12 (29%)
Duct, Dilatation	1 (2%)		1 (2%)		1 (2%)
Fibrosis			1 (2%)		
Galactocele	1 (2%)				
Hemorrhage					
Hyperplasia, Mast Cell	1 (2%)				
Infiltration Cellular, Lymphocyte		1 (3%)			
Infiltration Cellular, Mast Cell					
Inflammation, Chronic	1 (2%)				
Inflammation, Granulomatous					
Inflammation, Suppurative					
Lactation	3 (7%)	2 (5%)	1 (2%)	4 (10%)	4 (10%)
Skin	(50)	(49)	(50)	(48)	(49)
Abscess					
Angiectasis					1 (2%)
Autolysis					
Cyst					
Cyst Epithelial Inclusion	2 (4%)	2 (4%)	1 (2%)	3 (6%)	1 (2%)
Dermis, Fibrosis	1 (2%)				
Epidermis, Hyperplasia	2 (4%)	6 (12%)	2 (4%)	2 (4%)	2 (4%)
Epidermis, Ulcer					

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:33
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Fibrosis					
Foreign Body					
Hemorrhage	1 (2%)				
Hyperkeratosis	3 (6%)	6 (12%)	2 (4%)	2 (4%)	2 (4%)
Inflammation, Chronic	1 (2%)				3 (6%)
Inflammation, Chronic Active	6 (12%)	3 (6%)	1 (2%)	5 (10%)	3 (6%)
Inflammation, Granulomatous				1 (2%)	
Inflammation, Pyogranulomat					
Inflammation, Suppurative	22 (44%)	21 (43%)	22 (44%)	24 (50%)	21 (43%)
Lymphatic, Ectasia				1 (2%)	
Necrosis	6 (12%)	2 (4%)		2 (4%)	1 (2%)
MUSCULOSKELETAL SYSTEM					
Bone	(0)	(0)	(0)	(0)	(1)
Bone, Cranium	(0)	(2)	(0)	(0)	(0)
Hemorrhage		1 (50%)			
Hyperostosis		1 (50%)			
Bone, Femur	(50)	(50)	(50)	(48)	(49)
Hyperostosis					
Necrosis					
Skeletal Muscle	(2)	(1)	(0)	(0)	(1)
Cyst	1 (50%)				
Fibrosis	1 (50%)				
NERVOUS SYSTEM					
Brain, Brain Stem	(48)	(46)	(46)	(48)	(47)
Autolysis			1 (2%)		1 (2%)
Compression	2 (4%)	6 (13%)	1 (2%)	3 (6%)	4 (9%)
Cyst					
Gliosis					
Hemorrhage		1 (2%)		1 (2%)	

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:33
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Brain, Cerebellum	(48)	(46)	(46)	(48)	(46)
Autolysis			1 (2%)		
Gliosis					
Hemorrhage					
Hydrocephalus		2 (4%)			
Brain, Cerebrum	(48)	(45)	(46)	(48)	(46)
Autolysis			1 (2%)		
Compression					
Developmental Malformation		1 (2%)			
Ectopic Tissue					
Gliosis			1 (2%)	1 (2%)	
Hemorrhage		1 (2%)			
Hydrocephalus	1 (2%)	3 (7%)			1 (2%)
Infiltration Cellular, Lymphocyte			1 (2%)		
Meninges, Congestion					
Meninges, Fibrosis	1 (2%)				
Meninges, Hemorrhage					
Mineralization					
Vacuolization Cytoplasmic				1 (2%)	
RESPIRATORY SYSTEM					
Lung	(49)	(48)	(47)	(47)	(46)
Alveolar Epith, Hyperplasia	2 (4%)	4 (8%)	3 (6%)		1 (2%)
Artery, Mineralization	5 (10%)	3 (6%)	5 (11%)	12 (26%)	6 (13%)
Autolysis	3 (6%)	4 (8%)	1 (2%)		1 (2%)
Congestion	1 (2%)		1 (2%)		1 (2%)
Cyst					
Edema					
Hemorrhage	2 (4%)				1 (2%)
Infiltration Cellular, Histiocyte	21 (43%)	14 (29%)	12 (26%)	12 (26%)	17 (37%)
Infiltration Cellular, Histiocytic					

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:33
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Infiltration Cellular, Lymphocyte			1 (2%)	2 (4%)	
Inflammation, Chronic		1 (2%)	1 (2%)		1 (2%)
Inflammation, Suppurative					
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%)	3 (6%)	5 (11%)	5 (11%)	2 (4%)
Peribronchial, Hyperplasia, Lymphoid					
Pigmentation					
Pleura, Fibrosis					
Pleura, Hyperplasia					
Pleura, Inflammation, Chronic					
Polyarteritis					
Thrombosis		1 (2%)			
Nose	(48)	(46)	(45)	(49)	(45)
Autolysis		1 (2%)			
Cyst	1 (2%)				
Foreign Body					1 (2%)
Fungus					
Goblet Cell, Hyperplasia		1 (2%)			
Goblet Cell, Metaplasia				1 (2%)	
Hemorrhage					
Hyperkeratosis		2 (4%)			1 (2%)
Inflammation, Chronic		1 (2%)			2 (4%)
Inflammation, Chronic Active		2 (4%)		2 (4%)	
Inflammation, Suppurative	1 (2%)	7 (15%)	2 (4%)	3 (6%)	3 (7%)
Keratin Cyst					
Metaplasia, Osseous					

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
Route: DOSED FEED
Species/Strain: Rat/CD

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Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Metaplasia, Squamous				1 (2%)	
Necrosis					
Respirat Epith, Hyperplasia				1 (2%)	
Squam Epithel, Hyperplasia					
Squam Epithel, Metaplasia					
Ulcer					
Upper Molar, Inflammation, Chronic Active				1 (2%)	
Upper Molar, Necrosis				1 (2%)	
Trachea	(48)	(45)	(44)	(48)	(44)
Cyst, Squamous	1 (2%)				
Epithelium, Hyperplasia					
SPECIAL SENSES SYSTEM					
Ear	(1)	(0)	(0)	(0)	(0)
Eye	(40)	(37)	(43)	(38)	(39)
Antr Chamber, Hemorrhage					
Antr Chamber, Inflammation, Suppurative					
Autolysis			1 (2%)		1 (3%)
Bilateral, Retina, Atrophy	1 (3%)	12 (32%)	11 (26%)	5 (13%)	12 (31%)
Cataract					
Cornea, Degeneration					
Cornea, Hyperplasia			2 (5%)	1 (3%)	
Cornea, Inflammation, Suppurative					
Cornea, Ulcer					
Hemorrhage				1 (3%)	
Inflammation, Chronic					
Inflammation, Chronic Active					
Inflammation, Suppurative	1 (3%)			1 (3%)	1 (3%)
Retina, Atrophy	1 (3%)		2 (5%)		2 (5%)
Harderian Gland	(41)	(38)	(43)	(38)	(39)
Autolysis			1 (2%)		

