

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Test Compound: Endocrine disruptor (Genistein)
CAS Number: 446-72-0

Date Report Requested: 10/17/2014
Time Report Requested: 12:59:19
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
F3 0PPM

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	4	4	4	4	4	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	6	0	6	9	9	9	0	5	8	0	0	3	6	6	8	9	2	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	0	2	8	4	7	7	6	0	1	6	9	5	2	5	3	5	9	2	4	4	1	1	1	1	0	2	2	5	5	4	4	5	5	5	5
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	1	1	1	1	1	1	2	2	2	2	3	3	4	4	6	9	9	9	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0
	5	0	2	4	4	4	5	0	3	9	9	5	9	1	4	2	3	4	4	7	7	7	7	7	9	9	4	4	4	4	7	7	7	7	7
	5	4	6	4	6	7	1	6	9	5	6	1	8	3	3	2	8	7	8	0	1	2	3	4	0	1	4	5	6	7	2	2	2	2	2

Alimentary System

Esophagus	A	A	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Hyperkeratosis						2					4																										
Intestine Large, Cecum	A	A	A	A	A	A	+	A	+	+	M	+	+	+	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Hyperplasia, Lymphoid																							2														
Intestine Large, Colon	A	A	A	A	A	A	+	A	+	+	M	+	+	+	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Hyperplasia, Lymphoid																																					
Intestine Large, Rectum	A										+	+	+	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Intestine Small, Duodenum	A	A	A	A	A	A	+	A	+	+	M	+	+	+	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Intestine Small, Ileum	A	A	A	A	A	A	+	A	+	A	M	+	+	+	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia, Lymphoid																																					2
Intestine Small, Jejunum	A	A	A	A	A	A	A	A	+	+	M	+	+	+	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Liver	+	+	+	+	+	+	+	A	+	+	M	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Angiectasis																	2																				1
Autolysis	4		2		4										2																						
Bile Duct, Hyperplasia											1			1						1	1						1	2									
Biliar Tract, Fibrosis																	1		1									1	2	1							
Capsule, Hemorrhage																							3														
Degeneration, Cystic					3																			1												1	
Developmental Malformation																																					
Eosinophilic Focus																																					
Eosinophilic Focus, Multiple																																					X

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CD Rat Male F3 OPPM	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
	ANIMAL ID	2	4	4	4	4	4	5	5	5	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7									
		6	0	6	9	9	9	0	5	8	0	0	3	6	6	8	9	2	4	4	5	5	5	5	5	5	5	5	5									
		0	2	8	4	7	7	6	0	1	6	9	5	2	5	3	5	9	2	4	1	1	1	1	0	2	2	5	4	5								
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1							
		0	1	1	1	1	1	1	2	2	2	2	3	3	4	4	6	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0						
		5	0	2	4	4	4	5	0	3	9	9	5	9	1	4	2	3	4	4	7	7	7	7	9	9	4	4	4	4	7							
		5	4	6	4	6	7	1	6	9	5	6	1	8	3	3	2	8	7	8	0	1	2	3	4	0	1	4	5	6	7	2						
Stomach, Glandular		A	A	A	A	A	A	+	A	+	+	M	+	+	+	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+							
Cardiovascular System																																						
Blood Vessel		+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+						
Heart		+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+						
Atrium, Dilatation																																						
Autolysis							2																															
Cardiomyopathy							2				2		1	2		1	1				1			1			1	1	2	1	1	1	1					
Mineralization																																						
Pericardium, Inflammation, Chronic Active																																						
Endocrine System																																						
Adrenal Cortex		A	+	+	A	+	+	+	A	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Accessory Adrenal Cortical Nodule							X																															
Angiectasis																																						
Autolysis																																						
Bilateral, Hyperplasia																																						
Capsule, Fibrosis																																						
Cyst																																						
Degeneration, Cystic																																						
Hyperplasia																																						
Hypertrophy																																						
Vacuolization Cytoplasmic																																						
Adrenal Medulla		A	+	+	A	+	+	+	A	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

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CD Rat Male
 F3 OPPM

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	4	4	4	4	4	5	5	5	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	6	0	6	9	9	9	0	5	8	0	0	3	6	6	8	9	2	4	4	5	5	5	5	5	5	5	5	5	5	
	0	2	8	4	7	7	6	0	1	6	9	5	2	5	3	5	9	2	4	4	1	1	1	0	2	2	5	5	4	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
	0	1	1	1	1	1	1	2	2	2	2	3	3	4	4	6	9	9	9	9	9	9	9	9	9	9	0	0	0	
	5	0	2	4	4	4	5	0	3	9	9	5	9	1	4	2	3	4	4	7	7	7	7	9	9	4	4	4		
	5	4	6	4	6	7	1	6	9	5	6	1	8	3	3	2	8	7	8	0	1	2	3	4	0	1	4	5	6	

Bilateral, Hyperplasia

Hyperplasia 1 1 3

Hypertrophy

Islets, Pancreatic A M I + + + + A + + M + + + + A +

Hyperplasia 1 1 2 1 1 1 2 2 1 1 1 1

Parathyroid Gland I + + + + + + + + + M I + + + + + M + + M + M + + + M + M + + +

Bilateral, Hyperplasia 2

Hyperplasia 1

Pituitary Gland A + + A + + + + + + M +

Autolysis 4

Pars Distalis, Cyst X X

Pars Distalis, Cyst, Multiple X

Pars Distalis, Hyperplasia 2 1 2 2 2

Pars Intermed, Cyst

Pars Intermed, Dysplasia

Thyroid Gland + + A A + A + A + + M + + + A A + M + + + + + + + + + + + + + + + +

Autolysis 4 4

C Cell, Hyperplasia

Cyst, Squamous X X

Infiltration Cellular, Lymphocyte

General Body System

NONE

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	DAY ON TEST																															
CD Rat Male	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F3 OPPM	2	4	4	4	4	4	5	5	5	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	6	0	6	9	9	9	0	5	8	0	0	3	6	6	8	9	2	4	4	5	5	5	5	5	5	5	5	5	5	5		
	0	2	8	4	7	7	6	0	1	6	9	5	2	5	3	5	9	2	4	4	1	1	1	0	2	2	5	5	4	5		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1		
	0	1	1	1	1	1	1	2	2	2	2	3	3	4	4	6	9	9	9	9	9	9	9	9	9	9	0	0	0	0		
	5	0	2	4	4	4	5	0	3	9	9	5	9	1	4	2	3	4	4	7	7	7	7	7	9	9	4	4	4	7		
	5	4	6	4	6	7	1	6	9	5	6	1	8	3	3	2	8	7	8	0	1	2	3	4	0	1	4	5	6	7		

Genital System

Coagulating Gland	A	A	A	A	+	+	+	A	+	+	M	+	+	+	A	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+
Atrophy											3							2													2
Autolysis						4									4																
Developmental Malformation																															
Inflammation, Suppurative															3							X									
Epididymis	+	A	+	+	+	+	+	+	+	+	M	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Autolysis						3																									
Degeneration																									3						
Hypospermia																									4						
Infiltration Cellular, Lymphocyte																											2				
Inflammation																											2				
Preputial Gland	+	+	+	A	+	+	+	+	+	+	M	+	+	+	A	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	
Abscess																															
Atrophy																															2
Autolysis	3		2		3			2																							
Duct, Dilatation																															
Infiltration Cellular, Lymphocyte			2			1	1	2				1		1			2	2	1				1		2		2		1	2	
Inflammation, Suppurative	4	4										4											1		4						
Parenchym Cell, Degeneration							1				2		1		1					1				1	2	2				2	
Prostate					+	+						M		+																	
Prostate, Dorsal Lobe	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

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CD Rat Male F3 OPPM	DAY ON TEST																												
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Autolysis	4	2						3						4			3												
Cyst																													X
Degeneration																					2								
Hyperplasia										4				4															
Infiltration Cellular, Lymphocyte																													
Inflammation, Suppurative	4	2					3	2	1	4		1		2	4	4	1		2	1	1	2	3	1	3	2	1	1	1
Prostate, Ventral Lobe	+	+	A	+	+	+	+	+	+	M	+	+	+	+	M	+	+	A	+	+	+	+	+	+	+	+	+	+	+
Autolysis	4						4							4															
Degeneration										2						2											3	1	2
Hyperplasia																						3		2				2	
Infiltration Cellular, Lymphocyte							1																			1	1	1	
Infiltration Cellular, Plasma Cell																					3								
Inflammation, Suppurative	4									1				4											2				
Rete Testes	+	+	+	+	M	M	+	+	+	+	M	+	+	+	+	+	+	M	M	+	+	+	+	+	+	+	+	+	+
Dilatation												1																	
Seminal Vesicle	A	A	A	A	+	A	+	A	+	+	M	+	+	+	A	+	+	+	A	+	+	+	+	+	+	+	+	+	+
Atrophy										4								2										2	
Autolysis					4									4															
Degeneration																													
Dilatation																													
Inflammation, Suppurative															4														
Testes	+	+	+	+	+	+	+	+	+	+	M		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Autolysis	4							4						4															

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ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	1	1	1	1	1	1	2	2	2	2	3	3	4	4	6	9	9	9	9	9	9	9	9	9	9	0	0	0	0	
	5	0	2	4	4	4	5	0	3	9	9	5	9	1	4	2	3	4	4	7	7	7	7	9	9	4	4	4	7		
	5	4	6	4	6	7	1	6	9	5	6	1	8	3	3	2	8	7	8	0	1	2	3	4	0	1	4	5	6	7	2

Inflammation, Granulomatous

Interstitial Cell, Hyperplasia

3

Polyarteritis

2

Seminif Tub, Degeneration

2 2

2

1

1 1

1

1

Hematopoietic System

Bone Marrow

+ + + + + A + A + + M + + + A + + + + + + + + + + + + + + +

Autolysis

4 4

Erythroid Cell, Hyperplasia

Myeloid Cell, Hyperplasia

4

4 3

2

Lymph Node

+ + +

+

A

+

+

Axillary, Hyperplasia, Lymphoid

Axillary, Infiltration Cellular, Plasma Cell

Inguinal, Autolysis

4

Lumbar, Congestion

3

Lumbar, Degeneration, Cystic

Lumbar, Hyperplasia, Lymphoid

3

Lumbar, Infiltration Cellular, Plasma Cell

4

Mediastinal, Congestion

3

Mediastinal, Infiltration Cellular, Plasma Cell

2

Popliteal, Hyperplasia, Lymphoid

3

Renal, Congestion

3

Renal, Degeneration, Cystic

4

2

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+ ..Tissue examined microscopically

M ..Missing tissue

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	2	4	4	4	4	4	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	6	0	6	9	9	9	0	5	8	0	0	3	6	6	8	9	2	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5		
	0	2	8	4	7	7	6	0	1	6	9	5	2	5	3	5	9	2	4	1	1	1	0	2	2	5	5	4	4	5	5			
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1		
	0	1	1	1	1	1	1	2	2	2	2	3	3	4	4	6	9	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0		
	5	0	2	4	4	4	5	0	3	9	9	5	9	1	4	2	3	4	4	7	7	7	7	7	9	9	4	4	4	4	7	2		
	5	4	6	4	6	7	1	6	9	5	6	1	8	3	3	2	8	7	8	0	1	2	3	4	0	1	4	5	6	7	2	2		

Renal, Infiltration Cellular, Plasma Cell																	4				3													
Renal, Pigmentation																	2																	
Lymph Node, Mandibular Autolysis	+	+	+	+	+	A	+	+	+	+	M	+	+	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Degeneration, Cystic																	2				1													
Hyperplasia, Lymphoid																	3		2		3		2		3		2		2		2		2	
Infiltration Cellular, Plasma Cell																	2		2		2		3		1		3		3		4		4	
Lymph Node, Mesenteric Congestion	A	+	A	+	+	A	+	+	+	+	M	+	+	+	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+			
Degeneration, Cystic																	2		1		2		2				2				2			
Hyperplasia, Lymphoid																	2		1				2				2						2	
Infiltration Cellular, Mast Cell																											2				2			
Infiltration Cellular, Plasma Cell																					3						3				2		2	
Inflammation, Granulomatous																	2		1		2				2		2		1		2		2	
Spleen Autolysis	+	+	+	+	+	+	+	A	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Capsule, Fibrosis																							2											
Depletion Lymphoid																	4																	
Hematopoietic Cell Proliferation																	2		2		2		2		4		1							
Hematopoietic Cell Proliferation Granulocytic																	4																	
Hyperplasia, Lymphoid																					3													
Pigmentation																	2		2		4		2		3		4		4		3		4	
Thymus	A	+	+	+	+	A	+	+	+	+	M	+	+	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:23
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male F3 OPPM	DAY ON TEST	ANIMAL ID																														
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		2	4	4	4	4	4	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7		
		6	0	6	9	9	9	0	5	8	0	0	3	6	6	8	9	2	4	4	5	5	5	5	5	5	5	5	5	5		
		0	2	8	4	7	7	6	0	1	6	9	5	2	5	3	5	9	2	4	4	1	1	1	1	0	2	2	5	5		
Atrophy		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Epithel Cell, Hyperplasia		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	
Hemorrhage		0	1	1	1	1	1	1	2	2	2	2	3	3	4	4	6	9	9	9	9	9	9	9	9	9	9	0	0	0	0	
Hyperplasia, Lymphoid		5	0	2	4	4	4	5	0	3	9	9	5	9	1	4	2	3	4	4	7	7	7	7	9	9	4	4	4	4		
		5	4	6	4	4	7	1	6	9	5	6	1	8	3	3	2	8	7	8	7	1	2	3	4	0	1	4	5	6	7	
						4		4	4	4	4		4	4	4		4	4	4	4	4	4	4	4	4	4	4	4	3	4	3	
Integumentary System																																
Mammary Gland		A	I	I	A	I	A	+	A	+	I	M	I	+	+	A	M	I	+	+	+	+	+	+	+	+	+	+	+	+		
Alveolus, Hyperplasia																									2			2				
Degeneration																		2					4		4	2		2	2		4	
Infiltration Cellular, Lymphocyte																					1											
Lactation								2		2																						
Skin		+	A	+	+	+	+	+	A	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Cyst Epithelial Inclusion																																
Epidermis, Hyperplasia																	2									2		2				
Hyperkeratosis																	2								2		4					
Inflammation, Chronic Active																1			2													
Inflammation, Suppurative																								4	4	4		2	4	4		4
Necrosis																																
Musculoskeletal System																																
Bone, Cranium						+																										
Hemorrhage						4																										
Hyperostosis																																
Bone, Femur		+	A	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically M ..Missing tissue 1-4 ..Lesion qualified as:
 X ..Lesion present A ..Autolysis precludes evaluation 1) Minimal 3) Moderate
 I ..Insufficient tissue BLANK ..Not examined microscopically 2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:24

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male F3 OPPM	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		2	4	4	4	4	4	5	5	5	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7		
	ANIMAL ID	6	0	6	9	9	9	0	5	8	0	0	3	6	6	8	9	2	4	4	5	5	5	5	5	5	5	5	5		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1		
	0	1	1	1	1	1	1	2	2	2	2	3	3	4	4	6	9	9	9	9	9	9	9	9	9	9	9	9	9		
	5	0	2	4	4	4	5	0	3	9	9	5	9	1	4	2	3	4	4	7	7	7	7	9	9	4	4	4	7		
	5	4	6	4	6	7	1	6	9	5	6	1	8	3	3	2	8	7	8	0	1	2	3	4	0	1	4	5	6	7	2

Skeletal Muscle +

Nervous System

Brain, Brain Stem	A	+	+	A	A	+	+	A	+	+	M	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Compression							2		3	3		2													2					
Hemorrhage							2																							
Brain, Cerebellum	A	+	+	+	A	+	+	A	+	+	M	+	+	+	A	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+
Hydrocephalus										2																				
Brain, Cerebrum	A	+	+	A	A	+	+	A	+	+	M	+	+	+	A	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+
Developmental Malformation																														
Hemorrhage							2																							
Hydrocephalus										1	2																			

Respiratory System

Lung	A	+	+	A	+	+	+	+	+	+	M	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Alveolar Epith, Hyperplasia																												1			
Artery, Mineralization														1						1											2
Autolysis				2		3	3								4																
Infiltration Cellular, Histiocyte				1						2				2	1				3					1	2		1	1			
Inflammation, Chronic																															
Mediastinum, Bacterium							4																								
Mediastinum, Foreign Body							X																								
Mediastinum, Hemorrhage							4																								
Mediastinum, Inflammation, Suppurative							4																								

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue

M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 12:59:24

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

CD Rat Male F3 OPPM	DAY ON TEST	ANIMAL ID																												
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		2	4	4	4	4	4	5	5	5	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Mediastinum, Necrosis						4																								
Metaplasia, Osseous																1														
Thrombosis																					2									
Nose	A	+	+	A	+	+	+	A	+	+	M	+	+	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	
Autolysis						3																								
Goblet Cell, Hyperplasia																													2	
Hyperkeratosis																				4										
Inflammation, Chronic																														1
Inflammation, Chronic Active														2	1															
Inflammation, Suppurative						4					2							4	4									2		
Trachea	A	+	+	A	+	A	+	A	+	+	M	+	+	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	
Special Senses System																														
Eye	A										M	+	+	A	A	+	A	+	+	+	+	+	+	+	+	+	+	+	+	
Bilateral, Retina, Atrophy														2						3	2		3	3	2	3	2			2
Harderian Gland	A										M	+	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Infiltration Cellular, Lymphocyte																													2	
Urinary System																														
Kidney	A	+	+	A	+	A	+	A	+	+	M	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Accumulation, Hyaline Droplet														1						4										
Autolysis			2		4											2														
Capsule, Fibrosis																										1				
Cortex, Cyst										X				X	X						X	X	X		X	X	X	X	X	X

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue

M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 12:59:25

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

CD Rat Male F3 OPPM	DAY ON TEST	ANIMAL ID																														
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
		2	4	4	4	4	4	5	5	5	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7			
		6	0	6	9	9	9	0	5	8	0	0	3	6	6	8	9	2	4	4	5	5	5	5	5	5	5	5	5			
		0	2	8	4	7	7	6	0	1	6	9	5	2	5	3	5	2	4	4	1	1	1	1	0	2	2	5	5			
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1			
		0	1	1	1	1	1	1	2	2	2	2	3	3	4	4	6	9	9	9	9	9	9	9	9	9	9	0	0			
		5	0	2	4	4	4	5	0	3	9	9	5	9	1	4	2	3	4	4	7	7	7	7	9	9	4	4	4			
		5	4	6	4	6	7	1	6	9	5	6	1	8	3	3	2	8	7	8	0	1	2	3	4	0	1	4	5			
Infiltration Cellular, Lymphocyte																																
Nephropathy, Chronic				1				1		2	3			2	3			2	4	1	2	2			2	4	2	1	1	2	1	2
Pelvis, Dilatation														2				2														
Pelvis, Hyperplasia											2							2	2													
Pelvis, Inflammation, Suppurative																			4													
Polycystic Kidney																																
Urinary Bladder		A	+	I	A	+	A	+	A	+	+	M	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Dilatation																																
Hemorrhage																																
Inflammation, Suppurative																																
Transit Epithe, Hyperplasia																																

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:25
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 OPPM

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	5	5	5	5	5	5	5	5	5	6	6	6	4	4	3	3	3	2	5	4	5
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	
	9	9	3	3	3	3	3	3	3	5	7	7	7	7	8	8	8	9	0	0	
	8	9	0	1	2	3	4	5	6	4	5	6	7	8	9	0	1	2	9	0	9
	*TOTALS																				

Alimentary System

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Hyperkeratosis																					2	3.0
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	41	
Hyperplasia, Lymphoid																					1	2.0
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	41	
Hyperplasia, Lymphoid										3											1	3.0
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	38	
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	41	
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	40	
Hyperplasia, Lymphoid																					1	2.0
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	40	
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Angiectasis				2					2	1		1									6	1.5
Autolysis																					4	3.0
Bile Duct, Hyperplasia	1	2			1	1							1				1	1	1		14	1.1
Biliar Tract, Fibrosis													1				1				8	1.1
Capsule, Hemorrhage																					1	3.0
Degeneration, Cystic			2																		4	1.8
Developmental Malformation																			X		1	
Eosinophilic Focus			X				X												X		3	
Eosinophilic Focus, Multiple																					1	