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:34
First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Degeneration	1 (2%)		1 (2%)		3 (8%)
Epithelium, Hyperplasia			1 (2%)		
Hyperplasia			2 (5%)		
Infiltration Cellular, Lymphocyte	6 (15%)	6 (16%)	2 (5%)	2 (5%)	7 (18%)
Inflammation, Chronic					
Inflammation, Suppurative					1 (3%)
Pigmentation					1 (3%)
Lacrimal Gland	(5)	(0)	(2)	(2)	(1)
Degeneration					
Ectopic Harderian	5 (100%)		2 (100%)	2 (100%)	1 (100%)
Infiltration Cellular, Lymphocyte					
Inflammation, Chronic Active					
Zymbal's Gland	(0)	(0)	(0)	(1)	(0)
Inflammation, Suppurative					
URINARY SYSTEM					
Kidney	(49)	(46)	(49)	(47)	(47)
Accumulation, Hyaline Droplet		2 (4%)			
Autolysis	3 (6%)	3 (7%)	5 (10%)	1 (2%)	2 (4%)
Bacterium					
Capsule, Fatty Change	3 (6%)		3 (6%)	2 (4%)	
Capsule, Fibrosis		1 (2%)			
Congestion					
Cortex, Cyst	24 (49%)	23 (50%)	31 (63%)	22 (47%)	21 (45%)
Fatty Change					
Fibrosis	1 (2%)				
Hyperplasia, Tubular				2 (4%)	1 (2%)
Infiltration Cellular, Lymphocyte	3 (6%)	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Inflammation, Chronic					
Inflammation, Chronic Active					
Inflammation, Suppurative					

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
Route: DOSED FEED
Species/Strain: Rat/CD

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CAS Number: 446-72-0

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First Dose M/F: NA / NA
Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Medulla, Cyst			1 (2%)		
Mineralization					
Nephropathy, Chronic	40 (82%)	39 (85%)	46 (94%)	43 (91%)	39 (83%)
Pelvis, Dilatation	1 (2%)	2 (4%)	1 (2%)		
Pelvis, Hyperplasia	4 (8%)	3 (7%)	1 (2%)	4 (9%)	5 (11%)
Pelvis, Inflammation, Suppurative		1 (2%)			
Pelvis, Mineralization			1 (2%)	1 (2%)	2 (4%)
Polyarteritis					
Polycystic Kidney		1 (2%)		1 (2%)	
Renal Tubule, Dilatation					
Renal Tubule, Inflammation, Suppurative	1 (2%)		1 (2%)		
Renal Tubule, Mineralization	2 (4%)				
Urethra	(2)	(0)	(2)	(2)	(1)
Congestion					
Urinary Bladder	(47)	(45)	(43)	(47)	(46)
Autolysis					
Dilatation	2 (4%)	2 (4%)			3 (7%)
Hemorrhage		1 (2%)			1 (2%)
Inflammation, Chronic Active					
Inflammation, Suppurative		1 (2%)			
Transit Epithe, Hyperplasia		1 (2%)			
Transit Epithe, Hypertrophy					1 (2%)

END OF MALE DATA

Experiment Number: 99930-92
 Test Type: MULTIGEN CHRONIC
 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: 10/22/2014
 Time Report Requested: 14:23:34
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Disposition Summary						
Animals Initially In Study	54	50	50	49	50	50
Early Deaths						
Moribund	24	14	18	20	12	14
Natural Death	3	7	6	6	6	3
Survivors						
Moribund	1		3	1		
Natural Death		1	1	1	1	1
Terminal Sacrifice	26	28	22	21	31	32
Animals Examined Microscopically	54	50	50	49	50	50
ALIMENTARY SYSTEM						
Esophagus	(54)	(50)	(49)	(49)	(50)	(50)
Lumen, Dilatation				1 (2%)		
Intestine Large	(0)	(0)	(0)	(0)	(0)	(1)
Intestine Large, Cecum	(54)	(50)	(50)	(49)	(49)	(50)
Inflammation					2 (4%)	
Intestine Large, Colon	(54)	(50)	(50)	(49)	(50)	(49)
Intestine Large, Rectum	(30)	(32)	(30)	(24)	(33)	(36)
Intestine Small	(0)	(0)	(0)	(0)	(0)	(1)
Hyperplasia, Lymphoid						1 (100%)
Intestine Small, Duodenum	(53)	(50)	(48)	(48)	(50)	(50)
Intestine Small, Ileum	(53)	(49)	(47)	(45)	(49)	(48)
Intestine Small, Jejunum	(54)	(49)	(47)	(45)	(49)	(48)
Inflammation				1 (2%)		
Liver	(54)	(50)	(50)	(49)	(50)	(50)
Angiectasis		1 (2%)	4 (8%)	2 (4%)	6 (12%)	4 (8%)
Atypical Cells				1 (2%)		
Basophilic Focus	4 (7%)	7 (14%)	3 (6%)	7 (14%)	5 (10%)	7 (14%)
Bile Duct, Hyperplasia	22 (41%)	13 (26%)	15 (30%)	10 (20%)	15 (30%)	18 (36%)

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

Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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Species/Strain: Rat/CD

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Lab: NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Biliar Tract, Fibrosis	4 (7%)	1 (2%)	4 (8%)	1 (2%)	6 (12%)	
Clear Cell Focus	1 (2%)					
Congestion		1 (2%)				
Cyst			1 (2%)	2 (4%)	1 (2%)	1 (2%)
Degeneration, Cystic	1 (2%)		2 (4%)			1 (2%)
Developmental Malformation		2 (4%)	1 (2%)			2 (4%)
Eosinophilic Focus		4 (8%)	4 (8%)	2 (4%)	2 (4%)	1 (2%)
Fibrosis					1 (2%)	
Hematopoietic Cell Proliferation	6 (11%)	1 (2%)	2 (4%)	4 (8%)	2 (4%)	1 (2%)
Hemorrhage						
Hepatodiaphragmatic Nodule	1 (2%)	1 (2%)		1 (2%)		
Infiltration Cellular, Lymphocyte	2 (4%)		4 (8%)	2 (4%)	4 (8%)	
Inflammation, Chronic Active	4 (7%)	3 (6%)	3 (6%)	2 (4%)	1 (2%)	4 (8%)
Mixed Cell Focus		1 (2%)		1 (2%)		
Necrosis	1 (2%)	2 (4%)				2 (4%)
Oval Cell, Hyperplasia						
Pigmentation						
Polyarteritis	1 (2%)					
Tension Lipidosis	1 (2%)	1 (2%)			1 (2%)	
Vacuolization Cytoplasmic	5 (9%)	3 (6%)	10 (20%)	2 (4%)	8 (16%)	2 (4%)
Vacuolization Cytoplasmic, Focal		2 (4%)		2 (4%)	3 (6%)	3 (6%)
Mesentery	(1)	(2)	(1)	(2)	(2)	(0)
Fat, Necrosis		1 (50%)	1 (100%)	2 (100%)	2 (100%)	
Polyarteritis						
Oral Mucosa	(0)	(0)	(0)	(0)	(0)	(0)
Keratin Cyst						
Pancreas	(54)	(50)	(50)	(48)	(50)	(50)
Acinar Cell, Degeneration	21 (39%)	13 (26%)	20 (40%)	9 (19%)	18 (36%)	11 (22%)
Acinar Cell, Hyperplasia		1 (2%)			1 (2%)	
Inflammation						

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First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Polyarteritis					1 (2%)	
Salivary Glands	(54)	(50)	(50)	(49)	(50)	(50)
Atrophy	1 (2%)					
Parotid GI, Inflammation				1 (2%)		
Submandibul GI, Inflammation			1 (2%)			1 (2%)
Stomach	(0)	(0)	(0)	(0)	(0)	(0)
Dilatation						
Stomach, Forestomach	(54)	(50)	(50)	(49)	(49)	(49)
Diverticulum					1 (2%)	
Hyperplasia	3 (6%)		1 (2%)		2 (4%)	1 (2%)
Inflammation		1 (2%)			1 (2%)	
Keratin Cyst			1 (2%)			
Ulcer	1 (2%)		1 (2%)	2 (4%)	1 (2%)	1 (2%)
Stomach, Glandular	(54)	(50)	(50)	(49)	(50)	(50)
Erosion			1 (2%)	1 (2%)		
Mineralization						
Tongue	(0)	(0)	(0)	(0)	(1)	(0)
CARDIOVASCULAR SYSTEM						
Blood Vessel	(53)	(50)	(50)	(49)	(50)	(50)
Mineralization		1 (2%)	1 (2%)			
Heart	(54)	(50)	(50)	(49)	(50)	(50)
Atrium Lft, Thrombosis						
Atrium Rgt, Dilatation		1 (2%)				
Cardiomyopathy	26 (48%)	30 (60%)	24 (48%)	26 (53%)	23 (46%)	26 (52%)
Inflammation				1 (2%)		
Mineralization			1 (2%)			
ENDOCRINE SYSTEM						
Adrenal Cortex	(54)	(50)	(50)	(49)	(50)	(50)
Accessory Adrenal Cortical Nodule				1 (2%)		

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First Dose M/F: NA / NA
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CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Angiectasis	3 (6%)	1 (2%)	3 (6%)	5 (10%)		1 (2%)
Atrophy		1 (2%)	1 (2%)	1 (2%)		
Degeneration, Cystic	45 (83%)	45 (90%)	42 (84%)	42 (86%)	46 (92%)	45 (90%)
Hematopoietic Cell Proliferation	1 (2%)	1 (2%)	1 (2%)			
Hyperplasia	11 (20%)	18 (36%)	16 (32%)	9 (18%)	12 (24%)	15 (30%)
Hypertrophy	16 (30%)	16 (32%)	18 (36%)	14 (29%)	28 (56%)	18 (36%)
Infarct				1 (2%)		
Vacuolization Cytoplasmic				1 (2%)	2 (4%)	
Adrenal Medulla	(54)	(48)	(50)	(48)	(48)	(50)
Hyperplasia, Diffuse			1 (2%)			1 (2%)
Hyperplasia, Focal	3 (6%)	3 (6%)	7 (14%)	2 (4%)	7 (15%)	5 (10%)
Infiltration Cellular, Eosinophil		1 (2%)				
Islets, Pancreatic	(54)	(50)	(50)	(48)	(50)	(50)
Hyperplasia		1 (2%)	2 (4%)		2 (4%)	
Parathyroid Gland	(46)	(46)	(46)	(44)	(47)	(42)
Hyperplasia, Diffuse	1 (2%)					
Hyperplasia, Focal	2 (4%)	2 (4%)	1 (2%)	1 (2%)	2 (4%)	1 (2%)
Pituitary Gland	(54)	(50)	(50)	(49)	(49)	(50)
Angiectasis	1 (2%)					
Cyst	1 (2%)	2 (4%)	1 (2%)		2 (4%)	1 (2%)
Infiltration Cellular, Histiocyte			1 (2%)			
Pars Distalis, Hyperplasia	5 (9%)	6 (12%)	13 (26%)	1 (2%)	6 (12%)	6 (12%)
Thyroid Gland	(54)	(50)	(49)	(49)	(50)	(50)
C Cell, Hyperplasia	3 (6%)	1 (2%)	3 (6%)	3 (6%)	2 (4%)	1 (2%)
Cyst, Squamous	5 (9%)	4 (8%)	9 (18%)	5 (10%)	7 (14%)	7 (14%)
Follicular Cel, Atrophy		2 (4%)				1 (2%)
Follicular Cel, Hyperplasia		1 (2%)				
GENERAL BODY SYSTEM						
Tissue NOS	(0)	(0)	(0)	(0)	(0)	(0)