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:26

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male
F3 OPPM

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7			
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5			
	5	5	5	5	5	5	5	5	5	6	6	6	4	4	3	3	3	2	5	4	5		
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2			
	9	9	3	3	3	3	3	3	3	5	7	7	7	7	8	8	8	9	0	0			
	8	9	0	1	2	3	4	5	6	4	5	6	7	8	9	0	1	2	9	0	9		
																				*TOTALS			
Hematopoietic Cell Proliferation																				1	2	1.0	
Hemorrhage																					2	1	2.0
Hepatodiaphragmatic Nodule																						1	
Infiltration Cellular, Lymphocyte																				1	1	1	
Inflammation, Chronic Active																				1	2	1	
Inflammation, Suppurative																						1	1.0
Necrosis																				1	2	1	1.5
Vacuolization Cytoplasmic																				1			1.6
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Acinar Cell, Degeneration	3	2	3	2	2	3	4	2	1	2	2	1	2	1	4	2	2	4	3	1	2		
Autolysis																						3	3.3
Infiltration Cellular, Lymphocyte																						1	1.0
Pigmentation																						1	1.0
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Acinar Cell, Degeneration																				4		1	2.5
Autolysis																						1	4.0
Infiltration Cellular, Lymphocyte																				3		1	3.0
Mineralization																				3		2	3.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Infiltration Cellular, Lymphocyte																						1	3.0
Inflammation, Suppurative																						1	3.0
Mucosa, Ulcer																						1	2.0
Submucosa, Edema																						1	4.0

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:26

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male
F3 OPPM

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
	5	5	5	5	5	5	5	5	5	6	6	6	4	4	3	3	3	2	5	4	5		
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2		
	9	9	3	3	3	3	3	3	3	5	7	7	7	7	8	8	8	9	0	0	0		
	8	9	0	1	2	3	4	5	6	4	5	6	7	8	9	0	1	2	9	0	9		
	*TOTALS																						
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Cardiovascular System																					41		
Blood Vessel	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Atrium, Dilatation																		4	1	4.0			
Autolysis																		1	1	2.0			
Cardiomyopathy	1	1	1				2	1		1	2	2	1		2		1		2				
Mineralization												2	2	2.0									
Pericardium, Inflammation, Chronic Active																		1	1	1.0			
Endocrine System																							
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Accessory Adrenal Cortical Nodule													X	2									
Angiectasis																		1	1	2.0			
Autolysis																		1	1	3.0			
Bilateral, Hyperplasia																		1	1	1.0			
Capsule, Fibrosis																		1	1	2.0			
Cyst																X	1						
Degeneration, Cystic							2														3	3	2.3
Hyperplasia	1	2								2											4	4	1.8
Hypertrophy											1						2	1	2	4	4	1.5	
Vacuolization Cytoplasmic	2	2	1		1		2		2		1		1	1	1	2	2	1					
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
																					48		

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I ..Insufficient tissue
M ..Missing tissue
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BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:26
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 OPPM

DAY ON TEST	ANIMAL ID																				*TOTALS		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	2	2.5	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	9	1.9	
	5	5	5	5	5	5	5	5	5	6	6	6	4	4	3	3	3	2	5	4	5	1	2.0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45		
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	23	1.2	
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	41		
	9	9	3	3	3	3	3	3	3	5	7	7	7	7	8	8	8	9	0	0	1	2.0	
	8	9	0	1	2	3	4	5	6	4	5	6	7	8	9	0	1	2	9	0	3		
Bilateral, Hyperplasia															2			3			2	2.5	
Hyperplasia	2					3					2				1	2				2	9	1.9	
Hypertrophy	2																				1	2.0	
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	I	+	+	+	+	+	45		
Hyperplasia				1		2	1		1		1	1			1	1	1	2	1		23	1.2	
Parathyroid Gland	+	+	+	M	+	I	+	M	+	+	+	+	+	+	+	+	+	+	+	+	41		
Bilateral, Hyperplasia																					1	2.0	
Hyperplasia		2							2												3	1.7	
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49		
Autolysis																					1	4.0	
Pars Distalis, Cyst										X											3		
Pars Distalis, Cyst, Multiple																		X			2		
Pars Distalis, Hyperplasia		2	2		3	2	1			1	1	1	2	3				1	2	1	19	1.7	
Pars Intermed, Cyst											X										1		
Pars Intermed, Dysplasia				2																	1	2.0	
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	44		
Autolysis																					2	4.0	
C Cell, Hyperplasia	1	1				1		1	3			1	1	1					1		9	1.2	
Cyst, Squamous					X	X		X							X						6		
Infiltration Cellular, Lymphocyte															2						1	2.0	

General Body System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
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 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:27
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 OPPM**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	5	5	5	5	5	5	5	5	5	6	6	6	4	4	3	3	3	2	5	4	5
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	
	9	9	3	3	3	3	3	3	3	5	7	7	7	7	8	8	8	9	0	0	
	8	9	0	1	2	3	4	5	6	4	5	6	7	8	9	0	1	2	9	0	9
	*TOTALS																				

Genital System

Coagulating Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	44
Atrophy																					3 2.3
Autolysis																					2 4.0
Developmental Malformation																					1
Inflammation, Suppurative																					1 3.0
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49
Autolysis																					1 3.0
Degeneration								2					2							2	4 2.3
Hypospermia								4					4							4	4 4.0
Infiltration Cellular, Lymphocyte								1						1	1	1					5 1.2
Inflammation																					1 2.0
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	48
Abscess								4													1 4.0
Atrophy																					1 2.0
Autolysis																					4 2.5
Duct, Dilatation				3							4		3							2	4 3.0
Infiltration Cellular, Lymphocyte					2			1	1					2	1						19 1.5
Inflammation, Suppurative	3	2	4		3					3	4	1	4			2	1		4	1	17 2.9
Parenchym Cell, Degeneration	1						3				4	1		2				2			16 1.8
Prostate									+		+										6
Prostate, Dorsal Lobe	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	51

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 M ..Missing tissue
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 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
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Experiment Number: 99930-93
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:27
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 OPPM**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7											
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5											
	5	5	5	5	5	5	5	5	5	6	6	4	4	3	3	3	2	5	4	5	5											
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1											
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	0											
	9	9	3	3	3	3	3	3	3	5	7	7	7	7	8	8	8	9	0	0	0											
	8	9	0	1	2	3	4	5	6	4	5	6	7	8	9	0	1	2	9	0	9											
	*TOTALS																															
Autolysis																					5	3.2										
Cyst																					X	X	3									
Degeneration																					1	2.0										
Hyperplasia																					2	4.0										
Infiltration Cellular, Lymphocyte																					1	2	1	3	1.3							
Inflammation, Suppurative																					1	1	2	3	2	2	2	2	1	2	35	2.0
Prostate, Ventral Lobe	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+											
Autolysis																					3	4.0										
Degeneration	2	2																					1	2	2	10	1.9					
Hyperplasia																					3	1	2	1	7	2.0						
Infiltration Cellular, Lymphocyte																					2	1	1	1	8	1.1						
Infiltration Cellular, Plasma Cell																					1	3.0										
Inflammation, Suppurative																					1	5	2.4									
Rete Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+											
Dilatation																					1	2	1.0									
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+											
Atrophy																					3	4	2.8									
Autolysis																					2	4.0										
Degeneration																					2	2	2.0									
Dilatation																					3	1	3.0									
Inflammation, Suppurative																					2	2	3.0									
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+											
Autolysis																					3	4.0										

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 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
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Experiment Number: 99930-93
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:28
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 OPPM

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
ANIMAL ID	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7															
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5															
	5	5	5	5	5	5	5	5	5	6	6	6	4	4	3	3	3	2	5	4	5															
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1															
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2																
	9	9	3	3	3	3	3	3	3	5	7	7	7	7	8	8	8	9	0	0	0															
	8	9	0	1	2	3	4	5	6	4	5	6	7	8	9	0	1	2	9	0	9															
																					*TOTALS															
Inflammation, Granulomatous																					3	1	3.0													
Interstit Cell, Hyperplasia																						1	3.0													
Polyarteritis																						3	2.5													
Seminif Tub, Degeneration	1	1		4	4	1	4	1		1		4			1	3	1	1	1	4	23	1.9														
Hematopoietic System																																				
Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	48														
Autolysis																						2	4.0													
Erythroid Cell, Hyperplasia																						2	2.0													
Myeloid Cell, Hyperplasia																						6	2.8													
Lymph Node	+																		+	+	+	+	+	+	+	+	+	+	+	+	+	+	13			
Axillary, Hyperplasia, Lymphoid																						4	4.0													
Axillary, Infiltration Cellular, Plasma Cell																						4	4.0													
Inguinal, Autolysis																						1	4.0													
Lumbar, Congestion																						1	3.0													
Lumbar, Degeneration, Cystic	2																		4														4	3.5		
Lumbar, Hyperplasia, Lymphoid																						3	3.0													
Lumbar, Infiltration Cellular, Plasma Cell	4																		4	3	4	4												4	7	3.9
Mediastinal, Congestion																						1	3.0													
Mediastinal, Infiltration Cellular, Plasma Cell																						1	2.0													
Popliteal, Hyperplasia, Lymphoid																						1	3.0													
Renal, Congestion																						1	3.0													
Renal, Degeneration, Cystic																						4	3.3													

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Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

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CAS Number: 446-72-0

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Time Report Requested: 12:59:28

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male
F3 OPPM

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	5	5	5	5	5	5	5	5	5	6	6	6	4	4	3	3	3	2	5	4	5	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	0	
	9	9	3	3	3	3	3	3	3	5	7	7	7	7	8	8	8	9	0	0	0	
	8	9	0	1	2	3	4	5	6	4	5	6	7	8	9	0	1	2	9	0	9	
	*TOTALS																					
Renal, Infiltration Cellular, Plasma Cell																					2	3.5
Renal, Pigmentation																					1	2.0
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Autolysis																					1	4.0
Degeneration, Cystic																					2	2
Hyperplasia, Lymphoid	3	2			2				2	2	3		2							3		
Infiltration Cellular, Plasma Cell	3	2	3	4	4	3	1	3	4	3	2	3		2			3		3		4	
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Congestion																					1	3.0
Degeneration, Cystic																					4	4
Hyperplasia, Lymphoid	2								1			2		2								
Infiltration Cellular, Mast Cell																					2	2.0
Infiltration Cellular, Plasma Cell																					3	3
Inflammation, Granulomatous	1				2		2	2					2	2			1			1		
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Autolysis																					5	3.0
Capsule, Fibrosis																					1	2.0
Depletion Lymphoid																					1	4.0
Hematopoietic Cell Proliferation																					1	4
Hematopoietic Cell Proliferation Granulocytic																					1	4.0
Hyperplasia, Lymphoid																						1
Pigmentation		1	2		2							2		1		2	1	3	1			
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	
																					46	

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+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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BLANK ..Not examined microscopically

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Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:28

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male
F3 OPPM

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2		
	9	9	3	3	3	3	3	3	3	5	7	7	7	8	8	8	9	0	0	0		
	8	9	0	1	2	3	4	5	6	4	5	6	7	8	9	0	1	2	9	9		
																				*TOTALS		
Atrophy	4	4	4	4	4	4	4	4	4	4	3		4	4	4	4		4	4	4	41	3.9
Epithel Cell, Hyperplasia												4									1	4.0
Hemorrhage																					1	4.0
Hyperplasia, Lymphoid												4									1	4.0
Integumentary System																						
Mammary Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	39	
Alveolus, Hyperplasia					1							1									4	1.5
Degeneration	4	4					3		1	4					4	4	1	4			16	3.1
Infiltration Cellular, Lymphocyte																					1	1.0
Lactation																					2	2.0
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Cyst Epithelial Inclusion					X							X									2	
Epidermis, Hyperplasia				2											1	1					6	1.7
Hyperkeratosis				2											1	2					6	2.2
Inflammation, Chronic Active						3															3	2.0
Inflammation, Suppurative	3		4						4		4	3	4	4		4	4	4	4	4	21	3.8
Necrosis								3						2							2	2.5
Musculoskeletal System																						
Bone, Cranium												+									2	
Hemorrhage																					1	4.0
Hyperostosis												3									1	3.0
Bone, Femur	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:29
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 0PPM

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7				
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5				
	5	5	5	5	5	5	5	5	5	6	6	6	4	4	3	3	2	5	4	5				
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1				
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2				
	9	9	3	3	3	3	3	3	3	5	7	7	7	7	8	8	8	9	0	0				
	8	9	0	1	2	3	4	5	6	4	5	6	7	8	9	0	1	2	9	0				
	*TOTALS																							
Skeletal Muscle																				1				
Nervous System																								
Brain, Brain Stem	+																			46				
Compression																				6	2.3			
Hemorrhage																				1	2.0			
Brain, Cerebellum	+																			46				
Hydrocephalus	2																			2	2.0			
Brain, Cerebrum	+																			45				
Developmental Malformation	X																			1				
Hemorrhage																				1	2.0			
Hydrocephalus	3																			3	2.0			
Respiratory System																								
Lung	+																			48				
Alveolar Epith, Hyperplasia	2																			3	2	4	2.0	
Artery, Mineralization																				3	1.3			
Autolysis																				4	3.0			
Infiltration Cellular, Histiocyte	2 1																			1	1	2	14	1.5
Inflammation, Chronic																				3	1	3.0		
Mediastinum, Bacterium																				1	4.0			
Mediastinum, Foreign Body																				1				
Mediastinum, Hemorrhage																				1	4.0			
Mediastinum, Inflammation, Suppurative																				1	4.0			

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:29

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male
F3 OPPM

DAY ON TEST	ANIMAL ID																				*TOTALS		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	1	4.0	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3	1.0	
	5	5	5	5	5	5	5	5	5	6	6	6	4	4	3	3	3	2	5	4	5	1	2.0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46		
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3.0	
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3.0	
	9	9	3	3	3	3	3	3	3	3	5	7	7	7	7	8	8	8	9	0	7	2.9	
	8	9	0	1	2	3	4	5	6	4	5	6	7	8	9	0	1	2	9	0	45		
Mediastinum, Necrosis																					1	4.0	
Metaplasia, Osseous																1					1	1.0	
Thrombosis																					1	2.0	
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	46		
Autolysis																					1	3.0	
Goblet Cell, Hyperplasia																					1	2.0	
Hyperkeratosis																	2				2	3.0	
Inflammation, Chronic																					1	1.0	
Inflammation, Chronic Active																					2	1.5	
Inflammation, Suppurative			2									2									7	2.9	
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	45		
Special Senses System																							
Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	37		
Bilateral, Retina, Atrophy	1	2								2											12	2.3	
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	38		
Infiltration Cellular, Lymphocyte				1	1						1				1				1		6	1.2	
Urinary System																							
Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	46		
Accumulation, Hyaline Droplet																					2	2.5	
Autolysis																					3	2.7	
Capsule, Fibrosis																					1	1.0	
Cortex, Cyst	X				X	X						X	X	X	X	X			X	X	23		

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:30

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Male
F3 OPPM**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
	5	5	5	5	5	5	5	5	5	5	6	6	6	4	4	3	3	3	2	5	4	5	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2		
	9	9	3	3	3	3	3	3	3	5	7	7	7	7	7	8	8	8	9	0	0		
	8	9	0	1	2	3	4	5	6	4	5	6	7	8	9	0	1	2	9	0	9		
																					*TOTALS		
Infiltration Cellular, Lymphocyte																					1 1.0		
Nephropathy, Chronic	2	1	1	2	1	1	2	2	1	2	3	2	1	2	4	3	3	1	2		2	39 1.9	
Pelvis, Dilatation																					2 2.0		
Pelvis, Hyperplasia																					3 2.0		
Pelvis, Inflammation, Suppurative																					1 4.0		
Polycystic Kidney																					4 4.0		
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	45	
Dilatation																					4 4.0		
Hemorrhage																					1 2.0		
Inflammation, Suppurative																					1 1.0		
Transit Epithe, Hyperplasia																					1 2.0		

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:31
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 5PPM TO CTL

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	2	5	5	5	5	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	8	9	2	7	8	9	1	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	4	5	2	0	7	3	7	4	1	1	1	1	1	1	1	1	1	2	2	2	1	5	5	4	4	4	4	4	4	

Hematopoietic Cell Proliferation																													
Hepatodiaphragmatic Nodule																													
Infiltration Cellular, Lymphocyte																													
Inflammation, Chronic Active																													
Tension Lipidosis																													
Vacuolization Cytoplasmic																													
Mesentery																													
Fat, Necrosis																													
Pancreas	+	+	+	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Acinar Cell, Degeneration																													
Autolysis																													
Polyarteritis																													
Salivary Glands	+	+	+	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Hyperplasia																													
Mineralization																													
Stomach, Forestomach	+	A	+	A	A	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Stomach, Glandular	+	A	A	A	A	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cardiovascular System																													
Blood Vessel	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Heart	+	+	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Autolysis																													
Cardiomyopathy																													

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:31
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 5PPM TO CTL**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	2	5	5	5	5	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	8	9	2	7	8	9	1	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
	4	5	2	0	7	3	7	4	1	1	1	1	1	1	1	2	2	2	1	5	5	4	4	4	4	5	4	4	4	4		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	
	0	0	1	2	2	2	3	5	9	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	
	2	5	7	2	7	8	1	6	7	7	7	7	7	8	8	8	9	9	9	9	4	4	5	5	5	5	7	7	7	7	7	
	0	9	7	7	2	2	2	0	5	6	7	8	9	0	1	2	2	3	4	5	8	9	0	1	2	3	3	4	5	6	7	

Congestion	4																													
Endocardium, Hyperplasia	1																													
Metaplasia, Osseous																														
Mineralization	1																													
Endocrine System																														
Adrenal Cortex	+	+	+	A	+	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Accessory Adrenal Cortical Nodule	X																													
Degeneration, Cystic																														
Hyperplasia	2																													
Hypertrophy	4																													
Vacuolization Cytoplasmic	2 1 1 1 2 2 1 2 1 2 1 2 2 1																													
Adrenal Medulla	+	+	+	A	+	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Degeneration, Cystic																														
Hyperplasia	2																													
Islets, Pancreatic	+	+	+	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Autolysis	3																													
Hyperplasia	2 1 1 1 1 1 1 1 1 1 2 1 1 1 3																													
Parathyroid Gland	M	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+
Bilateral, Hyperplasia																														
Hyperplasia	2																													
Pituitary Gland	+	+	+	A	+	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pars Distalis, Cyst	X																													

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 12:59:32

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

CD Rat Male F3 5PPM TO CTL	DAY ON TEST																												
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	2	5	5	5	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	8	9	2	7	8	9	1	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	5	2	0	7	3	7	4	1	1	1	1	1	1	1	2	2	2	1	5	5	4	4	4	4	5	4	4	4
Pars Distalis, Hyperplasia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thyroid Gland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
C Cell, Hyperplasia	0	0	1	2	2	2	3	5	9	9	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0
Cyst, Squamous	2	5	7	2	7	8	1	6	7	7	7	7	7	8	8	8	8	9	9	9	4	4	5	5	5	5	7	7	7
General Body System	0	9	7	7	2	2	2	0	5	6	7	8	9							2	2	2	4		2		2		
Tissue NOS										2	3	1									2	2	2	4		2		2	
Genital System																													
Coagulating Gland																													
Atrophy																													
Developmental Malformation																													
Epididymis																													
Atrophy																													
Autolysis																													
Degeneration																													
Hypospermia																													
Infiltration Cellular, Lymphocyte																													
Preputial Gland																													
Autolysis																													
Duct, Dilatation																													
Infiltration Cellular, Lymphocyte																													
Inflammation, Chronic Active																													
Inflammation, Suppurative																													

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically M ..Missing tissue 1-4 ..Lesion qualified as:
X ..Lesion present A ..Autolysis precludes evaluation 1) Minimal 3) Moderate
I ..Insufficient tissue BLANK ..Not examined microscopically 2) Mild 4) Marked

Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 12:59:32

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

CD Rat Male F3 5PPM TO CTL	DAY ON TEST																												
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parenchym Cell, Degeneration					2					1					1			1											
Prostate	+				A	A		A																					
Prostate, Dorsal Lobe	+	+	+		A	A	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Autolysis				3						4																			
Cyst																													
Inflammation, Suppurative					2				1		2	1	1	3	2	3	2	1	1										
Polyarteritis				2																									
Prostate, Ventral Lobe	+	+		A	A	A	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Autolysis											4																		
Degeneration																													
Hyperplasia														2															
Infiltration Cellular, Lymphocyte																													
Inflammation, Suppurative																													
Rete Testes	+	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Dilatation																													
Fibrosis																													
Seminal Vesicle	+	A	A	A	A	A	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Atrophy																													
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Autolysis																													
Polyarteritis																													
Seminif Tub, Degeneration																													

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Test Compound: Endocrine disruptor (Genistein)
CAS Number: 446-72-0

Date Report Requested: 10/17/2014
Time Report Requested: 12:59:33
First Dose M/F: NA / NA
Lab: NCTR

CD Rat Male
F3 5PPM TO CTL

DAY ON TEST	0																															
	0	2	5	5	5	5	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	8	9	2	7	8	9	1	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	5	2	0	7	3	7	4	1	1	1	1	1	1	1	1	2	2	2	1	5	5	4	4	4	4	5	4	4	4	4	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	1	2	2	2	3	5	9	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	
	2	5	7	2	7	8	1	6	7	7	7	7	8	8	8	9	9	9	9	4	4	5	5	5	5	5	7	7	7	7	7	
	0	9	7	7	2	2	2	0	5	6	7	8	9	0	1	2	2	3	4	5	8	9	0	1	2	3	3	4	5	6	7	7

Hematopoietic System

Bone Marrow	+ + + A A +																												
Autolysis	2																												
Erythroid Cell, Hyperplasia																													
Myeloid Cell, Hyperplasia	3 3																												
Lymph Node	+ + +																												
Lumbar, Degeneration, Cystic	2																												
Lumbar, Hyperplasia, Lymphoid	3																												
Lumbar, Infiltration Cellular, Plasma Cell	4																												
Mediastinal, Degeneration, Cystic																													
Popliteal, Degeneration, Cystic	2																												
Popliteal, Hyperplasia, Lymphoid	4																												
Popliteal, Infiltration Cellular, Plasma Cell	4																												
Renal, Degeneration, Cystic	4 2																												
Renal, Hemorrhage	3																												
Renal, Hyperplasia, Lymphoid	2																												
Renal, Infiltration Cellular, Plasma Cell	4																												
Renal, Inflammation, Suppurative																													
Renal, Necrosis																													
Lymph Node, Mandibular	+ + + A A +																												
Autolysis	3																												
Degeneration, Cystic	2 3 2																												

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- + ..Tissue examined microscopically
- X ..Lesion present
- I ..Insufficient tissue

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Time Report Requested: 12:59:33

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

CD Rat Male F3 5PPM TO CTL	DAY ON TEST																												
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	2	5	5	5	5	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	8	9	2	7	8	9	1	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	5	2	0	7	3	7	4	1	1	1	1	1	1	1	1	1	2	2	2	1	5	5	4	4	4	4	4	4
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	0	0	1	2	2	2	3	5	9	9	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0
	2	5	7	2	7	8	1	6	7	7	7	7	8	8	8	8	9	9	9	9	4	4	5	5	5	5	5	5	5
	0	9	7	7	2	2	2	0	5	6	7	8	9	9	9	9	3	4	5	8	9	0	1	2	3	3	3	3	3
Hyperplasia, Lymphoid	2					2							3	1						2			2		3			4	2
Infiltration Cellular, Plasma Cell		2				4	3	4	4	3	3		4	3					2	2			2		4		2		3
Lymph Node, Mesenteric	+	+	+	A	A	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Autolysis		2																											
Hyperplasia, Lymphoid	1																		2			2				2		2	2
Infiltration Cellular, Plasma Cell																													
Inflammation, Granulomatous		1	2			1							2		1	2				1	3			1	1		1	3	
Spleen	+	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Autolysis		2			4	3		2																					
Capsule, Degeneration, Cystic																													
Capsule, Fibrosis																													
Congestion															4														
Hematopoietic Cell Proliferation						1							1						1				2				2		
Hyperplasia, Lymphoid	2																												
Hyperplasia, Stromal																						2		2					
Pigmentation		3			4	2	2	4		3	3		3					2	2	2			2	2	3		2		2
Red Pulp, Hyperplasia																								4					
Thymus	+	A	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Atrophy			4			4	4	4	4	3	4		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Autolysis						4																							
Epithel Cell, Hyperplasia															2														

Integumentary System

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M ..Missing tissue
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BLANK ..Not examined microscopically
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1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 99930-93
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 Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:34
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 5PPM TO CTL

	DAY ON TEST																												
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	2	5	5	5	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	8	9	2	7	8	9	1	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	5	2	0	7	3	7	4	1	1	1	1	1	1	1	1	2	2	2	1	5	5	4	4	4	4	5	4	4
Mammary Gland	I	A	I	I	A	+	A	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Alveolus, Hyperplasia																													
Degeneration																													
Duct, Dilatation																													
Fibrosis																													
Lactation																													
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Cyst Epithelial Inclusion																													
Epidermis, Hyperplasia																													
Hyperkeratosis																													
Inflammation, Chronic Active																													
Inflammation, Suppurative																													
Musculoskeletal System																													
Bone, Femur	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Nervous System																													
Brain, Brain Stem	+	+	A	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Autolysis																													
Compression																													
Brain, Cerebellum	+	+	A	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Autolysis																													
Brain, Cerebrum	+	+	A	A	A	+	+	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Autolysis																													

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Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 12:59:34

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

DAY ON TEST	ANIMAL ID																												
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CD Rat Male	0	2	5	5	5	5	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
F3 5PPM TO CTL	8	9	2	7	8	9	1	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	5	2	0	7	3	7	4	1	1	1	1	1	1	1	1	1	2	2	1	5	5	4	4	4	4	4	4	4

Gliosis	2																											
Infiltration Cellular, Lymphocyte	2																											

Respiratory System

Lung	+ A A + A +																											
Alveolar Epith, Hyperplasia	4 1 1																											
Artery, Mineralization	1 1 1																											
Autolysis	2																											
Congestion																												
Infiltration Cellular, Histiocyte	2 1 3 2 2 2 1																											
Infiltration Cellular, Lymphocyte	1																											
Inflammation, Chronic	2																											
Metaplasia, Osseous	1 1 1																											
Nose	+ + A A A + A A +																											
Inflammation, Suppurative	2 1																											
Trachea	+ A A A A + A A +																											

Special Senses System

Eye	A A +																											
Autolysis	4																											
Bilateral, Retina, Atrophy	2 2 2 1 1 1 2 2 2 2																											
Cornea, Hyperplasia	3																											
Retina, Atrophy	2 2																											
Harderian Gland	+ +																											

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CD Rat Male F3 5PPM TO CTL	DAY ON TEST																														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	0	2	5	5	5	5	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7			
ANIMAL ID	8	9	2	7	8	9	1	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5			
	4	5	2	0	7	3	7	4	1	1	1	1	1	1	1	1	2	2	2	1	5	5	4	4	4	4	4	4			
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1		
	0	0	1	2	2	2	3	5	9	9	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0		
	2	5	7	2	7	8	1	6	7	7	7	7	8	8	8	9	9	9	9	4	4	5	5	5	5	7	7	7	7		
	0	9	7	7	2	2	2	0	5	6	7	8	9	0	1	2	2	3	4	5	8	9	0	1	2	3	3	4	5	6	7
Autolysis	3																														
Degeneration																															
Epithelium, Hyperplasia	2																														
Hyperplasia																															
Infiltration Cellular, Lymphocyte	1																														
Lacrimal Gland	+																														
Ectopic Harderian	X																														
Urinary System																															
Kidney	+ A +																														
Autolysis	3 4 4 3 4																														
Capsule, Fatty Change	X X																														
Cortex, Cyst	X X																														
Infiltration Cellular, Lymphocyte	1																														
Medulla, Cyst																															
Nephropathy, Chronic	1 2 2 3 2 1 1 2 2 4 2 2 1 1 1 3 1 2 2 2 2 1 2 1 3 3 4 2																														
Pelvis, Dilatation																															
Pelvis, Hyperplasia	2																														
Pelvis, Mineralization	2																														
Renal Tubule, Inflammation, Suppurative	2																														
Urethra																															
Urinary Bladder	+ A + A A A + A + + + + + + + M + + + + + + + + + + + + + + + + + +																														

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CD Rat Male
F3 5PPM TO CTL

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	5	5	5	5	5	4	4	5	4	5	4	4	4	1	1	0	0	1
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
	7	0	3	3	3	4	4	4	8	8	0	0	0	0	0	0	0	1	1
	8	0	7	8	9	0	1	2	3	4	1	2	3	4	5	6	7	8	2
	*TOTALS																		

Alimentary System

Esophagus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Dilatation																					1 2.0
Hyperkeratosis																					1 2.0
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	43	
Polyarteritis																					1 3.0
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	43	
Polyarteritis																					1 3.0
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	42	
Polyarteritis									4												1 4.0
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	43	
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	42	
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	43	
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	47	
Angiectasis	1														4						4 2.3
Autolysis																					2 2.0
Basophilic Focus	X																	X			4
Bile Duct, Hyperplasia				1			1				1				1				1		10 1.2
Biliar Tract, Fibrosis															1						2 1.0
Degeneration, Cystic							1			2											6 1.5
Eosinophilic Focus																					2
Eosinophilic Focus, Multiple																					2

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F3 5PPM TO CTL

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	5	5	5	5	5	4	4	5	4	5	4	4	4	1	1	0	0	1
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
	7	0	3	3	3	4	4	4	8	8	0	0	0	0	0	0	0	1	1
	8	0	7	8	9	0	1	2	3	4	1	2	3	4	5	6	7	8	2

***TOTALS**

Hematopoietic Cell Proliferation																				1	1.0
Hepatodiaphragmatic Nodule																				2	
Infiltration Cellular, Lymphocyte			1																	2	1.5
Inflammation, Chronic Active	1		1		1	1				1	1			1					10	1.0	
Tension Lipidosis																			2	2.5	
Vacuolization Cytoplasmic																			1	1.0	
Mesentery							+												1		
Fat, Necrosis							4												1	4.0	
Pancreas	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	47		
Acinar Cell, Degeneration	3	1	2	3	2	2	1	1		4	2	2	2	4	2	4	3	2	2	38	2.1
Autolysis																			1	3.0	
Polyarteritis																			1	4.0	
Salivary Glands	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	47		
Hyperplasia								2											1	2.0	
Mineralization							2												1	2.0	
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	45		
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	43		
Cardiovascular System																					
Blood Vessel	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50		
Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	48		
Autolysis																			1	2.0	
Cardiomyopathy	1	1	1	1	2	1		1		3	2		2	2			1	1	2	31	1.5

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CD Rat Male
F3 5PPM TO CTL

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	5	5	5	5	5	4	4	5	4	5	4	4	4	1	1	0	0	1
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
	7	0	3	3	3	4	4	4	8	8	0	0	0	0	0	0	0	0	1
	8	0	7	8	9	0	1	2	3	4	1	2	3	4	5	6	7	8	2

***TOTALS**

Congestion	1	4.0
Endocardium, Hyperplasia	1	1.0
Metaplasia, Osseous	2	1 2.0
Mineralization	1	1.0

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	47	
Accessory Adrenal Cortical Nodule							X													4	
Degeneration, Cystic	4		1					2					1							7	2.3
Hyperplasia																				2	1.5
Hypertrophy										2		2								5	2.4
Vacuolization Cytoplasmic				2				1	2		2	2	2	2	2	2	2	1	2	26	1.7
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	46	
Degeneration, Cystic								2												1	2.0
Hyperplasia			4	1				1						1					3	9	2.0
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Autolysis																				1	3.0
Hyperplasia	1			1		3		1		2			2		3			1	1	23	1.4
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	M	+	+	+	+	+	46	
Bilateral, Hyperplasia	2														2					3	2.0
Hyperplasia						2														3	2.0
Pituitary Gland	+	+	+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	46	
Pars Distalis, Cyst												X			X					5	

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:36
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 5PPM TO CTL

	DAY ON TEST																		*TOTALS	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ANIMAL ID	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	4	5	5	5	5	5	4	4	5	4	4	4	4	1	1	0	0	1	1	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	
	7	0	3	3	3	4	4	4	8	8	0	0	0	0	0	0	0	0	1	
	8	0	7	8	9	0	1	2	3	4	1	2	3	4	5	6	7	8	2	
Pars Distalis, Hyperplasia						3			1	3				3	4		2	2	16	2.4
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	46	
C Cell, Hyperplasia	2																	1	5	1.4
Cyst, Squamous									X						X				4	
General Body System																				
Tissue NOS									+										1	
Genital System																				
Coagulating Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	43	
Atrophy																			1	2.0
Developmental Malformation									X								X		2	
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	48	
Atrophy		2																	2	2.0
Autolysis																			1	4.0
Degeneration				2						3							3		5	2.0
Hypospermia		4		4						4							4		10	3.8
Infiltration Cellular, Lymphocyte								1									1		6	1.2
Preputial Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	48	
Autolysis																			1	4.0
Duct, Dilatation														2					7	3.1
Infiltration Cellular, Lymphocyte	2	2			1					1			2			1	1	1	20	1.3
Inflammation, Chronic Active																			1	2.0
Inflammation, Suppurative			2			1	2		2	2			2		3	2			16	2.1

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:36
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 5PPM TO CTL

	DAY ON TEST																		*TOTALS	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ANIMAL ID	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
	4	5	5	5	5	5	4	4	5	4	5	4	4	4	1	1	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2		
	7	0	3	3	3	4	4	4	8	8	0	0	0	0	0	0	0	1		
	8	0	7	8	9	0	1	2	3	4	1	2	3	4	5	6	7	8		
Parenchym Cell, Degeneration	1					2			1						1	1	1	2		
Prostate	+																	8		
Prostate, Dorsal Lobe	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	47		
Autolysis																		2 3.5		
Cyst															X			1		
Inflammation, Suppurative		3	1	1	2	2	3	1	1	1	1	2	3	2	3	2	1	1	3	
Polyarteritis																			1 2.0	
Prostate, Ventral Lobe	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	46	
Autolysis																			1 4.0	
Degeneration		2								2	1								4 2.0	
Hyperplasia			2									2			3				5 2.2	
Infiltration Cellular, Lymphocyte								2				1							6 1.2	
Inflammation, Suppurative		1					2												4 1.5	
Rete Testes	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	+	48	
Dilatation										2					2				7 2.3	
Fibrosis																			2 2.5	
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	43	
Atrophy			2																3 2.3	
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	50	
Autolysis																			2 3.5	
Polyarteritis										2									3 2.7	
Seminif Tub, Degeneration		4		4	4	1	1		1	4	1			1	1		4	1	26 2.6	

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 + ..Tissue examined microscopically
 X ..Lesion present
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 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:36
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 5PPM TO CTL

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	5	5	5	5	5	4	4	5	4	5	4	4	4	1	1	0	0	1
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
	7	0	3	3	3	4	4	4	8	8	0	0	0	0	0	0	0	1	1
	8	0	7	8	9	0	1	2	3	4	1	2	3	4	5	6	7	8	2
	*TOTALS																		

Hematopoietic System

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	48	
Autolysis																				1	2.0
Erythroid Cell, Hyperplasia										2										1	2.0
Myeloid Cell, Hyperplasia										1										3	2.3
Lymph Node	+	+	+				+						+							9	
Lumbar, Degeneration, Cystic	3	3	4																	5	3.2
Lumbar, Hyperplasia, Lymphoid																				2	3.0
Lumbar, Infiltration Cellular, Plasma Cell	3	4	4				4													6	3.8
Mediastinal, Degeneration, Cystic	4																			1	4.0
Popliteal, Degeneration, Cystic																				1	2.0
Popliteal, Hyperplasia, Lymphoid																				1	4.0
Popliteal, Infiltration Cellular, Plasma Cell																				1	4.0
Renal, Degeneration, Cystic													4							4	3.5
Renal, Hemorrhage																				1	3.0
Renal, Hyperplasia, Lymphoid																				2	2.0
Renal, Infiltration Cellular, Plasma Cell														3						3	3.7
Renal, Inflammation, Suppurative														2						1	2.0
Renal, Necrosis														2						1	2.0
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	48	
Autolysis																				1	3.0
Degeneration, Cystic	2																	2	2	7	2.1

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:37
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 5PPM TO CTL**

	DAY ON TEST																			
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ANIMAL ID	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	4	5	5	5	5	5	4	4	5	4	4	4	4	1	1	0	0	1	1	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	
	7	0	3	3	3	4	4	4	8	8	0	0	0	0	0	0	0	0	1	
	8	0	7	8	9	0	1	2	3	4	1	2	3	4	5	6	7	8	2	
																			*TOTALS	
Hyperplasia, Lymphoid	2	3				2			3								3		14	
Infiltration Cellular, Plasma Cell	3	3	2		3	2	2	3	3	2		2				2	4	2	4	
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	46	
Autolysis																			1	
Hyperplasia, Lymphoid																			6	
Infiltration Cellular, Plasma Cell					3														1	
Inflammation, Granulomatous		1			2	1	2	1	2	1				1	1				21	
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49	
Autolysis																			4	
Capsule, Degeneration, Cystic																2			1	
Capsule, Fibrosis								2											1	
Congestion																			1	
Hematopoietic Cell Proliferation				1					1										7	
Hyperplasia, Lymphoid																			1	
Hyperplasia, Stromal																			2	
Pigmentation	2					2	2	2			2	2	2	2	1			2	27	
Red Pulp, Hyperplasia																			1	
Thymus	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	+	+	M	45	
Atrophy	4	4	4		4	3	4	4	4	4	4	4	4	4	4	3	4	4	43	
Autolysis																			1	
Epithel Cell, Hyperplasia																			1	

Integumentary System

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:37
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 5PPM TO CTL**

	DAY ON TEST																											
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
ANIMAL ID	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7								
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5								
	4	5	5	5	5	5	4	4	5	4	5	4	4	4	1	1	0	0	1									
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1								
	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2								
	7	0	3	3	3	4	4	4	8	8	0	0	0	0	0	0	0	0	0	1								
	8	0	7	8	9	0	1	2	3	4	1	2	3	4	5	6	7	8	2									
																					*TOTALS							
Mammary Gland	+																			43								
Alveolus, Hyperplasia	1																				5	1.2						
Degeneration		4	1	2	4															2	3	4	2	3	4	4	24	3.1
Duct, Dilatation																				1	3.0							
Fibrosis																				4	1	4.0						
Lactation																				1	2.0							
Skin	+																				50							
Cyst Epithelial Inclusion																				1								
Epidermis, Hyperplasia																				3	2	3.0						
Hyperkeratosis																				3	2	3.5						
Inflammation, Chronic Active					2															1	2.0							
Inflammation, Suppurative	4	4	4				4								4	4	4	4	3	22	3.8							
Musculoskeletal System																												
Bone, Femur	+																				50							
Nervous System																												
Brain, Brain Stem	+																				46							
Autolysis																				1	2.0							
Compression																				1	2.0							
Brain, Cerebellum	+																				46							
Autolysis																				1	2.0							
Brain, Cerebrum	+																				46							
Autolysis																				1	2.0							

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:37
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 5PPM TO CTL**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	5	5	5	5	5	4	4	5	4	5	4	4	4	1	1	0	0	1
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
	7	0	3	3	3	4	4	4	8	8	0	0	0	0	0	0	0	0	1
	8	0	7	8	9	0	1	2	3	4	1	2	3	4	5	6	7	8	2
	*TOTALS																		

Gliosis 1 2.0
 Infiltration Cellular, Lymphocyte 1 2.0

Respiratory System

Lung + + + + + + + + + + + + + + + + + 47
 Alveolar Epith, Hyperplasia 3 2.0
 Artery, Mineralization 1 1 5 1.0
 Autolysis 1 2.0
 Congestion 3 1 3.0
 Infiltration Cellular, Histiocyte 1 1 12 1.6
 Infiltration Cellular, Lymphocyte 1 1.0
 Inflammation, Chronic 1 2.0
 Metaplasia, Osseous 1 1 5 1.0
 Nose + + + + + + + + + + + + + + + + + 45
 Inflammation, Suppurative 2 1.5
 Trachea + + + + + + + + + + + + + + + + + 44

Special Senses System

Eye + + + + + + + + + + + + + + + + + 43
 Autolysis 1 4.0
 Bilateral, Retina, Atrophy 1 11 1.6
 Cornea, Hyperplasia 2 2.5
 Retina, Atrophy 2 2.0
 Harderian Gland + + + + + + + + + + + + + + + + + 43

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically M ..Missing tissue 1-4 ..Lesion qualified as:
 X ..Lesion present A ..Autolysis precludes evaluation 1) Minimal 3) Moderate
 I ..Insufficient tissue BLANK ..Not examined microscopically 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:38
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 5PPM TO CTL

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	4	5	5	5	5	5	4	4	5	4	5	4	4	4	1	1	0	0	1
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
	7	0	3	3	3	4	4	4	8	8	0	0	0	0	0	0	0	1	1
	8	0	7	8	9	0	1	2	3	4	1	2	3	4	5	6	7	8	2
	*TOTALS																		

Autolysis																				1	3.0																																			
Degeneration																				1	1.0																																			
Epithelium, Hyperplasia																				1	2.0																																			
Hyperplasia																				2	2.0																																			
Infiltration Cellular, Lymphocyte																				2	1.5																																			
Lacrimal Gland																				+	2																																			
Ectopic Harderian																				X	2																																			
Urinary System																																																								
Kidney																				+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	49																			
Autolysis																																					5	3.6																		
Capsule, Fatty Change																																					3																			
Cortex, Cyst																																					X	X	X	X	X	X	X	X	X	X	31									
Infiltration Cellular, Lymphocyte																																						1	1.0																	
Medulla, Cyst																																						X	1																	
Nephropathy, Chronic																																						2	1	1	1	3	2	1	2	1	1	46	1.8							
Pelvis, Dilatation																																						3	1	3.0																
Pelvis, Hyperplasia																																						1	2.0																	
Pelvis, Mineralization																																						1	2.0																	
Renal Tubule, Inflammation, Suppurative																																						1	2.0																	
Urethra																																						2																		
Urinary Bladder																																						+	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	+	43	

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 12:59:38

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

CD Rat Male
F3 100PPM TO CTL

Table with columns for DAY ON TEST and ANIMAL ID, and rows of numerical data representing counts for each animal.