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

Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:34
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
GENITAL SYSTEM						
Clitoral Gland	(51)	(49)	(49)	(49)	(49)	(49)
Duct, Dilatation	7 (14%)	9 (18%)	8 (16%)	6 (12%)	6 (12%)	7 (14%)
Hyperplasia	2 (4%)	3 (6%)	1 (2%)	1 (2%)		3 (6%)
Inflammation	32 (63%)	28 (57%)	21 (43%)	23 (47%)	24 (49%)	29 (59%)
Parenchym Cell, Degeneration	5 (10%)	3 (6%)	1 (2%)	6 (12%)	1 (2%)	2 (4%)
Vacuolization Cytoplasmic						
Ovary	(54)	(50)	(50)	(49)	(50)	(49)
Angiectasis			2 (4%)			
Atrophy	34 (63%)	32 (64%)	29 (58%)	40 (82%)	24 (48%)	28 (57%)
Cyst	11 (20%)	12 (24%)	14 (28%)	13 (27%)	9 (18%)	16 (33%)
Granulosa Cell, Hyperplasia						2 (4%)
Hyperplasia, Stromal	25 (46%)	19 (38%)	30 (60%)	19 (39%)	25 (50%)	21 (43%)
Serosa, Hyperplasia						
Oviduct	(54)	(50)	(49)	(49)	(50)	(49)
Atrophy						
Cyst						
Hyperplasia, Stromal						
Uterus	(54)	(50)	(50)	(49)	(50)	(49)
Adenomyosis						
Angiectasis			2 (4%)	1 (2%)		
Atrophy			1 (2%)			
Cervix, Muscularis, Hypertrophy	1 (2%)	1 (2%)	2 (4%)			
Hemorrhage		1 (2%)				
Hyperplasia, Cystic	16 (30%)	24 (48%)	16 (32%)	24 (49%)	15 (30%)	26 (53%)
Hyperplasia, Focal				1 (2%)		
Inflammation	1 (2%)					
Metaplasia	4 (7%)	5 (10%)	8 (16%)	5 (10%)	1 (2%)	5 (10%)
Necrosis			1 (2%)			
Vagina	(54)	(50)	(50)	(48)	(49)	(48)

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:35
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Developmental Malformation				1 (2%)		
Hyperplasia				1 (2%)		
Inflammation	4 (7%)	3 (6%)	5 (10%)	7 (15%)	3 (6%)	2 (4%)
Keratin Cyst	2 (4%)					
HEMATOPOIETIC SYSTEM						
Bone Marrow	(54)	(50)	(50)	(48)	(50)	(50)
Hypocellularity	2 (4%)	1 (2%)	2 (4%)	2 (4%)	1 (2%)	
Myeloid Cell, Hyperplasia				2 (4%)		
Lymph Node	(11)	(10)	(12)	(5)	(9)	(10)
Axillary, Degeneration, Cystic						1 (10%)
Axillary, Infiltration Cellular, Plasma Cell						1 (10%)
Degeneration, Cystic				1 (20%)		
Infiltration Cellular, Plasma Cell				1 (20%)		
Inguinal, Infiltration Cellular, Plasma Cell	1 (9%)					
Lumbar, Degeneration, Cystic	4 (36%)	4 (40%)	4 (33%)	3 (60%)	6 (67%)	4 (40%)
Lumbar, Hemorrhage			1 (8%)			
Lumbar, Hyperplasia, Lymphoid	1 (9%)	1 (10%)				
Lumbar, Infiltration Cellular, Plasma Cell	6 (55%)	6 (60%)	4 (33%)	3 (60%)	6 (67%)	7 (70%)
Mediastinal, Hemorrhage						
Mediastinal, Infiltration Cellular, Plasma Cell						
Pancreatic, Hemorrhage			1 (8%)	1 (20%)		
Pancreatic, Infiltration Cellular, Plasma Cell		1 (10%)				
Pancreatic, Inflammation, Granulomatous			1 (8%)			
Pancreatic, Pigmentation			1 (8%)			
Popliteal, Degeneration, Cystic						
Popliteal, Hyperplasia, Lymphoid		1 (10%)				
Popliteal, Infiltration Cellular, Plasma Cell		2 (20%)	3 (25%)		2 (22%)	
Renal, Degeneration, Cystic				1 (20%)		2 (20%)
Renal, Hyperplasia, Lymphoid						
Renal, Infiltration Cellular, Plasma Cell		1 (10%)		1 (20%)	1 (11%)	

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Experiment Number: 99930-92
 Test Type: MULTIGEN CHRONIC
 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: 10/22/2014
 Time Report Requested: 14:23:35
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Thoracic, Infiltration Cellular, Plasma Cell					1 (11%)	
Thoracic, Thrombosis			1 (8%)			
Lymph Node, Mandibular Cyst	(53)	(50)	(50)	(49)	(50)	(50)
Degeneration, Cystic	1 (2%)	1 (2%)	3 (6%)	2 (4%)	2 (4%)	1 (2%)
Hemorrhage	1 (2%)			1 (2%)	1 (2%)	1 (2%)
Hyperplasia, Lymphoid			1 (2%)			
Infiltration Cellular, Plasma Cell	41 (77%)	40 (80%)	43 (86%)	44 (90%)	38 (76%)	43 (86%)
Lymph Node, Mesenteric	(54)	(50)	(50)	(48)	(50)	(50)
Degeneration, Cystic		1 (2%)	1 (2%)			2 (4%)
Hemorrhage				2 (4%)	1 (2%)	
Hyperplasia, Lymphoid		2 (4%)				
Infiltration Cellular, Plasma Cell						
Inflammation, Granulomatous	44 (81%)	42 (84%)	42 (84%)	44 (92%)	46 (92%)	47 (94%)
Spleen	(54)	(50)	(50)	(49)	(50)	(50)
Hematopoietic Cell Proliferation	15 (28%)	9 (18%)	12 (24%)	12 (24%)	5 (10%)	8 (16%)
Hemorrhage						
Inflammation, Chronic Active, Focal			1 (2%)			
Lymphocyte, Atrophy	1 (2%)	2 (4%)	5 (10%)	6 (12%)	3 (6%)	3 (6%)
Pigmentation	31 (57%)	26 (52%)	28 (56%)	41 (84%)	28 (56%)	19 (38%)
Red Pulp, Atrophy			1 (2%)			
Red Pulp, Hyperplasia						
Thymus	(50)	(43)	(43)	(44)	(47)	(47)
Atrophy	9 (18%)	7 (16%)	7 (16%)	12 (27%)	10 (21%)	9 (19%)
Cyst	15 (30%)	10 (23%)	16 (37%)	17 (39%)	17 (36%)	13 (28%)
Ectopic Thyroid			1 (2%)			
Epithel Cell, Hyperplasia	1 (2%)	1 (2%)	1 (2%)	3 (7%)	2 (4%)	2 (4%)
Hemorrhage	1 (2%)	1 (2%)	2 (5%)	1 (2%)	1 (2%)	
Hyperplasia, Lymphoid				1 (2%)		