Alimentary System

Table with rows for various tissues (Esophagus, Intestine, Liver, etc.) and columns of data representing lesion counts and grades (A, M, X, I, BLANK).

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
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Experiment Number: 99930-93
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:39
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male F3 100PPM TO CTL	DAY ON TEST																												
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hemorrhage	0	3	5	5	5	5	5	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Hepatodiaphragmatic Nodule	5	3	2	4	5	5	7	9	4	5	6	6	8	8	0	1	3	5	5	5	5	5	5	5	5	5	5	5	5
Inflammation, Chronic Active	1	8	7	4	0	5	0	3	5	9	6	5	1	0	2	5	7	1	1	1	2	1	1	1	1	1	1	1	1
Mixed Cell Focus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Necrosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tension Lipidosis	0	0	1	2	2	2	2	2	3	3	4	4	4	4	7	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Vacuolization Cytoplasmic	1	8	8	0	0	1	2	7	6	8	0	0	3	4	8	3	4	8	8	8	9	9	9	9	9	9	9	9	9
Pancreas	6	9	8	3	7	4	8	9	7	6	2	3	7	0	1	4	6	3	4	5	6	7	8	9	0	0	0	0	0
Acinar Cell, Degeneration																													
Salivary Glands																													
Stomach, Forestomach																													
Stomach, Glandular																													
Tongue																													
Cardiovascular System																													
Blood Vessel																													
Heart																													
Cardiomyopathy																													
Mineralization																													
Endocrine System																													
Adrenal Cortex																													
Accessory Adrenal Cortical Nodule																													
Angiectasis																													

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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Experiment Number: 99930-93
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)
CAS Number: 446-72-0

Date Report Requested: 10/17/2014
Time Report Requested: 12:59:40
First Dose M/F: NA / NA
Lab: NCTR

CD Rat Male
F3 100PPM TO CTL

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	3	5	5	5	5	5	5	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
	5	3	2	4	5	5	7	9	4	5	6	6	8	8	0	1	3	5	5	5	5	5	5	5	5	5	5	5	5		
	1	8	7	4	0	5	0	3	5	9	6	5	1	0	2	5	7	1	1	1	2	1	1	1	1	1	1	1	1		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	1	2	2	2	2	2	3	3	4	4	4	4	7	9	9	9	9	9	9	9	9	9	9	9	9	9	9		
	1	8	8	0	0	1	2	7	6	8	0	0	3	4	8	3	4	8	8	8	9	9	9	9	9	9	9	9	9		
	6	9	8	3	7	4	8	9	7	6	2	3	7	0	1	4	6	3	4	5	6	7	8	9	0	1	2	3	4	5	6

Cyst, Squamous

X

Follicular Cel, Hyperplasia

Infiltration Cellular, Lymphocyte

General Body System

NONE

Genital System

Coagulating Gland

M + + + A +

Degeneration

2

Developmental Malformation

X

Fibrosis

Inflammation, Chronic

Epididymis

+ +

Degeneration

3 4 2 2 1 1

Hypospermia

4 4 2 2 4 4 4 4 4

Infiltration Cellular, Lymphocyte

1 1 1

Preputial Gland

M + M +

Abscess

4

Duct, Dilatation

4

Infiltration Cellular, Lymphocyte

1 1 2 4 1 2 4 1 2 2 1 1 4

Inflammation, Suppurative

4

Parenchym Cell, Degeneration

1 1 3 1 2 3

Prostate

M + + +

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

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Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:40

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male
F3 100PPM TO CTL

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ANIMAL ID | 0 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 1 | 8 | 2 | 4 | 5 | 5 | 7 | 9 | 4 | 5 | 6 | 6 | 8 | 8 | 0 | 1 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Prostate, Dorsal Lobe | M | + | + | + | + | + | | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | 3 | 2 | 3 | 1 | | 2 | | | | 1 | 4 | | 4 | 2 | 3 | 2 | | 2 | 2 | 3 | 1 | | 2 | 1 | 1 | | 3 |
| Prostate, Ventral Lobe | M | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Autolysis | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration | | | | | 2 | | | | 2 | | | | 3 | | 3 | | | 2 | | | | | | | 2 | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | 3 | 4 | 1 | | | | | | 4 | | | | | | |
| Infiltration Cellular, Lymphocyte | | | | 2 | | 2 | | | | 1 | | | | | | 1 | | | 1 | 1 | 1 | | | | | 1 | 1 | | 1 | 1 |
| Inflammation, Chronic | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | 1 | | | | | | 1 | | | | | 4 | 1 | | | | | | | | | | | | | | | |
| Rete Testes | M | + | + | + | M | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Dilatation | | | | | | | | | | | | | | | | 3 | | 2 | | | | | | | | | | | | |
| Fibrosis | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | 2 |
| Seminal Vesicle | M | A | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | | 3 | | | | | | | 3 | | 1 | | | | | | | | | 2 | | | | | | |
| Autolysis | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | |
| Dilatation | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | 4 |
| Hyperplasia | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | |
| Testes | A | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Edema | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
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BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
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Experiment Number: 99930-93
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)
CAS Number: 446-72-0

Date Report Requested: 10/17/2014
Time Report Requested: 12:59:41
First Dose M/F: NA / NA
Lab: NCTR

CD Rat Male
F3 100PPM TO CTL

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 3 | 2 | 4 | 5 | 5 | 7 | 9 | 4 | 5 | 6 | 6 | 8 | 8 | 0 | 1 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 1 | 8 | 7 | 4 | 0 | 5 | 0 | 3 | 5 | 9 | 6 | 5 | 1 | 0 | 2 | 5 | 7 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 7 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 8 | 8 | 0 | 0 | 1 | 2 | 7 | 6 | 8 | 0 | 0 | 3 | 4 | 8 | 3 | 4 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | |
| | 6 | 9 | 8 | 3 | 7 | 4 | 8 | 9 | 7 | 6 | 2 | 3 | 7 | 0 | 1 | 4 | 6 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|--|--|---|---|---|--|--|--|--|---|--|--|--|--|---|---|---|---|--|--|---|---|---|--|--|---|---|---|--|--|---|---|---|---|---|
| Fibrosis | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyarteritis | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | |
| Seminif Tub, Degeneration | | | | 1 | 1 | 3 | | | | | 4 | | | | | 1 | 2 | 4 | 4 | | | 4 | 2 | 1 | | | 4 | 4 | 1 | | | 4 | 3 | 1 | 4 | 2 |

Hematopoietic System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Erythroid Cell, Hyperplasia | | | | 3 | 4 | | | | 3 | 4 | | | | 2 | | | | | | | | | | | | | | | |
| Hypocellularity | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | | |
| Myeloid Cell, Hyperplasia | | | | 3 | | | | | | | | | | | | 2 | 2 | | | 4 | 3 | | | 3 | | | | | |
| Lymph Node | | | | | | | | | | | + | | | + | + | + | | | + | + | + | + | + | | | | | | + |
| Inguinal, Degeneration, Cystic | | | | | | | | | | | | | 4 | | | | | | | | | | | | | | | | |
| Inguinal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | 4 | | | | | | | | | | | | | | | | |
| Lumbar, Degeneration, Cystic | | | | | | | | | | | | | | | 4 | 4 | 4 | | | 4 | 4 | 2 | 4 | | | | | 4 | |
| Lumbar, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | 3 | | | | | | | 3 | | | | | | | |
| Lumbar, Infiltration Cellular, Plasma Cell | | | | 3 | | | | | | | | | | | | 3 | 4 | 3 | | | 3 | 2 | 4 | 4 | 3 | | | 4 | |
| Lumbar, Pigmentation | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | |
| Pancreatic, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreatic, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | |
| Renal, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | |
| Renal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mandibular | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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 X ..Lesion present
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Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 12:59:41

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

| CD Rat Male
F3 100PPM TO CTL | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 1 | 8 | 7 | 4 | 0 | 5 | 0 | 3 | 5 | 9 | 6 | 5 | 1 | 0 | 2 | 5 | 7 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric | A | + | + | + | A | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen | A | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Capsule, Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depletion Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Stromal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | M | + | + | + | + | + | | + | + | + | + | + | + | M | + | M | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithel Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integumentary System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | A | + | + | + | A | I | | + | M | I | I | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

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Experiment Number: 99930-93
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:41
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 100PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 3 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 3 | 2 | 4 | 5 | 5 | 7 | 9 | 4 | 5 | 6 | 6 | 8 | 8 | 0 | 1 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 1 | 8 | 7 | 4 | 0 | 5 | 0 | 3 | 5 | 9 | 6 | 5 | 1 | 0 | 2 | 5 | 7 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 7 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| | 1 | 8 | 8 | 0 | 0 | 1 | 2 | 7 | 6 | 8 | 0 | 0 | 3 | 4 | 8 | 3 | 4 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| | 6 | 9 | 8 | 3 | 7 | 4 | 8 | 9 | 7 | 6 | 2 | 3 | 7 | 0 | 1 | 4 | 6 | 3 | 4 | 5 | 6 | 6 | 7 | 8 | 9 | 0 | 0 | 0 | 0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Alveolus, Hyperplasia | | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 | 1 | | | 2 | | | 2 | |
| Degeneration | | | | | | | | | | | 3 | | | 1 | | | | 3 | | | 4 | | | | | | | | | | | | |
| Lactation | | | | | | | | | | | 2 | | | | | | | | | | | 1 | | | | | | | | | | | |
| Skin | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cyst Epithelial Inclusion | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | |
| Epidermis, Hyperplasia | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | 4 | | | 4 | | | | 3 | | | | 2 | | | 2 | | | | | | | | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | 4 | | | 4 | | | 4 | | | 4 | | | |
| Lymphatic, Ectasia | | | | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | 2 | | | | 2 | | | | | | | | |
| Musculoskeletal System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone, Femur | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Nervous System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain, Brain Stem | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Compression | | | | | | | | | | | 1 | | | 1 | | | 2 | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | |
| Brain, Cerebellum | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Brain, Cerebrum | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Gliosis | | | | | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 8 | 8 | 0 | 0 | 1 | 2 | 7 | 6 | 8 | 0 | 0 | 3 | 4 | 8 | 3 | 4 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 6 | 9 | 8 | 3 | 7 | 4 | 8 | 9 | 7 | 6 | 2 | 3 | 7 | 0 | 1 | 4 | 6 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |

Respiratory System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|--|--|--|---|---|--|---|---|--|--|---|---|--|--|--|--|---|---|---|---|---|--|--|--|--|--|--|--|--|---|---|---|--|--|
| Lung | A | + | + | + | A | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Artery, Mineralization | | | | | | | | | | | 1 | | | | | | | | | | | | | 1 | 2 | | | | | | | | | | | 1 | 1 | 1 | | |
| Infiltration Cellular, Histiocyte | | | | | | 2 | | | | | | | | | | | 3 | | | | | | 2 | 1 | 1 | 1 | | | | | | | | | | | 1 | 2 | | |
| Infiltration Cellular, Lymphocyte | | | | | | 2 | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| Metaplasia, Osseous | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| Nose | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Goblet Cell, Metaplasia | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | 4 | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Metaplasia, Squamous | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respirat Epith, Hyperplasia | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Upper Molar, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Upper Molar, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | A | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Senses System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|---|---|--|
| Eye | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bilateral, Retina, Atrophy | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | 2 | | | | | | | | | | | 2 | 2 | |
| Cornea, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | | 5 | 3 | 2 | 4 | 5 | 5 | 7 | 9 | 4 | 5 | 6 | 6 | 8 | 8 | 0 | 1 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | | 1 | 8 | 7 | 4 | 0 | 5 | 0 | 3 | 5 | 9 | 6 | 5 | 1 | 0 | 2 | 5 | 7 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| ANIMAL ID | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 7 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | | |
| | | 1 | 8 | 8 | 0 | 0 | 1 | 2 | 7 | 6 | 8 | 0 | 0 | 3 | 4 | 8 | 3 | 4 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | | |
| | | 6 | 9 | 8 | 3 | 7 | 4 | 8 | 9 | 7 | 6 | 2 | 3 | 7 | 0 | 1 | 4 | 6 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | | | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | |
| Lacrimal Gland | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | |
| Ectopic Harderian | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | |
| Urinary System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | | A | + | + | + | A | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Autolysis | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capsule, Fatty Change | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Cortex, Cyst | | | X | | | | X | | X | | | X | | | | | | X | | X | X | | | X | | X | X | X | | | | | X | X | | | | | |
| Hyperplasia, Tubular | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy, Chronic | | | | | 1 | 3 | | 1 | 3 | | 2 | 3 | | 2 | | 3 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 4 | 1 | 1 | | | | | | | |
| Pelvis, Hyperplasia | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | |
| Pelvis, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polycystic Kidney | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urethra | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | |
| Urinary Bladder | | M | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
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|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 6 | 4 | 6 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 8 | 8 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 1 |
| | 4 | 5 | 6 | 6 | 7 | 8 | 9 | 0 | 1 | 3 | 6 | 3 | 4 | 5 | 6 | 7 | 5 | 6 | 1 |
| | *TOTALS | | | | | | | | | | | | | | | | | | |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 38 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Angiectasis | | | | | | | | | | | | | | | | | | | 1 | 2 1.0 |
| Autolysis | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Basophilic Focus | | | | | | | | | | | X | | | | | | | | | 3 |
| Bile Duct, Hyperplasia | | | | 1 | | | | | | | | | | | | | | | | 10 1.3 |
| Biliar Tract, Fibrosis | | | 1 | | | | | | | | | | | | | 1 | | | | 6 1.0 |
| Clear Cell Focus | | | | | | | | | | | | | | | | | | | | 2 |
| Cyst | | | | | | | | | | | | | | | | | | | | 1 |
| Degeneration, Cystic | 1 | | 2 | | | | | | | | | | | | | | | | | 5 1.8 |
| Developmental Malformation | | | | | | | | | | | | | | | | | | | | 1 |
| Eosinophilic Focus | | | | | X | | | | | X | | | | | | | | | | 2 |
| Eosinophilic Focus, Multiple | | | | | | | | | | | | | | | | | | X | | 2 |
| Fatty Change | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | 2 1.0 |

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+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

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|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 6 | 4 | 6 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 8 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 1 |
| | 4 | 5 | 6 | 6 | 7 | 8 | 9 | 0 | 1 | 3 | 6 | 3 | 4 | 5 | 6 | 7 | 5 | 6 |

***TOTALS**

| | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Hemorrhage | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | 1 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | 5 | 1.0 | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | 1 | | |
| Necrosis | | | | | | | | | | | | | | | | | | | 3 | 1.0 | |
| Tension Lipidosis | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Vacuolization Cytoplasmic | | | | 1 | | | | | | 2 | | | | | | | | | 7 | 1.9 | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Acinar Cell, Degeneration | | | 4 | 2 | 2 | 2 | 4 | 3 | 3 | 3 | 4 | 2 | 3 | 3 | | 2 | 4 | 4 | 2 | 38 | 2.5 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 | | |
| Tongue | | | | | | | | | | | | | | | | | | | 1 | | |
| Cardiovascular System | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Cardiomyopathy | 1 | 2 | | 3 | 2 | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 2 | | 1 | | 1 | 1 | 37 | 1.6 | |
| Mineralization | | | | | | | | | | 1 | | | | | | | | | 1 | 1.0 | |
| Endocrine System | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | | |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | X | | | | | | | | 1 | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 99930-93
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 Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:43
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 100PPM TO CTL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|-----|
| ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 6 | 4 | 6 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | | |
| | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 8 | 8 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 1 | | |
| | 4 | 5 | 6 | 6 | 7 | 8 | 9 | 0 | 1 | 3 | 6 | 3 | 4 | 5 | 6 | 7 | 5 | 6 | 1 | | |
| | | | | | | | | | | | | | | | | | | | | *TOTALS | |
| Autolysis | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Bilateral, Hyperplasia | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Cyst | | | | | | | | | | | | | | | | | | | | 1 | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | 5 | 2.0 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | 5 | 2.0 |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | 8 | 1.6 |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | 34 | 1.5 |
| Adrenal Medulla | | | | | | | | | | | | | | | | | | | | 47 | |
| Bilateral, Hyperplasia | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | 10 | 1.7 |
| Islets, Pancreatic | | | | | | | | | | | | | | | | | | | | 48 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | 22 | 1.4 |
| Parathyroid Gland | | | | | | | | | | | | | | | | | | | | 48 | |
| Bilateral, Hyperplasia | | | | | | | | | | | | | | | | | | | | 4 | 2.0 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | 7 | 1.6 |
| Pituitary Gland | | | | | | | | | | | | | | | | | | | | 48 | |
| Pars Distalis, Cyst | | | | | | | | | | | | | | | | | | | | 5 | |
| Pars Distalis, Hyperplasia | | | | | | | | | | | | | | | | | | | | 13 | 2.2 |
| Pars Nervosa, Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Thyroid Gland | | | | | | | | | | | | | | | | | | | | 46 | |
| C Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | 3 | 1.0 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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 CAS Number: 446-72-0

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**CD Rat Male
 F3 100PPM TO CTL**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 6 | 4 | 6 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | |
| | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 8 | 8 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 1 | | |
| | 4 | 5 | 6 | 6 | 7 | 8 | 9 | 0 | 1 | 3 | 6 | 3 | 4 | 5 | 6 | 7 | 5 | 6 | 1 | | *TOTALS |
| Cyst, Squamous | | | | | | | | | | | | | | | X | | | | | 2 | |
| Follicular Cel, Hyperplasia | | | | | | | | | | 4 | | | | | | | | | | 1 | 4.0 |
| Infiltration Cellular, Lymphocyte | 1 | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| General Body System | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | |
| Genital System | | | | | | | | | | | | | | | | | | | | | |
| Coagulating Gland | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | |
| Degeneration | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Developmental Malformation | | | | | | | | | | | | X | | | | | | | | 2 | |
| Fibrosis | | | | 4 | | | | | | | | | | | | | | | | 1 | 4.0 |
| Inflammation, Chronic | | | | 2 | | | | | | | | | | | | | | | | 1 | 2.0 |
| Epididymis | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Degeneration | | | | | | | | | | | | | | | | | | | | 6 | 2.2 |
| Hypospermia | | | | | | | | | | | | | | | | | | | | 10 | 3.6 |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | 1 | | | | | | | 1 | | 6 | 1.0 |
| Preputial Gland | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | |
| Abscess | | | | | 4 | | | | | | | | | | | | | | | 2 | 4.0 |
| Duct, Dilatation | | | | 3 | 4 | | 3 | | | | 3 | | | | | | | | | 7 | 3.6 |
| Infiltration Cellular, Lymphocyte | | 1 | 1 | | 4 | 2 | | | | | | | | | | 1 | | | | 15 | 1.8 |
| Inflammation, Suppurative | | | | 4 | 4 | | 4 | | 2 | 1 | 2 | | 1 | | 4 | | 4 | | 4 | 18 | 2.8 |
| Parenchym Cell, Degeneration | | 1 | | 4 | 1 | 3 | 2 | | | | 1 | | | | | | 3 | | | 13 | 2.0 |
| Prostate | | | | | | | | | + | + | | | | | | | + | | | 6 | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically M ..Missing tissue 1-4 ..Lesion qualified as:
 X ..Lesion present A ..Autolysis precludes evaluation 1) Minimal 3) Moderate
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Experiment Number: 99930-93

Test Type: SPECIAL STUDY

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Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:44