INTEGUMENTARY SYSTEM

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

Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:35
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Mammary Gland	(54)	(50)	(50)	(49)	(50)	(50)
Alveolus, Degeneration				2 (4%)		
Alveolus, Hyperplasia	13 (24%)	11 (22%)	11 (22%)	11 (22%)	14 (28%)	10 (20%)
Atypical Focus	13 (24%)	4 (8%)	6 (12%)	5 (10%)	2 (4%)	7 (14%)
Duct, Hyperplasia						1 (2%)
Galactocele	3 (6%)	1 (2%)	2 (4%)	2 (4%)	2 (4%)	
Hyperplasia						
Inflammation						
Lactation	30 (56%)	31 (62%)	35 (70%)	42 (86%)	28 (56%)	33 (66%)
Skin	(54)	(50)	(50)	(49)	(50)	(50)
Angiectasis						
Cyst Epithelial Inclusion					1 (2%)	
Foot, Inflammation, Chronic	36 (67%)	34 (68%)	32 (64%)	33 (67%)	35 (70%)	36 (72%)
Inflammation					1 (2%)	
Lip, Inflammation, Chronic					1 (2%)	1 (2%)
MUSCULOSKELETAL SYSTEM						
Bone	(0)	(0)	(0)	(0)	(0)	(0)
Bone, Femur	(54)	(50)	(50)	(49)	(50)	(50)
Fibrous Osteodystrophy						
Hyperostosis	1 (2%)					
Bone, Joint	(0)	(0)	(0)	(0)	(0)	(0)
Inflammation						
Bone, Mandible	(0)	(0)	(0)	(0)	(1)	(0)
Bone, Tibia	(0)	(0)	(0)	(0)	(0)	(0)
Malformation						
Skeletal Muscle	(0)	(1)	(1)	(0)	(1)	(1)
Cyst						
NERVOUS SYSTEM						
Brain, Brain Stem	(54)	(50)	(50)	(49)	(50)	(50)

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Experiment Number: 99930-92
 Test Type: MULTIGEN CHRONIC
 Route: DOSED FEED
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 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Compression	19 (35%)	18 (36%)	24 (48%)	35 (71%)	15 (30%)	17 (34%)
Brain, Cerebellum	(53)	(50)	(50)	(49)	(49)	(50)
Brain, Cerebrum	(54)	(50)	(50)	(49)	(50)	(50)
Hemorrhage						2 (4%)
Hydrocephalus	2 (4%)			3 (6%)	3 (6%)	2 (4%)
RESPIRATORY SYSTEM						
Lung	(54)	(50)	(50)	(49)	(50)	(50)
Alveolar Epith, Hyperplasia		1 (2%)	2 (4%)			
Atelectasis					1 (2%)	
Hemorrhage		1 (2%)				
Infiltration Cellular, Histiocyte	9 (17%)	17 (34%)	13 (26%)	17 (35%)	12 (24%)	12 (24%)
Inflammation			1 (2%)		1 (2%)	
Metaplasia					1 (2%)	
Mineralization						
Polyarteritis						
Nose	(54)	(50)	(50)	(49)	(50)	(50)
Foreign Body				1 (2%)		
Fungus					1 (2%)	
Inflammation			3 (6%)	2 (4%)	4 (8%)	1 (2%)
Keratin Cyst				2 (4%)	1 (2%)	
Nasolacrim Dct, Inflammation	7 (13%)	7 (14%)	6 (12%)	7 (14%)	2 (4%)	
Upper Molar, Inflammation	1 (2%)	1 (2%)	5 (10%)	3 (6%)	3 (6%)	2 (4%)
Trachea	(54)	(50)	(50)	(49)	(50)	(50)
SPECIAL SENSES SYSTEM						
Ear	(0)	(0)	(0)	(0)	(2)	(0)
Hemorrhage					1 (50%)	
Eye	(32)	(32)	(31)	(26)	(33)	(37)
Bilateral, Lens, Cataract		1 (3%)	2 (6%)		1 (3%)	3 (8%)
Bilateral, Retina, Degeneration	3 (9%)	3 (9%)	1 (3%)	1 (4%)	1 (3%)	2 (5%)

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
Route: DOSED FEED
Species/Strain: Rat/CD

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Test Compound: Endocrine disruptor (Genistein)
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Date Report Requested: 10/22/2014
Time Report Requested: 14:23:35
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Cornea, Ulcer						
Lens, Cataract				2 (8%)		
Lens, Unilateral, Cataract	1 (3%)					
Phthisis Bulbi				1 (4%)		
Polyarteritis						1 (3%)
Retina, Degeneration	2 (6%)	1 (3%)	3 (10%)	3 (12%)	4 (12%)	5 (14%)
Retina, Unilateral, Degeneration	1 (3%)					
Harderian Gland	(30)	(34)	(30)	(25)	(33)	(36)
Epithelium, Degeneration	6 (20%)	20 (59%)	9 (30%)	10 (40%)	18 (55%)	17 (47%)
Hypertrophy	3 (10%)	3 (9%)	4 (13%)	3 (12%)	3 (9%)	4 (11%)
Inflammation						
Lacrimal Gland	(0)	(1)	(1)	(1)	(1)	(0)
Metaplasia		1 (100%)		1 (100%)	1 (100%)	
URINARY SYSTEM						
Kidney	(54)	(50)	(50)	(49)	(50)	(50)
Accumulation, Hyaline Droplet	2 (4%)	1 (2%)				
Cyst	14 (26%)	17 (34%)	13 (26%)	13 (27%)	12 (24%)	16 (32%)
Epithelium, Pelvis, Hyperplasia	1 (2%)		1 (2%)		1 (2%)	1 (2%)
Hydronephrosis	2 (4%)					
Infarct	1 (2%)	3 (6%)	1 (2%)		2 (4%)	1 (2%)
Inflammation	2 (4%)		1 (2%)	1 (2%)		3 (6%)
Nephropathy	13 (24%)	10 (20%)	12 (24%)	17 (35%)	13 (26%)	5 (10%)
Pelvis, Mineralization	16 (30%)	20 (40%)	23 (46%)	25 (51%)	20 (40%)	21 (42%)
Renal Tubule, Mineralization	38 (70%)	37 (74%)	36 (72%)	37 (76%)	36 (72%)	33 (66%)
Renal Tubule, Pigmentation				1 (2%)		
Urinary Bladder	(54)	(49)	(49)	(49)	(49)	(48)
Developmental Malformation				1 (2%)		
Hyperplasia		1 (2%)	1 (2%)			
Inflammation			1 (2%)			
Mineralization						1 (2%)

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:35
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
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Experiment Number: 99930-92
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 Lab: NCTR

CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Disposition Summary					
Animals Initially In Study	50	53	50	50	50
Early Deaths					
Moribund	18	9	9	12	13
Natural Death	9	3	2	4	6
Survivors					
Moribund		6	5	4	4
Natural Death		2	4	1	2
Terminal Sacrifice	23	33	30	29	25
Animals Examined Microscopically	50	53	50	50	50
ALIMENTARY SYSTEM					
Esophagus	(50)	(53)	(50)	(50)	(48)
Lumen, Dilatation					
Intestine Large	(0)	(0)	(0)	(0)	(0)
Intestine Large, Cecum	(50)	(52)	(50)	(50)	(49)
Inflammation					
Intestine Large, Colon	(50)	(53)	(50)	(50)	(49)
Intestine Large, Rectum	(26)	(42)	(40)	(40)	(37)
Intestine Small	(0)	(0)	(0)	(0)	(0)
Hyperplasia, Lymphoid					
Intestine Small, Duodenum	(50)	(52)	(50)	(50)	(49)
Intestine Small, Ileum	(47)	(51)	(48)	(47)	(48)
Intestine Small, Jejunum	(49)	(51)	(49)	(49)	(48)
Inflammation					
Liver	(50)	(53)	(50)	(50)	(49)
Angiectasis	2 (4%)	2 (4%)	2 (4%)	1 (2%)	3 (6%)
Atypical Cells					1 (2%)
Basophilic Focus	6 (12%)	5 (9%)	7 (14%)	6 (12%)	5 (10%)
Bile Duct, Hyperplasia	13 (26%)	16 (30%)	18 (36%)	14 (28%)	16 (33%)

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Experiment Number: 99930-92
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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: 10/22/2014
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First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Biliar Tract, Fibrosis	2 (4%)	2 (4%)	7 (14%)	4 (8%)	
Clear Cell Focus		1 (2%)			1 (2%)
Congestion					2 (4%)
Cyst	3 (6%)	1 (2%)		3 (6%)	1 (2%)
Degeneration, Cystic	1 (2%)	1 (2%)	3 (6%)		1 (2%)
Developmental Malformation			1 (2%)	1 (2%)	1 (2%)
Eosinophilic Focus	4 (8%)			1 (2%)	4 (8%)
Fibrosis					
Hematopoietic Cell Proliferation	1 (2%)	1 (2%)	3 (6%)	4 (8%)	3 (6%)
Hemorrhage				1 (2%)	
Hepatodiaphragmatic Nodule	2 (4%)	1 (2%)	1 (2%)	1 (2%)	3 (6%)
Infiltration Cellular, Lymphocyte	1 (2%)	4 (8%)	2 (4%)	4 (8%)	3 (6%)
Inflammation, Chronic Active	2 (4%)	4 (8%)	3 (6%)	3 (6%)	5 (10%)
Mixed Cell Focus				1 (2%)	
Necrosis	2 (4%)	2 (4%)	1 (2%)		2 (4%)
Oval Cell, Hyperplasia					1 (2%)
Pigmentation				1 (2%)	
Polyarteritis					
Tension Lipidosis					
Vacuolization Cytoplasmic	3 (6%)	7 (13%)	5 (10%)	9 (18%)	4 (8%)
Vacuolization Cytoplasmic, Focal		4 (8%)		1 (2%)	
Mesentery	(2)	(0)	(1)	(1)	(0)
Fat, Necrosis	2 (100%)			1 (100%)	
Polyarteritis			1 (100%)		
Oral Mucosa	(0)	(1)	(0)	(1)	(1)
Keratin Cyst				1 (100%)	
Pancreas	(50)	(52)	(50)	(50)	(49)
Acinar Cell, Degeneration	14 (28%)	25 (48%)	23 (46%)	19 (38%)	18 (37%)
Acinar Cell, Hyperplasia					
Inflammation	1 (2%)				

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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Polyarteritis	1 (2%)	1 (2%)			1 (2%)
Salivary Glands	(50)	(53)	(49)	(50)	(49)
Atrophy	1 (2%)			1 (2%)	2 (4%)
Parotid GI, Inflammation	2 (4%)				
Submandibul GI, Inflammation					
Stomach	(0)	(0)	(1)	(0)	(0)
Dilatation			1 (100%)		
Stomach, Forestomach	(50)	(52)	(49)	(49)	(49)
Diverticulum					
Hyperplasia	2 (4%)	1 (2%)	3 (6%)	1 (2%)	1 (2%)
Inflammation	1 (2%)	2 (4%)	1 (2%)		
Keratin Cyst			1 (2%)		
Ulcer	1 (2%)			3 (6%)	
Stomach, Glandular	(50)	(53)	(50)	(50)	(49)
Erosion		1 (2%)			1 (2%)
Mineralization		1 (2%)		1 (2%)	
Tongue	(0)	(0)	(0)	(0)	(0)
CARDIOVASCULAR SYSTEM					
Blood Vessel	(50)	(53)	(50)	(50)	(49)
Mineralization		1 (2%)		2 (4%)	1 (2%)
Heart	(50)	(53)	(50)	(50)	(49)
Atrium Lft, Thrombosis		1 (2%)			1 (2%)
Atrium Rgt, Dilatation					1 (2%)
Cardiomyopathy	28 (56%)	38 (72%)	32 (64%)	25 (50%)	26 (53%)
Inflammation					
Mineralization				2 (4%)	
ENDOCRINE SYSTEM					
Adrenal Cortex	(50)	(53)	(50)	(50)	(49)
Accessory Adrenal Cortical Nodule		1 (2%)	1 (2%)		

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

Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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: 10/22/2014
Time Report Requested: 14:23:36
First Dose M/F: NA / NA
Lab: NCTR

CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Angiectasis	1 (2%)	2 (4%)		1 (2%)	
Atrophy			1 (2%)		1 (2%)
Degeneration, Cystic	45 (90%)	48 (91%)	48 (96%)	45 (90%)	47 (96%)
Hematopoietic Cell Proliferation				1 (2%)	
Hyperplasia	11 (22%)	14 (26%)	14 (28%)	13 (26%)	16 (33%)
Hypertrophy	18 (36%)	21 (40%)	21 (42%)	22 (44%)	23 (47%)
Infarct					
Vacuolization Cytoplasmic	1 (2%)	6 (11%)			2 (4%)
Adrenal Medulla	(48)	(53)	(46)	(50)	(48)
Hyperplasia, Diffuse					
Hyperplasia, Focal	5 (10%)	10 (19%)	1 (2%)	7 (14%)	7 (15%)
Infiltration Cellular, Eosinophil					
Islets, Pancreatic	(50)	(52)	(50)	(50)	(49)
Hyperplasia	2 (4%)	3 (6%)	3 (6%)	3 (6%)	1 (2%)
Parathyroid Gland	(43)	(53)	(41)	(47)	(46)
Hyperplasia, Diffuse	1 (2%)	1 (2%)		1 (2%)	
Hyperplasia, Focal	1 (2%)	1 (2%)		2 (4%)	
Pituitary Gland	(50)	(53)	(50)	(50)	(50)
Angiectasis					
Cyst		1 (2%)		2 (4%)	
Infiltration Cellular, Histiocyte					1 (2%)
Pars Distalis, Hyperplasia	2 (4%)	7 (13%)	3 (6%)	4 (8%)	6 (12%)
Thyroid Gland	(50)	(53)	(50)	(50)	(49)
C Cell, Hyperplasia	2 (4%)	2 (4%)			3 (6%)
Cyst, Squamous	8 (16%)	10 (19%)	8 (16%)	7 (14%)	5 (10%)
Follicular Cel, Atrophy	1 (2%)				
Follicular Cel, Hyperplasia	1 (2%)				
GENERAL BODY SYSTEM					
Tissue NOS	(1)	(0)	(0)	(0)	(0)

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Experiment Number: 99930-92
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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
GENITAL SYSTEM					
Clitoral Gland	(49)	(49)	(47)	(49)	(48)
Duct, Dilatation	11 (22%)	9 (18%)	5 (11%)	8 (16%)	8 (17%)
Hyperplasia	3 (6%)		1 (2%)	2 (4%)	3 (6%)
Inflammation	23 (47%)	24 (49%)	18 (38%)	29 (59%)	32 (67%)
Parenchym Cell, Degeneration	2 (4%)	4 (8%)	1 (2%)	1 (2%)	8 (17%)
Vacuolization Cytoplasmic					1 (2%)
Ovary	(49)	(53)	(50)	(49)	(49)
Angiectasis					
Atrophy	42 (86%)	28 (53%)	35 (70%)	32 (65%)	39 (80%)
Cyst	18 (37%)	9 (17%)	15 (30%)	16 (33%)	16 (33%)
Granulosa Cell, Hyperplasia					
Hyperplasia, Stromal	17 (35%)	21 (40%)	30 (60%)	27 (55%)	24 (49%)
Serosa, Hyperplasia	1 (2%)				
Oviduct	(47)	(53)	(49)	(49)	(49)
Atrophy				1 (2%)	
Cyst			1 (2%)		
Hyperplasia, Stromal				1 (2%)	
Uterus	(50)	(53)	(50)	(50)	(49)
Adenomyosis			2 (4%)	1 (2%)	2 (4%)
Angiectasis		1 (2%)			
Atrophy					
Cervix, Muscularis, Hypertrophy	2 (4%)				
Hemorrhage				1 (2%)	
Hyperplasia, Cystic	33 (66%)	16 (30%)	24 (48%)	24 (48%)	24 (49%)
Hyperplasia, Focal	1 (2%)	3 (6%)			
Inflammation					
Metaplasia	7 (14%)	1 (2%)	6 (12%)	5 (10%)	6 (12%)
Necrosis					
Vagina	(50)	(52)	(49)	(49)	(48)

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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Developmental Malformation					
Hyperplasia					
Inflammation	5 (10%)	9 (17%)	4 (8%)	5 (10%)	7 (15%)
Keratin Cyst					
HEMATOPOIETIC SYSTEM					
Bone Marrow	(50)	(53)	(50)	(50)	(49)
Hypocellularity	1 (2%)			1 (2%)	4 (8%)
Myeloid Cell, Hyperplasia	1 (2%)		1 (2%)	1 (2%)	1 (2%)
Lymph Node	(9)	(18)	(9)	(8)	(12)
Axillary, Degeneration, Cystic					
Axillary, Infiltration Cellular, Plasma Cell					
Degeneration, Cystic					
Infiltration Cellular, Plasma Cell					
Inguinal, Infiltration Cellular, Plasma Cell					
Lumbar, Degeneration, Cystic	3 (33%)	9 (50%)	5 (56%)	4 (50%)	4 (33%)
Lumbar, Hemorrhage					
Lumbar, Hyperplasia, Lymphoid		1 (6%)			
Lumbar, Infiltration Cellular, Plasma Cell	6 (67%)	11 (61%)	7 (78%)	6 (75%)	10 (83%)
Mediastinal, Hemorrhage	1 (11%)				1 (8%)
Mediastinal, Infiltration Cellular, Plasma Cell	1 (11%)	1 (6%)			2 (17%)
Pancreatic, Hemorrhage	2 (22%)		1 (11%)		2 (17%)
Pancreatic, Infiltration Cellular, Plasma Cell					
Pancreatic, Inflammation, Granulomatous					
Pancreatic, Pigmentation					
Popliteal, Degeneration, Cystic		1 (6%)			
Popliteal, Hyperplasia, Lymphoid					
Popliteal, Infiltration Cellular, Plasma Cell	1 (11%)	1 (6%)			1 (8%)
Renal, Degeneration, Cystic	1 (11%)		1 (11%)	1 (13%)	
Renal, Hyperplasia, Lymphoid		1 (6%)			
Renal, Infiltration Cellular, Plasma Cell	1 (11%)	1 (6%)	1 (11%)	1 (13%)	1 (8%)

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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Thoracic, Infiltration Cellular, Plasma Cell					
Thoracic, Thrombosis					
Lymph Node, Mandibular	(50)	(53)	(49)	(50)	(49)
Cyst			1 (2%)		
Degeneration, Cystic	2 (4%)	2 (4%)			3 (6%)
Hemorrhage	1 (2%)	1 (2%)		1 (2%)	
Hyperplasia, Lymphoid					
Infiltration Cellular, Plasma Cell	45 (90%)	43 (81%)	40 (82%)	42 (84%)	42 (86%)
Lymph Node, Mesenteric	(50)	(53)	(50)	(50)	(49)
Degeneration, Cystic	1 (2%)			1 (2%)	1 (2%)
Hemorrhage		1 (2%)	1 (2%)		1 (2%)
Hyperplasia, Lymphoid					
Infiltration Cellular, Plasma Cell		1 (2%)			1 (2%)
Inflammation, Granulomatous	45 (90%)	48 (91%)	47 (94%)	45 (90%)	44 (90%)
Spleen	(50)	(53)	(50)	(50)	(49)
Hematopoietic Cell Proliferation	8 (16%)	17 (32%)	8 (16%)	7 (14%)	10 (20%)
Hemorrhage	1 (2%)				
Inflammation, Chronic Active, Focal					
Lymphocyte, Atrophy	4 (8%)	3 (6%)		2 (4%)	3 (6%)
Pigmentation	34 (68%)	21 (40%)	32 (64%)	32 (64%)	30 (61%)
Red Pulp, Atrophy					1 (2%)
Red Pulp, Hyperplasia	1 (2%)				
Thymus	(47)	(48)	(45)	(46)	(47)
Atrophy	9 (19%)	12 (25%)	7 (16%)	10 (22%)	9 (19%)
Cyst	20 (43%)	18 (38%)	15 (33%)	13 (28%)	17 (36%)
Ectopic Thyroid				1 (2%)	
Epithel Cell, Hyperplasia	1 (2%)	2 (4%)	4 (9%)		2 (4%)
Hemorrhage			1 (2%)		2 (4%)
Hyperplasia, Lymphoid					