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male
F3 100PPM TO CTL

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | *TOTALS |
|-----------------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 6 | 4 | 6 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 8 | 8 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 1 |
| | 4 | 5 | 6 | 6 | 7 | 8 | 9 | 0 | 1 | 3 | 6 | 3 | 4 | 5 | 6 | 7 | 5 | 6 | 1 |
| Prostate, Dorsal Lobe | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | 2 |
| Inflammation, Suppurative | 2 | 3 | 1 | 1 | 2 | 2 | 2 | | 2 | | 2 | 2 | 2 | 1 | 2 | 3 | | 1 | 2 |
| Prostate, Ventral Lobe | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Autolysis | | | | | | | | | | | | | | | | | | | 1 |
| Degeneration | | | | | | | | | | | | | | | | | | | 2 |
| Hyperplasia | | 3 | 3 | | | | | | | | | | | | | | | | 6 |
| Infiltration Cellular, Lymphocyte | | | | 1 | | | | | 1 | | | 1 | | | | | | | 14 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation, Suppurative | | | | | 1 | 1 | 1 | | | | | | | | 1 | 2 | | | 9 |
| Rete Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Dilatation | | | | 2 | | | 3 | | | | | | | | | | | | 5 |
| Fibrosis | | | | | | | | | | | | | | | | | | | 2 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | | | | | | | | 2 | | | | | | | 5 |
| Autolysis | | | | | | | | | | | | | | | | | | | 1 |
| Degeneration | | | | | | | | | | | | | | | | | | | 1 |
| Dilatation | | | | | | | | | | | | | | | | | | | 2 |
| Hyperplasia | | | | | | | | | | | | | 4 | | | | 4 | | 3 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | 1 |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Edema | | | | | 3 | | | | | | | | | | | | | | 1 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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I ..Insufficient tissue

M ..Missing tissue

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Experiment Number: 99930-93
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:44
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 100PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 6 | 4 | 6 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 8 | 8 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 1 |
| | 4 | 5 | 6 | 6 | 7 | 8 | 9 | 0 | 1 | 3 | 6 | 3 | 4 | 5 | 6 | 7 | 5 | 6 | 1 |

***TOTALS**

| | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|--|--|---|---|---|---|--|---|--|---|---|---|--|--|--|---|---|---|--|----|-----|
| Fibrosis | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Polyarteritis | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Seminif Tub, Degeneration | | | 1 | 4 | 4 | 4 | | 4 | | 1 | 1 | 2 | | | | 1 | 1 | 1 | | 30 | 2.5 |

Hematopoietic System

| | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Erythroid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | 5 | 3.2 |
| Hypocellularity | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Myeloid Cell, Hyperplasia | | | | 2 | | | | | | | | | | | | | | | | 7 | 2.7 |
| Lymph Node | | + | | | | + | + | | + | | | | + | | + | | | | + | 18 | |
| Inguinal, Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Inguinal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Lumbar, Degeneration, Cystic | | | | | | | | 3 | | 3 | | | | 4 | | | | | | 11 | 3.6 |
| Lumbar, Hyperplasia, Lymphoid | | | | | | | | | | 3 | | | | 3 | | | | | | 4 | 3.0 |
| Lumbar, Infiltration Cellular, Plasma Cell | | | | | | | | 3 | | 4 | | | | 4 | | | | | | 13 | 3.4 |
| Lumbar, Pigmentation | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Pancreatic, Hemorrhage | | | | | | | | 2 | | | | | | | | | | | | 1 | 2.0 |
| Pancreatic, Hyperplasia, Lymphoid | | | | | | | | 2 | | | | | | | | | | | | 1 | 2.0 |
| Renal, Degeneration, Cystic | | | | 2 | | | | | | | | | | | | | | 4 | | 3 | 2.7 |
| Renal, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Renal, Infiltration Cellular, Plasma Cell | | | | 3 | | | | | | | | | | | | | | | | 1 | 3.0 |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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**CD Rat Male
 F3 100PPM TO CTL**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|----|-----|---------|-----|-----|-----|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 0 | |
| ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 6 | 4 | 6 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | | |
| | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 8 | 8 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 1 | | |
| | 4 | 5 | 6 | 6 | 7 | 8 | 9 | 0 | 1 | 3 | 6 | 3 | 4 | 5 | 6 | 7 | 5 | 6 | 6 | 1 | | |
| | | | | | | | | | | | | | | | | | | | *TOTALS | | | |
| Degeneration, Cystic | 2 | | | | | | | | | | | | 2 | | 9 | 2.8 | | | | | | |
| Hyperplasia, Lymphoid | 2 | | | | | 2 | 2 | 3 | | | | | | | | | | | 17 | 2.4 | | |
| Infiltration Cellular, Plasma Cell | 2 | | 4 | | | | | | | 2 | 3 | 2 | 4 | 2 | 2 | | 2 | 2 | 2 | 26 | 2.7 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | | |
| Hemorrhage | | | | 3 | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Hyperplasia, Lymphoid | 2 | | 2 | | 2 | | | | | | | | | | | | | | | 5 | 2.0 | |
| Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | 2 | 2.0 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Inflammation, Granulomatous | 2 | 2 | 1 | 1 | 2 | | | | | | | | | 1 | 1 | | 16 | 1.6 | | | | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Capsule, Cyst, Multiple | | | | | | | | | | | | | | | | | | | | 1 | | |
| Depletion Lymphoid | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Hematopoietic Cell Proliferation | | | | | | | 2 | 3 | | | 4 | | | | | | 13 | 2.6 | | | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Hyperplasia, Stromal | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Pigmentation | | | | 2 | 1 | 1 | | 2 | | 2 | | | 1 | | 3 | 4 | | 2 | 22 | 1.8 | | |
| Thymus | + | + | | + | | + | + | + | + | + | + | + | + | | + | + | + | + | + | 41 | | |
| Atrophy | 4 | 4 | 4 | | 4 | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | 4 | 4 | 4 | 4 | 3 | 41 | 3.8 |
| Epithel Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 | |
| Integumentary System | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 41 | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:45
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 100PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 6 | 4 | 6 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | |
| | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 8 | 8 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | |
| | 4 | 5 | 6 | 6 | 7 | 8 | 9 | 0 | 1 | 3 | 6 | 3 | 4 | 5 | 6 | 7 | 5 | 6 | 1 |

***TOTALS**

| | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|-------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---------------|---------|----|-----|
| Alveolus, Hyperplasia | 1 | | | | | | | | | | | | | | | | | | 6 | 1.3 | | |
| Degeneration | 3 1 4 | | | | | | | | | | | | | | | | | | 4 | 4 | 10 | 3.0 |
| Lactation | 1 | | | | | | | | | | | | | | | | | | 2 | | 4 | 1.5 |
| Skin | + + + + + + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | 48 | | | |
| Cyst Epithelial Inclusion | X | | | | | | | | | | | | | | | | | | X | | 3 | |
| Epidermis, Hyperplasia | 3 | | | | | | | | | | | | | | | | | | 2 | 2.5 | | |
| Hyperkeratosis | 2 | | | | | | | | | | | | | | | | | | 2 | 2.0 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | 5 | 3.0 | | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | 4 | | 1 | 4.0 |
| Inflammation, Suppurative | 4 4 | | | | | | | | | | | | | | | | | | 3 4 4 3 4 4 3 | 4 4 4 4 | 24 | 3.8 |
| Lymphatic, Ectasia | | | | | | | | | | | | | | | | | | | 1 | 3.0 | | |
| Necrosis | | | | | | | | | | | | | | | | | | | 2 | 2.0 | | |
| Musculoskeletal System | | | | | | | | | | | | | | | | | | | | | | |
| Bone, Femur | + + + + + + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | 48 | | | |
| Nervous System | | | | | | | | | | | | | | | | | | | | | | |
| Brain, Brain Stem | + + + + + + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | 48 | | | |
| Compression | | | | | | | | | | | | | | | | | | | 3 | 1.3 | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | 1 | 3.0 | | |
| Brain, Cerebellum | + + + + + + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | 48 | | | |
| Brain, Cerebrum | + + + + + + + + + + + + + + + + + + | | | | | | | | | | | | | | | | | | 48 | | | |
| Gliosis | | | | | | | | | | | | | | | | | | | 1 | 4.0 | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
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Experiment Number: 99930-93
 Test Type: SPECIAL STUDY
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:45
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 100PPM TO CTL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 6 | 4 | 6 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 8 | 8 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 1 |
| | 4 | 5 | 6 | 6 | 7 | 8 | 9 | 0 | 1 | 3 | 6 | 3 | 4 | 5 | 6 | 7 | 5 | 6 | 1 |
| | *TOTALS | | | | | | | | | | | | | | | | | | |

Respiratory System

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Artery, Mineralization | | | 1 | | | 1 | | | | 1 | | 2 | | | | 1 | 1 | | | 12 1.2 |
| Infiltration Cellular, Histiocyte | | | 1 | | 1 | 1 | | | | | 1 | | | | | | | | | 12 1.4 |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Metaplasia, Osseous | | | 1 | | | | | | 1 | | | | | | | | | | | 5 1.0 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Goblet Cell, Metaplasia | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Inflammation, Suppurative | | | | | | | | 1 | | | | | | | | | | | | 3 3.0 |
| Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Respirat Epith, Hyperplasia | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Upper Molar, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Upper Molar, Necrosis | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |

Special Senses System

| | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 38 |
| Bilateral, Retina, Atrophy | | | | | | | | | | | | | | | | | | 2 | | 5 2.0 |
| Cornea, Hyperplasia | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Hemorrhage | | | | | | 4 | | | | | | | | | | | | | | 1 4.0 |
| Inflammation, Suppurative | | | | | | 4 | | | | | | | | | | | | | | 1 4.0 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 38 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:45
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 100PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 6 | 4 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 8 | 8 | 4 | 4 | 4 | 4 | 4 | 8 | 8 |
| | 4 | 5 | 6 | 6 | 7 | 8 | 9 | 0 | 1 | 3 | 6 | 3 | 4 | 5 | 6 | 7 | 5 | 6 |

***TOTALS**

| | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | 2 | 1.0 | |
| Lacrimal Gland | | | | | | | | | | | | | | | | | | | 2 | | |
| Ectopic Harderian | | | | | | | | | | | | | | | | | | | 2 | | |
| Zymbal's Gland | | | | | | | | | | | | | | | | | | | 1 | | |
| Urinary System | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | | |
| Autolysis | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Capsule, Fatty Change | | | | | | | | | | | | | | | | | | | 2 | | |
| Cortex, Cyst | | X | | X | X | X | X | X | | X | | X | | X | | X | | | 22 | | |
| Hyperplasia, Tubular | | | | | | | | | | | | | 2 | | | | | | 2 | 2.0 | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Nephropathy, Chronic | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 1 | 1 | 3 | 2 | 3 | 2 | 1 | 1 | 43 | 1.8 |
| Pelvis, Hyperplasia | | | | | 1 | | | | | | | | | 2 | | | | | | 4 | 1.5 |
| Pelvis, Mineralization | | | | | | | | | | | | | | | | 2 | | | | 1 | 2.0 |
| Polycystic Kidney | | | | | | | | | | 4 | | | | | | | | | | 1 | 4.0 |
| Urethra | | | | | | | | | | | | | | | | | | | | 2 | |
| Urinary Bladder | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | 47 | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
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Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 12:59:46

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

| CD Rat Male
F3 500PPM TO CTL | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 7 | 0 | 2 | 3 | 5 | 0 | 2 | 2 | 2 | 3 | 4 | 7 | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 0 | 9 | 8 | 9 | 2 | 4 | 1 | 4 | 9 | 6 | 8 | 1 | 9 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 4 | 4 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 5 | 8 | 9 | 0 | 8 | 2 | 3 | 4 | 5 | 7 | 3 | 3 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 6 |
| | 7 | 9 | 4 | 9 | 0 | 9 | 5 | 3 | 6 | 7 | 6 | 4 | 5 | 3 | 6 | 7 | 8 | 9 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 9 | 0 |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|--|---|---|--|---|---|---|--|--|--|---|--|---|---|---|--|--|---|---|---|--|---|
| Esophagus | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperkeratosis | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Cecum | + | + | + | + | A | + | A | | | | | | | | | | | | | | | | | | | | | | | |
| Autolysis | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | |
| Lymphatic, Ectasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Intestine Large, Colon | + | + | + | + | A | A | + | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Rectum | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Duodenum | + | + | + | A | A | A | A | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Ileum | A | + | + | + | A | A | A | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Jejunum | A | + | + | A | A | A | A | | | | | | | | | | | | | | | | | | | | | | | |
| Liver | + | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autolysis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus, Multiple | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | 4 | | | 1 | | 2 | 1 | | 1 | | 1 | | | | 1 | | 1 | | | | | 1 | 1 | 1 | | |
| Biliar Tract, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Biliar Tract, Fibrosis | | | | | | | | | | | | | | 1 | 1 | | | | | | | 1 | 1 | | | | | | | 1 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
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2) Mild 4) Marked

Experiment Number: 99930-93

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Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:47

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male
F3 500PPM TO CTL

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 5 | 7 | 0 | 2 | 3 | 5 | 0 | 2 | 2 | 2 | 3 | 4 | 7 | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 0 | 9 | 8 | 9 | 2 | 4 | 1 | 4 | 9 | 6 | 8 | 1 | 9 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 5 | 8 | 9 | 0 | 8 | 2 | 3 | 4 | 5 | 7 | 3 | 3 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | |
| 7 | 9 | 4 | 9 | 0 | 9 | 5 | 3 | 6 | 7 | 6 | 4 | 5 | 3 | 6 | 7 | 8 | 9 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 9 | 0 | 1 | 9 | 0 | 1 | 9 | 0 | 1 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|--|--|---|--|---|---|--|--|--|--|---|--|---|---|--|---|---|--|--|--|--|---|---|--|---|---|---|--|--|--|--|--|--|---|---|---|--|
| Capsule, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Congestion | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | 2 | 2 | |
| Eosinophilic Focus, Multiple | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fibrosis | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Inflammation, Chronic Active | | | | | 4 | | | | | | | | | 1 | | | 2 | | | | | 1 | 1 | | | | | | | | | | | | 1 | | |
| Necrosis | | | | | 3 | | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | 1 | | 1 | |
| Tension Lipidosis | | | | | | | | | | | 3 | | | | | | | | | | | | | | | 2 | 2 | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinar Cell, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autolysis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acinar Cell, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Keratin Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Cardiovascular System

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:47

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male
F3 500PPM TO CTL

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 1 | 1 | 5 | 8 | 9 | 0 | 8 | 2 | 3 | 4 | 5 | 7 | 3 | 3 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 5 | 5 | | | |
| | 7 | 9 | 4 | 9 | 0 | 9 | 5 | 3 | 6 | 7 | 6 | 4 | 5 | 3 | 6 | 7 | 8 | 9 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 5 | 5 | | |
| Blood Vessel | + | + | A | + | + | A | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Heart | + | + | + | + | + | A | + | | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Cardiomyopathy | | | | 1 | 1 | | | | | | 2 | | | | | 1 | | 1 | 1 | 1 | 2 | 2 | 1 | | | | 1 | | 1 | 1 | 2 | |
| Pericardium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endocrine System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | + | + | + | + | A | + | + | | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | | | X | | | | | | X | | | | | | | | | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | 4 | | | | 2 | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | 4 | | | | 2 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigmentation | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | 2 | | | | | | 1 | 1 | | | 2 | | | 1 | 1 | 2 | 1 | 1 | | | | | 2 | 1 | 2 | |
| Adrenal Medulla | + | + | A | + | A | M | + | | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Bilateral, Hyperplasia | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | 1 | | | | | | | | | | | 2 | | | | | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia | | | | 1 | | 2 | 2 | | 1 | 1 | | 2 | | 2 | 2 | 1 | 1 | 1 | | | | 1 | | 2 | | | 1 | 2 | | | | |
| Parathyroid Gland | + | + | + | + | + | + | + | | + | + | + | + | M | + | M | + | + | M | + | M | + | + | + | + | + | + | + | + | + | + | + | |
| Bilateral, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pituitary Gland | + | + | A | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:48
 First Dose M/F: NA / NA
 Lab: NCTR

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | 0 0 5 5 5 5 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ANIMAL ID | 5 7 0 2 3 5 0 2 2 2 3 4 7 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 9 8 9 2 4 1 4 9 6 8 1 9 3 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 1 1 1 1 1 1 1 1 1 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 0 1 1 1 2 2 3 3 3 3 4 9 9 9 9 9 0 0 0 0 0 0 0 0 0 0 0 0 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 1 5 8 9 0 8 2 3 4 5 7 3 3 8 8 8 8 0 0 0 1 1 1 1 1 5 5 5 6 6 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 9 4 9 0 9 5 3 6 7 6 4 5 3 6 7 8 9 7 8 9 0 1 2 3 7 8 9 0 1 1 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|---|---|
| Pars Distalis, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Pars Distalis, Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Pars Distalis, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1 1 2 2 1 2 2 | | |
| Thyroid Gland | + | + | + | + | A | A | A | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| C Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1 2 2 1 1 | | |
| Cyst, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | |
| General Body System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tissue NOS | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | + | |
| Genital System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coagulating Gland | + | + | + | + | A | + | A | A | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 2 3 2 3 | | |
| Developmental Malformation | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | |
| Epididymis | + | + | + | + | + | A | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | |
| Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Hypospermia | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 4 3 | | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Preputial Gland | M | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Autolysis | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 3 | | |
| Duct, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 3 4 2 3 | | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1 2 2 2 | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
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Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 12:59:48

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

| CD Rat Male
F3 500PPM TO CTL | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0 | 0 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| ANIMAL ID | 5 | 7 | 0 | 2 | 3 | 5 | 0 | 2 | 2 | 3 | 4 | 7 | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | 0 | 9 | 8 | 9 | 2 | 4 | 1 | 4 | 9 | 6 | 8 | 1 | 9 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 4 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 1 | 1 | 5 | 8 | 9 | 0 | 8 | 2 | 3 | 4 | 5 | 7 | 3 | 3 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | | | |
| | 7 | 9 | 4 | 9 | 0 | 9 | 5 | 3 | 6 | 7 | 6 | 4 | 5 | 3 | 6 | 7 | 8 | 9 | 7 | 8 | 9 | 0 | 0 | 1 | 2 | 3 | 7 | 9 | | | |
| Inflammation, Suppurative | | | 4 | | 3 | | | | | | 3 | 4 | 2 | 4 | 3 | | | 2 | | 2 | 4 | 2 | 4 | | | 2 | 1 | 4 | 2 | 3 | |
| Parenchym Cell, Degeneration | | | 3 | | | | | | | 2 | | 1 | 2 | | 3 | | | 1 | 2 | | 4 | | | | | | 1 | | 2 | | |
| Prostate | + | + | | | | | | | | A | | | | | | | | + | | | | | | | | | | | | | |
| Prostate, Dorsal Lobe | + | + | + | + | + | + | + | | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Atrophy | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autolysis | | | | | 2 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration | | | | | | | | | | 1 | | | | | 2 | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | 1 | | |
| Inflammation, Suppurative | | | | | 2 | 2 | 2 | | | 1 | 1 | 2 | 1 | 2 | | | | 1 | 1 | | 2 | 2 | 1 | | | 1 | 2 | 2 | 2 | | |
| Prostate, Ventral Lobe | + | + | + | + | + | A | + | | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Atrophy | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration | | | | | | 2 | | | | | | | | 2 | | | | | | | | | | | | 1 | 2 | | 3 | 2 | |
| Hyperplasia | | | | 2 | | | | | | | | | | | 3 | 1 | | | | | 1 | 2 | | 3 | | 2 | | 1 | 1 | | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | 2 | | 1 | | | | 1 | | 2 | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | 1 | | | | | | | 1 | | 2 | | | | 1 | | | | | | | | 1 | | | 1 | | |
| Mineralization | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | |
| Rete Testes | + | + | + | + | M | M | + | | M | + | A | + | M | + | I | + | + | + | + | + | + | M | + | + | + | + | + | M | + | + | + |
| Dilatation | | | 2 | | | | | | | | | | | 1 | | | | | | | 2 | | | | | | | | | | |
| Seminal Vesicle | + | + | + | + | A | A | + | | A | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Atrophy | | | 2 | | | | 3 | | | | | | 2 | 3 | 2 | 3 | | | | | | | | | | | | | | | |
| Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
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 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

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

**CD Rat Male
 F3 500PPM TO CTL**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 7 | 0 | 2 | 3 | 5 | 0 | 2 | 2 | 2 | 3 | 4 | 7 | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 0 | 9 | 8 | 9 | 2 | 4 | 1 | 4 | 9 | 6 | 8 | 1 | 9 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 4 | 4 | 4 |
| Testes | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Artery, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autolysis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyarteritis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seminif Tub, Degeneration | | | 1 | | | | 2 | | | | | 2 | | 3 | | 4 | 2 | 1 | | 1 | 1 | 1 | | 2 | 2 | 3 | | 1 | 3 |
| Hematopoietic System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone Marrow | + | + | + | + | + | A | + | | + | + | + | A | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + |
| Autolysis | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Depletion Cellular | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Erythroid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypocellularity | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Myeloid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node | | | + | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinal, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinal, Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mandibular | + | + | + | M | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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Experiment Number: 99930-93
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 Lab: NCTR

| CD Rat Male
F3 500PPM TO CTL | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Autolysis | | | | | | | 3 | | 4 | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | 2 | 4 | | | | 2 | | 4 | | | | | | | | | |
| Depletion Lymphoid | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | 2 | | | | | 2 | | | | | | 3 | 3 | | | | | | 2 | | 2 | | 3 | 2 | 1 | | | | | |
| Infiltration Cellular, Plasma Cell | | | | | | | 3 | | 3 | 3 | 4 | 2 | 2 | 4 | 3 | | 2 | 2 | 1 | 3 | 4 | 3 | | 3 | 3 | 3 | | 2 | 4 | 3 | |
| Lymph Node, Mesenteric | M | + | + | + | + | + | + | | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Autolysis | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | 2 | | 2 | | | | | | | | | | | | | 2 | | | | | | | | | | | | 2 | | |
| Infiltration Cellular, Mast Cell | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | |
| Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | 3 | | | | | | 2 | | | | | | |
| Inflammation, Granulomatous | | | | 2 | | 2 | 1 | | | 2 | | 2 | 2 | 1 | | | | 1 | | | | | 2 | 2 | 1 | 1 | | | 1 | 2 | 4 |
| Spleen | + | + | + | + | A | + | + | | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Autolysis | | | | | | | 4 | | | | | 3 | | | | | | | | | | | | | | | | | | | |
| Capsule, Fibrosis | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Depletion Lymphoid | 4 | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | 4 | | | | | | | | | | | 1 | | | 2 | | | 2 | 1 | | 2 | | | | | 2 | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Stromal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigmentation | | | | | | | 3 | 2 | | | | 2 | 3 | | | | | | 2 | 2 | 1 | 1 | | | 3 | | 2 | | | | |
| Thymus | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | | |
| Atrophy | | | | 4 | 4 | 4 | 4 | | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | 4 | 4 | 4 | 4 | 4 | 2 | 4 | 4 | 4 |
| Autolysis | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:49

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male
F3 500PPM TO CTL

Table with columns for DAY ON TEST and ANIMAL ID, and 30 columns of numerical data representing lesion counts for each animal.