INTEGUMENTARY SYSTEM

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Experiment Number: 99930-92
Test Type: MULTIGEN CHRONIC
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Species/Strain: Rat/CD

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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Mammary Gland	(50)	(53)	(49)	(50)	(50)
Alveolus, Degeneration		3 (6%)	1 (2%)	1 (2%)	5 (10%)
Alveolus, Hyperplasia	15 (30%)	19 (36%)	14 (29%)	18 (36%)	17 (34%)
Atypical Focus	11 (22%)	6 (11%)	7 (14%)	4 (8%)	5 (10%)
Duct, Hyperplasia					
Galactocele	2 (4%)	1 (2%)	6 (12%)	1 (2%)	3 (6%)
Hyperplasia		1 (2%)			1 (2%)
Inflammation	1 (2%)				
Lactation	40 (80%)	32 (60%)	38 (78%)	43 (86%)	33 (66%)
Skin	(50)	(53)	(50)	(50)	(50)
Angiectasis		1 (2%)			
Cyst Epithelial Inclusion				1 (2%)	1 (2%)
Foot, Inflammation, Chronic	35 (70%)	39 (74%)	36 (72%)	37 (74%)	35 (70%)
Inflammation					
Lip, Inflammation, Chronic					
MUSCULOSKELETAL SYSTEM					
Bone	(0)	(0)	(0)	(1)	(0)
Bone, Femur	(50)	(53)	(50)	(50)	(49)
Fibrous Osteodystrophy				1 (2%)	
Hyperostosis					
Bone, Joint	(0)	(1)	(0)	(0)	(0)
Inflammation		1 (100%)			
Bone, Mandible	(0)	(0)	(0)	(0)	(0)
Bone, Tibia	(1)	(0)	(0)	(0)	(0)
Malformation	1 (100%)				
Skeletal Muscle	(0)	(1)	(0)	(0)	(0)
Cyst		1 (100%)			
NERVOUS SYSTEM					
Brain, Brain Stem	(50)	(53)	(50)	(50)	(49)

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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Compression	31 (62%)	23 (43%)	26 (52%)	28 (56%)	29 (59%)
Brain, Cerebellum	(50)	(53)	(50)	(50)	(49)
Brain, Cerebrum	(50)	(53)	(50)	(50)	(49)
Hemorrhage					
Hydrocephalus	2 (4%)	1 (2%)		1 (2%)	3 (6%)
RESPIRATORY SYSTEM					
Lung	(50)	(53)	(50)	(50)	(49)
Alveolar Epith, Hyperplasia	1 (2%)		1 (2%)	1 (2%)	
Atelectasis			1 (2%)		
Hemorrhage				1 (2%)	
Infiltration Cellular, Histiocyte	20 (40%)	16 (30%)	10 (20%)	13 (26%)	14 (29%)
Inflammation	1 (2%)	1 (2%)	3 (6%)	3 (6%)	1 (2%)
Metaplasia					
Mineralization		1 (2%)			
Polyarteritis		1 (2%)			
Nose	(50)	(53)	(50)	(50)	(49)
Foreign Body					
Fungus					
Inflammation	4 (8%)	3 (6%)	2 (4%)	3 (6%)	3 (6%)
Keratin Cyst				1 (2%)	
Nasolacrim Dct, Inflammation	4 (8%)	4 (8%)	2 (4%)	1 (2%)	3 (6%)
Upper Molar, Inflammation	1 (2%)	2 (4%)	6 (12%)		1 (2%)
Trachea	(50)	(53)	(50)	(50)	(49)
SPECIAL SENSES SYSTEM					
Ear	(0)	(0)	(0)	(0)	(0)
Hemorrhage					
Eye	(28)	(43)	(41)	(40)	(38)
Bilateral, Lens, Cataract		1 (2%)			1 (3%)
Bilateral, Retina, Degeneration		5 (12%)	9 (22%)	6 (15%)	3 (8%)

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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Cornea, Ulcer	1 (4%)				
Lens, Cataract					1 (3%)
Lens, Unilateral, Cataract					
Phthisis Bulbi					
Polyarteritis					
Retina, Degeneration	1 (4%)	6 (14%)	4 (10%)	1 (3%)	5 (13%)
Retina, Unilateral, Degeneration					
Harderian Gland	(26)	(43)	(40)	(40)	(38)
Epithelium, Degeneration	13 (50%)	16 (37%)	17 (43%)	10 (25%)	21 (55%)
Hypertrophy	5 (19%)	3 (7%)	5 (13%)	5 (13%)	2 (5%)
Inflammation		1 (2%)			
Lacrimal Gland	(2)	(0)	(1)	(0)	(0)
Metaplasia	1 (50%)		1 (100%)		
URINARY SYSTEM					
Kidney	(50)	(53)	(50)	(50)	(49)
Accumulation, Hyaline Droplet		1 (2%)			
Cyst	19 (38%)	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	1 (2%)	2 (4%)	1 (2%)		5 (10%)
Nephropathy	8 (16%)	19 (36%)	14 (28%)	21 (42%)	18 (37%)
Pelvis, Mineralization	23 (46%)	17 (32%)	19 (38%)	28 (56%)	24 (49%)
Renal Tubule, Mineralization	36 (72%)	43 (81%)	33 (66%)	43 (86%)	27 (55%)
Renal Tubule, Pigmentation					
Urinary Bladder	(49)	(53)	(47)	(48)	(47)
Developmental Malformation					
Hyperplasia		2 (4%)			1 (2%)
Inflammation					1 (2%)
Mineralization					

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CD Rat FEMALE

F1 500PPM/CTL

F3 0 PPM

F3 5PPM TO CTL

F3 100PPM TO CTL

F3 500PPM TOCTL

**** END OF REPORT ****