Depletion Lymphoid

Polyarteritis

Integumentary System

Mammary Gland

Alveolus, Hyperplasia

Degeneration

Duct, Dilatation

Lactation

Skin

Angiectasis

Cyst Epithelial Inclusion

Epidermis, Hyperplasia

Hyperkeratosis

Inflammation, Chronic

Inflammation, Chronic Active

Inflammation, Suppurative

Necrosis

Musculoskeletal System

Bone

Bone, Femur

Skeletal Muscle

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:50
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 7 | 0 | 2 | 3 | 5 | 0 | 2 | 2 | 2 | 3 | 4 | 7 | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 0 | 9 | 8 | 9 | 2 | 4 | 1 | 4 | 9 | 6 | 8 | 1 | 9 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 4 | 4 | 4 | 4 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 5 | 8 | 9 | 0 | 8 | 2 | 3 | 4 | 5 | 7 | 3 | 3 | 8 | 8 | 8 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 6 | 6 | 6 | |
| | 7 | 9 | 4 | 9 | 0 | 9 | 5 | 3 | 6 | 7 | 6 | 4 | 5 | 3 | 6 | 7 | 8 | 9 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 9 | 0 | 1 | 9 |

Nervous System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain, Brain Stem | + | + | A | + | + | A | + | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Autolysis | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Compression | | | | | | 2 | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Brain, Cerebellum | + | + | A | + | A | A | + | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Brain, Cerebrum | + | + | A | + | A | A | + | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hydrocephalus | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Respiratory System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Lung | + | + | + | + | A | + | + | | | A | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Alveolar Epith, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Artery, Mineralization | | | | | | 1 | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | 1 | | |
| Autolysis | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Congestion | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | 1 | | | | 1 | 2 | | | 4 | 2 | 2 | | | 1 | 2 | 2 | 1 | 1 | | | | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Metaplasia, Osseous | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | A | A | + | | | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Foreign Body | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Inflammation, Suppurative | | | | | | | 4 | | | | | | 3 | | | | | | 1 | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:50
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
 F3 500PPM TO CTL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 7 | 0 | 2 | 3 | 5 | 0 | 2 | 2 | 2 | 3 | 4 | 7 | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 0 | 9 | 8 | 9 | 2 | 4 | 1 | 4 | 9 | 6 | 8 | 1 | 9 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 4 | 4 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 5 | 8 | 9 | 0 | 8 | 2 | 3 | 4 | 5 | 7 | 3 | 3 | 8 | 8 | 8 | 8 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 6 | 6 | |
| | 7 | 9 | 4 | 9 | 0 | 9 | 5 | 3 | 6 | 7 | 4 | 5 | 3 | 3 | 6 | 7 | 8 | 9 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 9 | 9 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trachea | + | + | + | + | A | A | A | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Special Senses System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Autolysis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Bilateral, Retina, Atrophy | | | | | | | | | | | | 1 | | 1 | 1 | 2 | | 2 | | 2 | | | 2 | | | | | | 2 |
| Inflammation, Suppurative | | | | | | | | | | | | | 4 | | | | | | | | | | | | | | | | |
| Retina, Atrophy | | | | | | | | | | | | | | | | | | 2 | | | 2 | | | | | | | | |
| Harderian Gland | + | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Degeneration | | | | | | | | | | | | | 2 | | | | | | 1 | | | | | | | | | | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | 4 | | | | | | | | | | | | | | | |
| Pigmentation | | | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | |
| Lacrimal Gland | | | | | | | | | | | | | + | | | | | | | | | | | | | | | | |
| Ectopic Harderian | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| Urinary System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Autolysis | | | | | | 4 | | | | | | | | | 3 | | | | | | | | | | | | | | |
| Cortex, Cyst | | | | | | | | | X | X | | | X | | | X | | X | X | | X | X | X | X | | | | | |
| Hyperplasia, Tubular | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Nephropathy, Chronic | | | | 2 | | 3 | 2 | | 1 | | 1 | | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | 1 | 3 | 4 | 2 | 2 | 1 | 1 |
| Pelvis, Hyperplasia | | | | | | | | | | | | | | | | 1 | | | 2 | | | | | | | | | | 1 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:50
 First Dose M/F: NA / NA
 Lab: NCTR

| CD Rat Male
F3 500PPM TO CTL | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 5 | 7 | 0 | 2 | 3 | 5 | 0 | 2 | 2 | 2 | 3 | 4 | 7 | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 5 | 8 | 9 | 0 | 8 | 2 | 3 | 4 | 5 | 7 | 3 | 3 | 8 | 8 | 8 | 8 | 8 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| | 7 | 9 | 4 | 9 | 0 | 9 | 5 | 3 | 6 | 7 | 6 | 4 | 5 | 3 | 6 | 7 | 8 | 9 | 7 | 8 | 9 | 0 | 0 | 1 | 2 | 3 | 7 | 8 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pelvis, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | 2 |
| Urethra | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + |
| Urinary Bladder | + | + | + | + | A | + | + | | A | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Transit Epithe, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue

M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:51
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 500PPM TO CTL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 2 | 3 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| | 8 | 8 | 8 | 0 | 0 | 4 | 4 | 5 | 5 | 5 | 5 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 1 |
| | 2 | 4 | 5 | 1 | 2 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 0 |
| | *TOTALS | | | | | | | | | | | | | | | | | | |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Autolysis | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Lymphatic, Ectasia | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | 38 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 43 |
| Cyst | | | X | | | | | | | | | | | | | | | | | 1 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 43 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | 41 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Angiectasis | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Autolysis | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Basophilic Focus | | | | | | | | | | X | | | | | | | | | | 1 |
| Basophilic Focus, Multiple | | | | | | | | | | | X | | | | | | | | | 1 |
| Bile Duct, Dilatation | | | | | | | | | | | | | | | | 4 | | | | 1 4.0 |
| Bile Duct, Hyperplasia | 1 | 1 | 1 | | 2 | | 1 | 1 | 1 | | | 1 | 1 | | | | 1 | | | 22 1.2 |
| Biliar Tract, Cyst | | | | X | | | | | | | | | | | | | | | | 1 |
| Biliar Tract, Fibrosis | 1 | | | | 2 | | | | | | | | 1 | | | 1 | | 1 | | 10 1.1 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:51
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 2 | 3 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| | 8 | 8 | 8 | 0 | 0 | 4 | 4 | 5 | 5 | 5 | 5 | 8 | 8 | 8 | 9 | 9 | 9 | 1 |
| | 2 | 4 | 5 | 1 | 2 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 9 | 0 | 1 | 2 | 3 |

***TOTALS**

| | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|--------|
| Capsule, Hyperplasia | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Congestion | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Degeneration, Cystic | | | | | | | | | 1 | 1 | | | | | | | | | 2 | 6 1.8 | |
| Eosinophilic Focus, Multiple | | | | | | | | | X | | | | | | | | | | 1 | | |
| Fibrosis | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Infiltration Cellular, Lymphocyte | | | 1 | | | | | | | | | 1 | | 1 | | | | | 1 | 5 1.0 | |
| Inflammation, Chronic Active | | 1 | | | | | 1 | | | | | | | | | | 1 | | | 9 1.4 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | 5 1.4 | |
| Tension Lipidosis | | | | | 3 | | | | | | | | | | | | | | | 4 2.5 | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Pancreas | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 47 | |
| Acinar Cell, Degeneration | | 2 | 1 | | 2 | 3 | 1 | 3 | 1 | 2 | 1 | 4 | 3 | 2 | 1 | | 4 | 3 | 3 | 1 | 35 2.2 |
| Autolysis | | | | | | | | | | | | | | | | | | | | | 2 2.5 |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | 2 | | | | 1 2.0 |
| Salivary Glands | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 48 |
| Acinar Cell, Degeneration | | | | | | | | | | | | 2 | | | | | | | | | 1 2.0 |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Stomach, Forestomach | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 47 |
| Keratin Cyst | | | | | | | | | | | | | | | | | X | | | | 1 |
| Stomach, Glandular | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 46 |

Cardiovascular System

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:51
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 500PPM TO CTL**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|-----|--|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 2 | 3 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | | |
| | 8 | 8 | 8 | 0 | 0 | 4 | 4 | 5 | 5 | 5 | 5 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 1 | | |
| | 2 | 4 | 5 | 1 | 2 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 0 | | |
| | | | | | | | | | | | | | | | | | | | *TOTALS | | |
| Blood Vessel | + | | | | | | | | | | | | | | | | | | 47 | | |
| Heart | + | | | | | | | | | | | | | | | | | | 47 | | |
| Cardiomyopathy | | | 1 | 1 | | | | 1 | 1 | | 1 | | | 1 | | 1 | | | | | |
| Pericardium, Hyperplasia | | | | | | | | | 1 | | | | | | | | | | | | |
| Endocrine System | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | + | | | | | | | | | | | | | | | | | | 47 | | |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | | | | | | 2 | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | 4 | 2.5 | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | 4 | 2.5 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | 3 | 1.7 | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | 2 | 2.5 | |
| Pigmentation | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Vacuolization Cytoplasmic | 1 | 2 | 1 | 2 | 2 | | 1 | 2 | 1 | 1 | | 1 | 1 | | | 1 | 1 | | | | |
| Adrenal Medulla | + | | | | | | | | | | | | | | | | | | 45 | | |
| Bilateral, Hyperplasia | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Hyperplasia | 1 | | 3 | | | | | | | | | | | | 1 | | | | 2 | | |
| Islets, Pancreatic | + | | | | | | | | | | | | | | | | | | 48 | | |
| Hyperplasia | | 1 | | | | 1 | 2 | 1 | 2 | | 1 | 1 | 3 | 3 | 1 | | 1 | 1 | | | |
| Parathyroid Gland | + | | | | | | | | | | | | | | | | | | 43 | | |
| Bilateral, Hyperplasia | | | | | | | | | | | | | | | | | | | 2 | 2.0 | |
| Hyperplasia | 1 | 2 | 2 | | 1 | | | | | | 2 | | | | | | | | | | |
| Pituitary Gland | + | | | | | | | | | | | | | | | | | | 48 | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

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Experiment Number: 99930-93
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 Route: DOSED FEED
 Species/Strain: Rat/CD

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 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:52
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 500PPM TO CTL**

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | *TOTALS | |
|-----------------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|-----|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 2 | 3 | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | |
| 8 | 8 | 8 | 8 | 0 | 0 | 4 | 4 | 5 | 5 | 5 | 5 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 1 | |
| 2 | 4 | 5 | 1 | 2 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 0 | 0 | |
| Pars Distalis, Cyst | | X | | | X | X | | | | | | | | | | | X | X | 6 | |
| Pars Distalis, Cyst, Multiple | | | | | | | | | | | | | | | | | | | 1 | |
| Pars Distalis, Hyperplasia | 1 | | | | | | | 2 | | | | | 2 | | 1 | | | | 12 | 1.6 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 | |
| C Cell, Hyperplasia | | | | | 1 | | | | | 2 | | | | | | | | | 7 | 1.6 |
| Cyst, Squamous | | X | | | | | X | | | | | X | | | | | | | 4 | |
| General Body System | | | | | | | | | | | | | | | | | | | | |
| Tissue NOS | | | | | | | | | | | | | | | | | | | 2 | |
| Genital System | | | | | | | | | | | | | | | | | | | | |
| Coagulating Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 | |
| Atrophy | | | | | | 2 | | | | | | | | | | | | | 6 | 2.3 |
| Developmental Malformation | | | | | | | | | | | | | | | | | | | 1 | |
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | |
| Atrophy | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Degeneration | 2 | | | | 2 | | | | | | | | | | | | | | 4 | 2.3 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Hypospermia | 4 | | | | 4 | | | | | | | | | | | | | | 5 | 3.4 |
| Infiltration Cellular, Lymphocyte | 1 | | | | | | | | | | | | | | | 1 | | | 3 | 1.0 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | |
| Autolysis | | | | | | | | | | | | | | | | | | | 2 | 3.0 |
| Duct, Dilatation | | | | | 3 | 4 | | | | | | 4 | | | 4 | | | | 9 | 3.3 |
| Infiltration Cellular, Lymphocyte | | 2 | 1 | | | | | | | | | 1 | | | | | 1 | 2 | 9 | 1.6 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:52
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 500PPM TO CTL**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------|-----|-----|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 3 | 2 | 3 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | | | |
| | 8 | 8 | 8 | 0 | 0 | 4 | 4 | 5 | 5 | 5 | 5 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | | | |
| | 2 | 4 | 5 | 1 | 2 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 8 | 9 | 0 | 1 | 2 | | | |
| | | | | | | | | | | | | | | | | | | | *TOTALS | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | 26 | 3.1 | |
| Parenchym Cell, Degeneration | | | | | | | | | | | | | | | | | | | 16 | 2.1 | |
| Prostate | | | | | | | | | | | | | | | | | | | 4 | | |
| Prostate, Dorsal Lobe | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Atrophy | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Autolysis | | | | | | | | | | | | | | | | | | | 2 | 2.5 | |
| Degeneration | | | | | | | | | | | | | | | | | | | 3 | 1.7 | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | 2 | 1.0 | |
| Inflammation, Suppurative | 2 | | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | | 1 | 1 | 3 | 1 | 1 | 34 | 1.6 |
| Prostate, Ventral Lobe | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | |
| Atrophy | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Degeneration | | | | | | | | | | | | | | | | | | | 2 | 2 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | 11 | 1.7 | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | 8 | 1.3 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | 7 | 1.3 | |
| Mineralization | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Rete Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 41 | |
| Dilatation | | | | | | | | | | | | | | | | | | | 4 | 1.8 | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 | |
| Atrophy | | | | | | | | | | | | | | | | | | | 8 | 2.4 | |
| Dilatation | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
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 Lab: NCTR

**CD Rat Male
 F3 500PPM TO CTL**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------|--------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 3 | 2 | 3 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | |
| 8 | 8 | 8 | 8 | 0 | 0 | 4 | 4 | 5 | 5 | 5 | 5 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 1 | |
| 2 | 4 | 5 | 1 | 2 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 0 | *TOTALS | |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Artery, Mineralization | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Autolysis | | | | | | | | | | | | | | | | | | | | 2 2.5 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Polyarteritis | | | | | | | | 2 | | | | | | | | | | | | 1 2.0 |
| Seminif Tub, Degeneration | 4 | 2 | 1 | 1 | 4 | 1 | 2 | 1 | | 1 | | 1 | | 1 | 3 | 1 | 1 | 1 | 1 | 31 1.8 |
| Hematopoietic System | | | | | | | | | | | | | | | | | | | | |
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Autolysis | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Depletion Cellular | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Erythroid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | 2 | 3 2.3 |
| Hypocellularity | | 3 | | | | | | | | | | | | | | | | | | 2 3.0 |
| Myeloid Cell, Hyperplasia | | | | | 2 | | | | | 4 | | | | | | | | | 2 | 4 2.8 |
| Lymph Node | | | | + | + | + | + | | | | | | | | + | | | | + | 12 |
| Lumbar, Degeneration, Cystic | | | 4 | 4 | | | | | | | | | | | | | | | | 5 3.4 |
| Lumbar, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | 3 | | | | | 3 2.7 |
| Lumbar, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | 3 | | | 4 | | 5 3.6 |
| Mediastinal, Hemorrhage | | | | | | | | 2 | | | | | | | | | | | | 1 2.0 |
| Mediastinal, Pigmentation | | | | | | | | 2 | | | | | | | | | | | | 1 2.0 |
| Renal, Degeneration, Cystic | | | | | | 2 | | | | | | | | | | 4 | | | | 3 3.3 |
| Renal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | 3 | | | | 3 3.7 |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
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 CAS Number: 446-72-0

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 Time Report Requested: 12:59:53
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 3 | 2 | 3 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| | 8 | 8 | 8 | 0 | 0 | 4 | 4 | 5 | 5 | 5 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 1 |
| | 2 | 4 | 5 | 1 | 2 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 9 | 0 | 1 | 2 | 3 |

***TOTALS**

| | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Autolysis | | | | | | | | | | | | | | | | | | | 2 | 3.5 | |
| Degeneration, Cystic | 2 | | | | 2 | | | | | | | 2 | | | | | | | 7 | 2.6 | |
| Depletion Lymphoid | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Hyperplasia, Lymphoid | | 2 | 2 | | 2 | 3 | 3 | 2 | 2 | | 2 | | 2 | 2 | | 2 | 4 | | 21 | 2.3 | |
| Infiltration Cellular, Plasma Cell | 2 | 2 | 2 | 2 | | 3 | 4 | 3 | | 2 | 3 | 4 | 3 | 3 | | 2 | 4 | 3 | 36 | 2.8 | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | | |
| Autolysis | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Hyperplasia, Lymphoid | | 2 | | | 2 | | | | | 2 | | | 1 | | | 2 | 2 | | 10 | 1.9 | |
| Infiltration Cellular, Mast Cell | 2 | | | | | | | | | | | | | | | | | | 2 | 2.0 | |
| Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | 3 | 3 | 2.7 | |
| Inflammation, Granulomatous | | 1 | | | | 2 | 2 | 1 | | | | 1 | 2 | | | 2 | 3 | 1 | 2 | 25 | 1.7 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | | |
| Autolysis | | | | | | | | | | | | | | | | | | | 2 | 3.5 | |
| Capsule, Fibrosis | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Depletion Lymphoid | | | | | | | | | | | | | | | | | | | 2 | 3.5 | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | 2 | | | | | | | 2 | 9 | 2.0 | |
| Hyperplasia, Lymphoid | 1 | | 2 | | | | 2 | | | | | | | | | | | | 3 | 1.7 | |
| Hyperplasia, Stromal | | | | | | 1 | | | | | 2 | | | | | | | | 2 | 1.5 | |
| Necrosis | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Pigmentation | 1 | 2 | | 1 | | 1 | | 2 | | | 4 | 3 | | | | | | | 17 | 2.1 | |
| Thymus | + | + | + | + | M | + | + | M | + | + | + | + | I | + | + | + | + | + | I | 44 | |
| Atrophy | 4 | 4 | 4 | 4 | | 4 | 4 | | 4 | 4 | 4 | 4 | | 4 | 4 | 4 | 4 | 3 | | 41 | 3.9 |
| Autolysis | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:53
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Male
 F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|-------|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 3 | 2 | 3 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | |
| | 8 | 8 | 8 | 0 | 0 | 4 | 4 | 5 | 5 | 5 | 5 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 1 | |
| | 2 | 4 | 5 | 1 | 2 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 0 | |
| | *TOTALS | | | | | | | | | | | | | | | | | | | |
| Depletion Lymphoid | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Polyarteritis | | | | | | | | | | | | | | | | | | | 3 | 3.0 |
| Integumentary System | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | + | | | | | | | | | | | | | | | | | | 41 | |
| Alveolus, Hyperplasia | | | | | | | | | | | | | | | | | | | 1 | 6 2.0 |
| Degeneration | 4 4 4 4 4 2 | | | | | | | | | | | | | | | | | | 12 | 3.2 |
| Duct, Dilatation | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Lactation | | | | | | | | | | | | | | | | | | | 2 2 | 4 2.0 |
| Skin | + | | | | | | | | | | | | | | | | | | 49 | |
| Angiectasis | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | X | 1 |
| Epidermis, Hyperplasia | | | | | | | | | | | | | | | | | | | 3 | 2 2.5 |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | 2 | 2 2.0 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | 1 | 2 2.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | 1 | 3 2.0 |
| Inflammation, Suppurative | 4 4 3 4 4 4 3 4 4 | | | | | | | | | | | | | | | | | | 21 | 3.9 |
| Necrosis | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 |
| Musculoskeletal System | | | | | | | | | | | | | | | | | | | | |
| Bone | | | | | | | | | | | | | | | | | | | 1 | |
| Bone, Femur | + | | | | | | | | | | | | | | | | | | 49 | |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | 1 | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:53
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 500PPM TO CTL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 3 | 2 | 3 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| | 8 | 8 | 8 | 0 | 0 | 4 | 4 | 5 | 5 | 5 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 1 |
| | 2 | 4 | 5 | 1 | 2 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 0 |
| | *TOTALS | | | | | | | | | | | | | | | | | | |

Nervous System

| | | | | | | | | | | | | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Brain, Brain Stem | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Autolysis | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Compression | | | | | | | | | | | 2 | | | | | | | | | 4 1.5 |
| Brain, Cerebellum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Brain, Cerebrum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Hydrocephalus | | | | | | | | | | | 2 | | | | | | | | | 1 2.0 |

Respiratory System

| | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Alveolar Epith, Hyperplasia | | | | | | | | | | | 3 | | | | | | | | | 1 3.0 |
| Artery, Mineralization | | | | | | | 1 | | | | 1 | | | | 1 | | | | | 6 1.2 |
| Autolysis | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Congestion | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Infiltration Cellular, Histiocyte | 1 | | | 2 | | | 1 | | | | | | | 1 | | | 1 | 2 | | 17 1.6 |
| Inflammation, Chronic | | | | | | | | | | | 2 | | | | | | | | | 1 2.0 |
| Metaplasia, Osseous | | | | | | | | | | | | | | | | | | | 1 | 2 1.0 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |
| Foreign Body | | | | | | | | | | | | | | | | | | | | 1 |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation, Chronic | | | | | | | 2 | | | | | | | | | | | | | 2 1.5 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | 3 2.7 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:54

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Male
F3 500PPM TO CTL

Table with columns for DAY ON TEST (0-7) and ANIMAL ID (0-22). Rows show counts for various tissues and a *TOTALS row.

Main data table listing lesions such as Trachea, Special Senses System, Eye, Harderian Gland, Urinary System, and Kidney with associated counts and severity grades.

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
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Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:54
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Male
F3 500PPM TO CTL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
|-----------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|---|-----|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 3 | 2 | 3 | | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | | | |
| | 8 | 8 | 8 | 0 | 0 | 4 | 4 | 5 | 5 | 5 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 1 | | | |
| | 2 | 4 | 5 | 1 | 2 | 8 | 9 | 0 | 1 | 2 | 3 | 7 | 8 | 8 | 9 | 0 | 1 | 2 | 3 | | | |
| | *TOTALS | | | | | | | | | | | | | | | | | | | | | |
| Pelvis, Mineralization | 1 | | | | | | | | | | | | | | | | | | 2 | 1.5 | | |
| Urethra | | | | | | | | | | | | | | | | | | | 1 | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 | | | |
| Dilatation | | | | | | | | | | | | | | | | | | | 4 | 4 | 3 | 4.0 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | |
| Transit Epithe, Hypertrophy | | | | | | | | | | | | | | | | | | | 1 | 2.0 | | |

END OF MALE DATA

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

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Experiment Number: 99930-93
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:54
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Female
F3 0 PPM

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 8 | 8 | 0 | 8 | 8 | 9 | 1 | 1 | 3 | 5 | 6 | 7 | 9 | 0 | 0 | 0 | 2 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 9 | 6 | 0 | 4 | 4 | 0 | 2 | 3 | 0 | 8 | 1 | 7 | 5 | 1 | 6 | 8 | 7 | 5 | 4 | 4 | 1 | 0 | 2 | 2 | 5 | 4 | 4 | 5 | 5 | 4 | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 6 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 4 | 5 | 5 | 5 | 7 | 0 | 1 | 4 | 9 | 9 | 3 | 6 | 8 | 2 | 2 | 2 | 3 | 4 | 4 | 5 | 5 | 5 | 1 | 1 | 3 | 3 | 3 | 7 | 7 | |
| 5 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 3 | 1 | 1 | 0 | 2 | 7 | 8 | 6 | 2 | 4 | 0 | 1 | 2 | 4 | 5 | 1 | 2 | 3 | 0 | 1 | 7 |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Large, Rectum | | | | | | | | | | | | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Intestine Small, Duodenum | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Small, Ileum | A | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Small, Jejunum | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | | | | | | | | | | X | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Bile Duct, Hyperplasia | | | | | | | | | | | | | | 1 | 1 | | | | 2 | | | | 1 | | | | | 2 | | | | | | | | 2 | | |
| Biliar Tract, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clear Cell Focus | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | 1 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | 1 | 2 | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically M ..Missing tissue 1-4 ..Lesion qualified as:
 X ..Lesion present A ..Autolysis precludes evaluation 1) Minimal 3) Moderate
 I ..Insufficient tissue BLANK ..Not examined microscopically 2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:55

First Dose M/F: NA / NA

Lab: NCTR

| CD Rat Female
F3 0 PPM | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|
| | ANIMAL ID | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | | | | | |
| | 8 | 8 | 0 | 8 | 8 | 9 | 1 | 1 | 3 | 5 | 6 | 7 | 9 | 0 | 0 | 0 | 2 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | | | |
| | 9 | 6 | 0 | 4 | 4 | 0 | 2 | 3 | 0 | 8 | 1 | 7 | 5 | 1 | 6 | 8 | 7 | 5 | 4 | 4 | 1 | 1 | 0 | 2 | 2 | 5 | 4 | 4 | 5 | 5 | 4 | | | | | | | |
| Vacuolization Cytoplasmic, Focal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |
| Oral Mucosa | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | |
| Pancreas | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 6 | 7 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | | | | | | | |
| Acinar Cell, Degeneration | 3 | 4 | 5 | 5 | 5 | 7 | 0 | 1 | 4 | 9 | 9 | 3 | 6 | 8 | 2 | 2 | 2 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | | | |
| Polyarteritis | 5 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 3 | 1 | 1 | 0 | 2 | 7 | 8 | 6 | 4 | 4 | 0 | 1 | 2 | 4 | 5 | 1 | 2 | 3 | 3 | 0 | 1 | 7 | | | | | | |
| Salivary Glands | | | | X | | | | | | | | X | | | | | X | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Erosion | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cardiovascular System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrium Lft, Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cardiomyopathy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endocrine System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 12:59:55

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

| CD Rat Female
F3 0 PPM | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| ANIMAL ID | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| | 8 | 8 | 0 | 8 | 8 | 9 | 1 | 1 | 3 | 5 | 6 | 7 | 9 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| | 9 | 6 | 0 | 4 | 4 | 0 | 2 | 3 | 0 | 8 | 1 | 7 | 5 | 1 | 6 | 8 | 7 | 5 | 4 | 4 | 1 | 1 | 0 | 2 | 2 | 5 | 4 | 4 | 5 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 6 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | | |
| | 3 | 4 | 5 | 5 | 5 | 7 | 0 | 1 | 4 | 9 | 9 | 3 | 6 | 8 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 5 | 5 | 1 | 1 | 3 | 3 | 3 | 7 | | |
| | 5 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 3 | 1 | 1 | 0 | 2 | 7 | 8 | 6 | 2 | 4 | 4 | 5 | 5 | 1 | 2 | 4 | 5 | 1 | 7 | | |
| Degeneration, Cystic | 1 | 2 | | 2 | 2 | 3 | | 2 | 3 | | 3 | 2 | 1 | 2 | 4 | 3 | 2 | 2 | | 3 | 2 | 1 | 2 | 1 | 1 | 3 | 3 | 1 | 2 | 1 | 2 |
| Hyperplasia | | 1 | | 1 | | | | | | 1 | | | | | 2 | | | | | 1 | 1 | 2 | | | | | | | | | |
| Hypertrophy | | | | | | 2 | | | | | 4 | 2 | | 1 | 4 | | 2 | | | 3 | | 1 | | | | 3 | 2 | | | 1 | |
| Vacuolization Cytoplasmic | | | | | 3 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia, Focal | | | | | | | | | | 1 | | | | | | | 2 | | | | 2 | | | | | | | | 2 | | |
| Islets, Pancreatic | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | 1 | | | | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia, Diffuse | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Pars Distalis, Hyperplasia | | 3 | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| C Cell, Hyperplasia | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst, Squamous | 2 | | 2 | | | | | | | | 1 | | | | | 1 | 1 | | | | | | | | | | 2 | | | | |
| General Body System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Genital System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clitoral Gland | + | + | + | M | M | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Duct, Dilatation | | | | | | | | | | | 3 | | | | | | | | | | 2 | 2 | 2 | 3 | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 12:59:56

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

| CD Rat Female
F3 0 PPM | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Inflammation | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| Parenchym Cell, Degeneration | 8 | 8 | 0 | 8 | 8 | 9 | 1 | 1 | 3 | 5 | 6 | 7 | 9 | 0 | 0 | 0 | 2 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Ovary | 9 | 6 | 0 | 4 | 4 | 0 | 2 | 3 | 0 | 8 | 1 | 7 | 5 | 1 | 6 | 8 | 7 | 5 | 4 | 4 | 1 | 1 | 0 | 2 | 2 | 5 | 4 | 4 | |
| Atrophy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Cyst | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 6 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | |
| Hyperplasia, Stromal | 3 | 4 | 5 | 5 | 5 | 7 | 0 | 1 | 4 | 9 | 9 | 3 | 6 | 8 | 2 | 2 | 3 | 4 | 4 | 5 | 5 | 5 | 1 | 1 | 3 | 3 | 3 | 7 | |
| Oviduct | 5 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 7 | 8 | 6 | 2 | 4 | 0 | 1 | 2 | 4 | 5 | 1 | 2 | 3 | 0 | |
| Uterus | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Metaplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vagina | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone Marrow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mediastinal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Popliteal, Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:56
 First Dose M/F: NA / NA
 Lab: NCTR

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CD Rat Female | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| F3 0 PPM | 8 | 8 | 0 | 8 | 8 | 9 | 1 | 1 | 3 | 5 | 6 | 7 | 9 | 0 | 0 | 0 | 2 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| ANIMAL ID | 9 | 6 | 0 | 4 | 4 | 0 | 2 | 3 | 0 | 8 | 1 | 7 | 5 | 1 | 6 | 8 | 7 | 5 | 4 | 4 | 1 | 1 | 0 | 2 | 2 | 5 | 4 | 4 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 6 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | |
| | 3 | 4 | 5 | 5 | 5 | 7 | 0 | 1 | 4 | 9 | 9 | 3 | 6 | 8 | 2 | 2 | 2 | 3 | 4 | 4 | 5 | 5 | 5 | 1 | 1 | 3 | 3 | | |
| | 5 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 3 | 1 | 1 | 0 | 2 | 7 | 8 | 6 | 2 | 4 | 0 | 1 | 2 | 4 | 5 | 1 | 2 | 3 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Popliteal, Infiltration Cellular, Plasma Cell | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Hyperplasia, Lymphoid | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Degeneration, Cystic | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Plasma Cell | | 1 | 2 | 2 | | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | | 2 | | 2 | 1 | 2 | 2 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hemorrhage | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Granulomatous | 1 | 1 | 1 | 2 | 2 | 1 | 1 | | 2 | 2 | 1 | 2 | | 2 | 1 | 2 | 2 | 1 | 2 | 3 | | 2 | 1 | 1 | | 2 | 2 | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hematopoietic Cell Proliferation | 2 | | | | | | 2 | | | 2 | | | | | | | 1 | 2 | | 1 | | | | 2 | 1 | 1 | | |
| Lymphocyte, Atrophy | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigmentation | | | 3 | | | 2 | | | | 3 | | 3 | 2 | 1 | | | | | 3 | 3 | | | | | | | 1 | 2 |
| Thymus | + | + | + | + | + | + | + | + | + | + | M | M | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + |
| Atrophy | 3 | | | | | 3 | | | | | | | 1 | 3 | 2 | | | | | 2 | 1 | | | | | | 1 | 2 |
| Cyst | | 1 | | | | | | 1 | 2 | | | | | | | | | | 3 | 2 | | 1 | 2 | 2 | | 2 | | |
| Epithel Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integumentary System | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolus, Degeneration | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
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Experiment Number: 99930-93
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:56
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 0 PPM**

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| | 8 | 8 | 0 | 8 | 8 | 9 | 1 | 1 | 3 | 5 | 6 | 7 | 9 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| | 9 | 6 | 0 | 4 | 4 | 0 | 2 | 3 | 0 | 8 | 1 | 7 | 5 | 1 | 6 | 8 | 7 | 5 | 4 | 4 | 1 | 1 | 0 | 2 | 2 | 5 | 4 | 4 | 5 | 4 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 6 | 7 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 3 | 4 | 5 | 5 | 5 | 7 | 0 | 1 | 4 | 9 | 9 | 3 | 6 | 8 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 5 | 5 | 1 | 1 | 3 | 3 | 3 | 7 | 7 | 8 |
| | 5 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 3 | 1 | 1 | 0 | 2 | 7 | 8 | 6 | 2 | 2 | 4 | 0 | 1 | 2 | 4 | 5 | 1 | 2 | 2 | 7 | |
| Alveolus, Hyperplasia | | | | | | | 2 | | | 2 | 1 | | | 1 | | | | | | 2 | 1 | | 1 | 1 | | 1 | | 2 | | | |
| Atypical Focus | | | | | | | X | | X | | | | | | | | | | | | X | | X | | X | | | | | | |
| Galactocele | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | |
| Lactation | | | | | | | 1 | | 1 | 2 | 2 | | 1 | 2 | 1 | 1 | | 2 | 1 | 1 | 1 | 1 | | 2 | 1 | | 2 | | 2 | 1 | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Angiectasis | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Foot, Inflammation, Chronic | | | 4 | | 1 | 1 | | 1 | | | 2 | 3 | 2 | | | 2 | 2 | 3 | 4 | | | 3 | 3 | 2 | 3 | 3 | 3 | 3 | | 2 | |
| Musculoskeletal System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone, Femur | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Bone, Joint | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nervous System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain, Brain Stem | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Compression | | | 2 | | | | 1 | | 2 | | | 2 | 2 | 3 | 3 | | 1 | 1 | 2 | 3 | 1 | | | | | | | | | 1 | |
| Brain, Cerebellum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Brain, Cerebrum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hydrocephalus | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | |
| Respiratory System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
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 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
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Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:57

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female
F3 0 PPM

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | 8 | 8 | 0 | 8 | 8 | 9 | 1 | 1 | 3 | 5 | 6 | 7 | 9 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | 9 | 6 | 0 | 4 | 4 | 0 | 2 | 3 | 0 | 8 | 1 | 7 | 5 | 1 | 6 | 8 | 7 | 5 | 4 | 4 | 1 | 1 | 0 | 2 | 2 | 5 | 4 | 4 | 5 | 4 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 6 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | | |
| | 3 | 4 | 5 | 5 | 5 | 7 | 0 | 1 | 4 | 9 | 9 | 3 | 6 | 8 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 1 | 1 | 3 | 3 | 3 | | |
| | 5 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 3 | 1 | 1 | 0 | 2 | 7 | 8 | 6 | 4 | 4 | 4 | 5 | 5 | 1 | 1 | 3 | 3 | 3 | 0 | 1 | 7 | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyarteritis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nasolacrim Dct, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Upper Molar, Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special Senses System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bilateral, Lens, Cataract | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bilateral, Retina, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Retina, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accumulation, Hyaline Droplet | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
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BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
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Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 12:59:57

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

| CD Rat Female
F3 0 PPM | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 8 | 8 | 0 | 8 | 8 | 9 | 1 | 1 | 3 | 5 | 6 | 7 | 9 | 0 | 0 | 0 | 2 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 9 | 6 | 0 | 4 | 4 | 0 | 2 | 3 | 0 | 8 | 1 | 7 | 5 | 1 | 6 | 8 | 7 | 5 | 4 | 4 | 1 | 1 | 0 | 2 | 2 | 5 | 4 | 4 | 5 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 6 | 7 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 3 | 4 | 5 | 5 | 5 | 7 | 0 | 1 | 4 | 9 | 9 | 3 | 6 | 8 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 1 | 1 | 3 | 3 | 7 |
| | 5 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 3 | 1 | 1 | 0 | 2 | 7 | 8 | 6 | 2 | 4 | 4 | 0 | 1 | 2 | 4 | 5 | 1 | 2 | 3 |
| Cyst | | | | | X | | | | | X | X | | | | X | | | | X | X | | X | X | X | | X | X | X | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Nephropathy | | | | | | 2 | | | 1 | 4 | 1 | | | 3 | 1 | 3 | | 1 | | | 2 | 1 | | | 1 | | | | |
| Pelvis, Mineralization | | | | 2 | | | | 2 | 1 | | | | | | 1 | | 3 | | | | | | | | 1 | | 1 | | 1 |
| Renal Tubule, Mineralization | 2 | 1 | 1 | | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | 1 | 3 | 1 | | 1 | | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:57
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Female
F3 0 PPM

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 4 | 4 | 4 | 3 | 2 | 5 | 5 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 9 | 9 | 9 |
| | 8 | 3 | 4 | 5 | 8 | 9 | 0 | 1 | 2 | 3 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 |
| | *TOTALS | | | | | | | | | | | | | | | | | | | | | |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 52 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 42 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 52 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 51 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | 51 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | 1 | 2 1.0 |
| Basophilic Focus | X | | | | | X | | | | | | | | | X | X | | | | | | 5 |
| Bile Duct, Hyperplasia | | | 1 | 1 | | | | 2 | 1 | | 1 | 1 | | | | 1 | 2 | | | | 2 | 16 1.4 |
| Biliar Tract, Fibrosis | | 2 | | | | | | | | | | | | | | | | 1 | | | | 2 1.5 |
| Clear Cell Focus | | | | | | | | | | | | | | | | | | | | | | 1 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | 1 |
| Degeneration, Cystic | | | | | 1 | | | | | | | | | | | | | | | | | 1 1.0 |
| Hematopoietic Cell Proliferation | | | | | | | | | | | 1 | | | | | | | | | | | 1 1.0 |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | 1 |
| Infiltration Cellular, Lymphocyte | | 1 | | | | | | | | | | | | | | 1 | | | | | | 4 1.3 |
| Inflammation, Chronic Active | | | | | | | 1 | | 2 | | | | | | 1 | | | | | | | 4 1.8 |
| Necrosis | | | | | | | 1 | | | | | | | | | | | | | | | 2 1.0 |
| Vacuolization Cytoplasmic | | | | | | | | 1 | | | | | | | | | | | | | | 7 1.7 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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Experiment Number: 99930-93

Test Type: SPECIAL STUDY

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Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:58

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Female
F3 0 PPM**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|---|----|-----|
| ANIMAL ID | 0 | 1 | 0 | 8 | 8 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | *TOTALS | | | |
| Vacuolization Cytoplasmic, Focal | | | | | | | | | | | | | | | | | | | | | | | | | X | 4 | |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | 52 | |
| Acinar Cell, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | 25 | 1.5 |
| Polyarteritis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | 53 | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | 52 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | | 53 | |
| Erosion | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Cardiovascular System | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | | | | | | | | | | | | | | | | | | | | | | | | | | 53 | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Heart | | | | | | | | | | | | | | | | | | | | | | | | | | 53 | |
| Atrium Lft, Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Cardiomyopathy | | | | | | | | | | | | | | | | | | | | | | | | | | 38 | 1.1 |
| Endocrine System | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | | | | | | | | | | | | | | | | | | | | | | | | | | 53 | |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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

**CD Rat Female
 F3 0 PPM**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | *TOTALS | | | | |
|----------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|---|---|----|-----|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 0 | | |
| ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 4 | 4 | 4 | 3 | 2 | 5 | 5 | 4 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 9 | 9 | | | |
| | 8 | 3 | 4 | 5 | 8 | 9 | 0 | 1 | 1 | 2 | 3 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | | |
| Degeneration, Cystic | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | | | 2 | 1 | 3 | 1 | 3 | 2 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 48 | 1.9 |
| Hyperplasia | | | | 1 | | | | 2 | | | 2 | 1 | | | | 1 | 1 | | | 1 | | | | 14 | 1.3 |
| Hypertrophy | | | | | 2 | | | | | 1 | | | | 1 | 3 | 1 | 3 | 4 | | | 2 | 2 | 3 | 21 | 2.2 |
| Vacuolization Cytoplasmic | | | | | | 3 | | | | | 2 | | | | | 2 | 2 | | | | | | | 6 | 2.2 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| Hyperplasia, Focal | | | | | | | | 1 | | 2 | | | | | | 1 | | | 2 | | 2 | | 2 | 10 | 1.7 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 52 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 1 | | 3 | 1.3 |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| Hyperplasia, Diffuse | | | | | | | | | | | | | | | | | | | | 2 | | | | 1 | 2.0 |
| Hyperplasia, Focal | | | | | | | | 1 | | | | | | | | | | | | | | | | 1 | 1.0 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Pars Distalis, Hyperplasia | | 2 | | 1 | 2 | | | | | | | | | | 2 | | | | | | | | | 7 | 2.0 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| C Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | 1 | | | | 2 | 1.0 |
| Cyst, Squamous | | 1 | | | 1 | | | | | | 1 | | | | | | | | | | 1 | | | 10 | 1.3 |
| General Body System | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | |
| Genital System | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | 49 | |
| Duct, Dilatation | 2 | | 2 | | 3 | | | | | | 3 | | | | | | | | | | | | | 9 | 2.4 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 12:59:58

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female
F3 0 PPM

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | *TOTALS | | | |
|---|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|----|-----|-----|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 0 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 24 | 1.7 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 2.0 | |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 9 | 1.9 | |
| Inflammation | 2 | | | | 3 | | 3 | | | 1 | 2 | 1 | 1 | 2 | | | 1 | | | 1 | 2 | 1 | 24 | 1.7 |
| Parenchym Cell, Degeneration | | | | | | | 2 | | 2 | | | | | | 2 | | | | | | | | 4 | 2.0 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| Atrophy | 3 | | | | 2 | 2 | 2 | 2 | 3 | | 3 | | | 1 | 2 | 3 | | 3 | | | | 1 | 28 | 2.3 |
| Cyst | | X | | X | | | | X | | | | | | | | | X | X | | | | | 9 | |
| Hyperplasia, Stromal | | 1 | 2 | | | | 2 | | 1 | 2 | 2 | | | 1 | | | 1 | | 2 | 1 | | | 21 | 1.9 |
| Oviduct | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Hyperplasia, Cystic | | | | | 2 | 1 | | | 2 | | 3 | | | | | | 1 | 2 | | | 1 | | 16 | 1.4 |
| Hyperplasia, Focal | | | | | | 2 | | | | | | | | | | | | | | | | | 3 | 2.7 |
| Metaplasia | | | | | | | | | | | | | | | 2 | | | | | | | | 1 | 2.0 |
| Vagina | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 52 | |
| Inflammation | | | | | | | 2 | 2 | 1 | | | | | | | | 1 | | | | | | 9 | 1.9 |
| Hematopoietic System | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| Lymph Node | | + | | | | | + | | + | + | + | + | | + | | | + | | | + | + | | 18 | |
| Lumbar, Degeneration, Cystic | | | | | | | | | | | 4 | 2 | | 2 | | | | | | | 2 | | 9 | 2.3 |
| Lumbar, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Lumbar, Infiltration Cellular, Plasma Cell | | 2 | | | | | 3 | | 2 | | | | | 2 | | | 1 | | | | 2 | | 11 | 2.0 |
| Mediastinal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Popliteal, Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:58
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Female
F3 0 PPM

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|----------------|
| ANIMAL ID | 0 | 1 | 0 | 8 | 8 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 9 | 9 | 9 | |
| | 8 | 3 | 4 | 5 | 8 | 9 | 0 | 1 | 2 | 3 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 5 | 6 | *TOTALS |
| Popliteal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Renal, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Renal, Infiltration Cellular, Plasma Cell | | | | | | | | | 2 | | | | | | | | | | | | | | | 1 2.0 |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 |
| Degeneration, Cystic | | | 2 | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Infiltration Cellular, Plasma Cell | 2 | 1 | | 1 | 2 | 2 | 3 | 1 | 3 | | 2 | | 1 | 2 | 2 | 1 | 2 | | 1 | 2 | | 1 | 43 1.7 | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Infiltration Cellular, Plasma Cell | | | | | | | | | 2 | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation, Granulomatous | 2 | 1 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 3 | 2 | 1 | 3 | 1 | | | 48 1.7 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 |
| Hematopoietic Cell Proliferation | | | | | 2 | | | 1 | 4 | | 1 | 1 | | | | 3 | | 2 | | 1 | | | | 17 1.7 |
| Lymphocyte, Atrophy | | | | | | | | | | | | | | | | | 2 | | | | | | | 3 2.3 |
| Pigmentation | 2 | 1 | | 1 | | 2 | | | | | 1 | 1 | 1 | | | 1 | 1 | | | | 1 | 3 | 21 1.8 | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | M | + | + | + | + | 48 |
| Atrophy | | | | | | | | | | | | | | | | | 3 | | 2 | | | | 1 | 12 2.0 |
| Cyst | 2 | | | | | | | | 2 | | 3 | 2 | | | 2 | 2 | | 2 | | | 2 | 1 | 18 1.9 | |
| Epithel Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | 1 | | | 2 2.0 |
| Integumentary System | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 |
| Alveolus, Degeneration | | | | | | | | | | | | | | | | | 3 | | 3 | | | | | 3 3.0 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:59
 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Female
F3 0 PPM

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | *TOTALS | | | | |
|-------------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|---------|-----|-----|-----|-----|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 0 | | |
| 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 19 | 1.4 | | |
| 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | | | |
| 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 4 | 4 | 4 | 3 | 2 | 5 | 5 | 4 | 1 | 2.0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3.0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 32 | 1.6 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 53 | |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 9 | 9 | 9 | 9 | 39 | 2.7 |
| 8 | 3 | 4 | 5 | 8 | 9 | 0 | 1 | 1 | 2 | 3 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | 6 | | |
| Alveolus, Hyperplasia | | | | | | | | | | | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | | | 19 | 1.4 | | |
| Atypical Focus | | | | | | | | | | | X | | | | | | | | | | | 6 | | | |
| Galactocele | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | | | |
| Lactation | 1 | | | | 1 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 3 | 2 | 1 | 2 | | | | | | 2 | 32 | 1.6 | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | | | |
| Foot, Inflammation, Chronic | 3 | 3 | 2 | 3 | 4 | 3 | 3 | 3 | 4 | 3 | 1 | 3 | 2 | 3 | 4 | 3 | 4 | 3 | 3 | 39 | 2.7 | | | | |
| Musculoskeletal System | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone, Femur | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| Bone, Joint | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | | | |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | + | 1 | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | X | 1 | | | |
| Nervous System | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain, Brain Stem | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| Compression | 2 | | | | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | | | | | | 23 | 1.7 | | | | | |
| Brain, Cerebellum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| Brain, Cerebrum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | |
| Hydrocephalus | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | | | |
| Respiratory System | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:59
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 0 PPM**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|-----|--|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 4 | 4 | 4 | 3 | 2 | 5 | 5 | 4 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 9 | 9 | 9 | | |
| | 8 | 3 | 4 | 5 | 8 | 9 | 0 | 1 | 1 | 2 | 3 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | | |
| | | | | | | | | | | | | | | | | | | | | | | | *TOTALS | | |
| Lung | + | | | | | | | | | | | | | | | | | | | | | | 53 | | |
| Infiltration Cellular, Histiocyte | 1 | | 1 | | | 1 | | 2 | 1 | | 2 | | | | | | | 3 | | 1 | 1 | 3 | 16 | 1.7 | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Polyarteritis | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Nose | + | | | | | | | | | | | | | | | | | | | | | | 53 | | |
| Inflammation | | | | | | | | | | | | | | 1 | | | | | | | | | 3 | 1.7 | |
| Nasolacrim Dct, Inflammation | | | | | | | | | | | | | | | | | | 2 | | | 4 | | 4 | 2.3 | |
| Upper Molar, Inflammation | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Trachea | + | | | | | | | | | | | | | | | | | | | | | | 53 | | |
| Special Senses System | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | | | | | | | | | | | | | | | | | | | | | | 43 | | |
| Bilateral, Lens, Cataract | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Bilateral, Retina, Degeneration | | | | | | | | | | | | | | | | | 3 | | | | | | 5 | 2.6 | |
| Retina, Degeneration | 1 | | 3 | 2 | 3 | | | 1 | | | | 3 | | | | | | | | | | | 6 | 2.2 | |
| Harderian Gland | + | | | | | | | | | | | | | | | | | | | | | | 43 | | |
| Epithelium, Degeneration | 1 | | 1 | 1 | | | | | | | 1 | | | | | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 16 | 1.3 | |
| Hypertrophy | | | | | | | | | | | 1 | | | | | 1 | | | | | | | 3 | 1.0 | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Urinary System | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | | | | | | | | | | | | | | | | | | | | | | 53 | | |
| Accumulation, Hyaline Droplet | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:59
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 0 PPM**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|-------------|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|---|---|----------------|-----|-----|-----|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 4 | 4 | 4 | 3 | 2 | 5 | 5 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 9 | | | |
| | 8 | 3 | 4 | 5 | 8 | 9 | 0 | 1 | 2 | 3 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | | | |
| | | | | | | | | | | | | | | | | | | | | | *TOTALS | | | |
| Cyst | X | | X | | X | | | | | | X | | | | X | | X | | | | 19 | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | 1 | 2 | 1.0 | |
| Nephropathy | 1 | 1 | 2 | | | 1 | 1 | 1 | | | 1 | | | 3 | | | 19 | 1.6 | | | | | | |
| Pelvis, Mineralization | 1 | 1 2 | | 1 | | | 1 | 1 | | 1 | 1 | | 2 | 2 | | | 17 | 1.4 | | | | | | |
| Renal Tubule, Mineralization | 2 | 2 | | | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 1 | | 43 | 1.7 | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 53 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | 3 | 3 | 2 | 3.0 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
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 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 12:59:59
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 5PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 4 | 9 | 1 | 2 | 2 | 2 | 3 | 3 | 7 | 9 | 6 | 7 | 9 | 9 | 0 | 1 | 1 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 6 | 6 | 7 | 7 | 8 | 5 | 5 | 2 | 5 | 2 | 4 | 7 | 3 | 8 | 2 | 1 | 3 | 4 | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 6 | 6 | 7 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | |
| | 1 | 4 | 7 | 8 | 8 | 9 | 9 | 9 | 4 | 7 | 9 | 3 | 2 | 2 | 1 | 2 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 1 | 1 | |
| | 5 | 3 | 3 | 2 | 4 | 3 | 6 | 7 | 9 | 5 | 9 | 2 | 1 | 6 | 9 | 8 | 2 | 0 | 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 6 |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum | + | | | | | | | | | | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | | | | | | | | | | X | | | | | | | | | | | | X | | X | X | |
| Bile Duct, Hyperplasia | | | 1 | | 1 | 1 | | 1 | | | | | | | | 1 | 1 | | 1 | 2 | 2 | | | | | | | 2 | 1 |
| Biliar Tract, Fibrosis | | | | | 2 | | | | | | | 1 | | | | 2 | | | | | 2 | | | | | 2 | | | 2 |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Developmental Malformation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | 1 | | | | | | | | | | 2 | | 2 | 1 |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

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Time Report Requested: 13:00:00

First Dose M/F: NA / NA

Lab: NCTR

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 4 | 9 | 1 | 2 | 2 | 2 | 3 | 3 | 7 | 9 | 6 | 7 | 9 | 9 | 0 | 1 | 1 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 6 | 6 | 7 | 7 | 8 | 5 | 5 | 5 | 2 | 5 | 2 | 4 | 7 | 3 | 8 | 2 | 1 | 3 | 4 | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 6 | 6 | 7 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 1 | 4 | 7 | 8 | 8 | 9 | 9 | 9 | 4 | 7 | 9 | 3 | 2 | 2 | 1 | 2 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 3 | 3 | 2 | 4 | 3 | 6 | 7 | 9 | 5 | 9 | 2 | 1 | 6 | 9 | 8 | 2 | 0 | 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Polyarteritis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Acinar Cell, Degeneration | | | | 3 | | | | | | | 1 | 1 | 2 | 1 | 1 | 3 | | | | | 4 | 2 | 2 | | | | | 2 | 4 | 2 | 2 | 2 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | |
| Stomach | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Keratin Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Cardiovascular System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Cardiomyopathy | | | 1 | 1 | 1 | | | | 2 | | | 1 | 2 | | | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| Endocrine System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | | | 2 | 3 | 1 | 2 | 2 | 2 | 2 | | | | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 1 | 3 | 2 | 2 | 2 | 1 | 2 | 3 | 1 | 2 | | | |
| Hyperplasia | | | | | | | 3 | | | | | | | | | | | 1 | | | | | | | | | | | 1 | 2 | 1 | 1 |
| Hypertrophy | | | | | 1 | | | | | 2 | | | 3 | 3 | 1 | 2 | | | | 3 | | | | | 3 | 2 | 1 | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue

M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
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| CD Rat Female
F3 5PPM TO CTL | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adrenal Medulla | M | M | + | + | + | M | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parathyroid Gland | M | + | + | + | + | + | + | M | + | + | + | + | M | + | + | + | + | M | M | M | M | + | + | + | + | + | + | + | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pars Distalis, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| General Body System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Genital System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clitoral Gland | M | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M |
| Duct, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parenchym Cell, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Stromal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oviduct | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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X ..Lesion present
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1-4 ..Lesion qualified as:
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| CD Rat Female
F3 5PPM TO CTL | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|
| | ANIMAL ID | 0 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | | | | | | | | |
| Cyst | 4 | 9 | 1 | 2 | 2 | 2 | 3 | 3 | 7 | 9 | 6 | 7 | 9 | 9 | 0 | 1 | 1 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | | | | | | | |
| Uterus | 6 | 6 | 7 | 7 | 8 | 5 | 5 | 2 | 5 | 2 | 4 | 7 | 3 | 8 | 2 | 1 | 3 | 4 | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | |
| Adenomyosis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | |
| Hyperplasia, Cystic | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 6 | 6 | 7 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | | | | | | | | | | |
| Metaplasia | 1 | 4 | 7 | 8 | 8 | 9 | 9 | 9 | 4 | 7 | 9 | 3 | 2 | 2 | 1 | 2 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 1 | 1 | | | | | | | | | | | |
| Vagina | 5 | 3 | 3 | 2 | 4 | 3 | 6 | 7 | 9 | 5 | 9 | 2 | 1 | 6 | 9 | 8 | 2 | 0 | 3 | 3 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 7 | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone Marrow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Myeloid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreatic, Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mandibular | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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| | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
|----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| CD Rat Female
F3 5PPM TO CTL | ANIMAL ID | 4 | 9 | 1 | 2 | 2 | 2 | 3 | 3 | 7 | 9 | 6 | 7 | 9 | 9 | 0 | 1 | 1 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| | | 6 | 6 | 7 | 7 | 8 | 5 | 5 | 2 | 5 | 2 | 4 | 7 | 3 | 8 | 2 | 1 | 3 | 4 | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Spleen | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Hematopoietic Cell Proliferation | | | | | | | 1 | | | 2 | | 3 | | | | | | | | | | | 3 | | | | 1 | | | | | |
| Pigmentation | | | 1 | 3 | 2 | 2 | | 1 | 1 | | | 2 | | | | 3 | 1 | 3 | 2 | 3 | 2 | 1 | | | | 1 | | 1 | 1 | | 1 | 3 |
| Thymus | | + | + | + | + | + | + | + | + | + | + | M | M | + | + | + | M | + | + | + | + | + | M | + | + | + | + | + | + | + | | |
| Atrophy | | | | 2 | 3 | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | 2 | | | 3 | 2 | 2 | | | | | 3 | 3 | | | 1 | | | | | 2 | | |
| Epithel Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | 3 | | |
| Hemorrhage | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integumentary System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Alveolus, Degeneration | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | |
| Alveolus, Hyperplasia | | | | 2 | | | | | | 3 | | | | | | | 1 | | | | | 1 | 4 | | | 1 | | | | 1 | 1 | |
| Atypical Focus | | | X | | | | | | | | | | | | | | | | | | | X | X | | | | X | X | | | | |
| Galactocele | | | 2 | 2 | | 1 | | 2 | 3 | | | | | 2 | | | | | | | | | | | | | | | | | | |
| Lactation | | | 1 | 2 | 2 | 1 | | 2 | | | | 2 | | 1 | 2 | 1 | 2 | 1 | 1 | | | 2 | 1 | 1 | | 2 | 2 | 2 | 1 | 2 | 2 | |
| Skin | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Foot, Inflammation, Chronic | | | | | 1 | 3 | | | 3 | 3 | 1 | 1 | | 3 | | | 2 | 3 | 3 | 3 | 1 | 1 | 2 | 3 | 3 | | 4 | 3 | 3 | 3 | 3 | |
| Musculoskeletal System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone, Femur | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Nervous System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain, Brain Stem | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 13:00:01

First Dose M/F: NA / NA

Lab: NCTR

| CD Rat Female
F3 5PPM TO CTL | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ANIMAL ID | 0 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | | 4 | 9 | 1 | 2 | 2 | 2 | 3 | 3 | 7 | 9 | 6 | 7 | 9 | 9 | 0 | 1 | 1 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | | 6 | 6 | 7 | 7 | 8 | 5 | 5 | 2 | 5 | 2 | 4 | 7 | 3 | 8 | 2 | 1 | 3 | 4 | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| Compression | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Brain, Cerebellum | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| Brain, Cerebrum | | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 6 | 6 | 7 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | |
| Respiratory System | | 1 | 4 | 7 | 8 | 8 | 9 | 9 | 4 | 7 | 9 | 3 | 2 | 2 | 1 | 2 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 1 | |
| | | 5 | 3 | 3 | 2 | 2 | 3 | 6 | 9 | 9 | 9 | 9 | 9 | 2 | 1 | 6 | 9 | 9 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 7 | |
| Lung | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar Epith, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atelectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Histiocyte | | | | | 1 | | | | | 1 | 1 | | | | | 2 | 1 | | | | | | | 1 | | | 1 | | | |
| Inflammation | | | | | | | | | | | | | | | | | | 2 | | | 2 | | | | | | | | | |
| Nose | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| Nasolacrim Dct, Inflammation | | | | | | 1 | | | 2 | | | | | | | | | | | | | | | | | | | | | |
| Upper Molar, Inflammation | | | | | | | | | | | | | | X | | X | | | | | | | | | | | | | X | |
| Trachea | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Special Senses System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bilateral, Retina, Degeneration | | | | | | | | | | | | | | | | 1 | | 2 | | 3 | | | | | | | | | | |
| Retina, Degeneration | | | | | | | | | | | | | | | | | | 3 | | | | 1 | | 2 | | | | | | |
| Harderian Gland | | M | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lacrimal Gland | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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 + ..Tissue examined microscopically
 X ..Lesion present
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 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
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Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 13:00:02

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 4 | 9 | 1 | 2 | 2 | 2 | 3 | 3 | 7 | 9 | 6 | 7 | 9 | 9 | 0 | 1 | 1 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 6 | 6 | 7 | 7 | 8 | 5 | 5 | 2 | 5 | 2 | 4 | 7 | 3 | 8 | 2 | 1 | 3 | 4 | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 6 | 6 | 7 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 1 | 4 | 7 | 8 | 8 | 9 | 9 | 9 | 4 | 7 | 9 | 3 | 2 | 2 | 1 | 2 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 |
| 5 | 3 | 3 | 2 | 4 | 3 | 6 | 7 | 9 | 5 | 9 | 2 | 1 | 6 | 9 | 8 | 2 | 0 | 3 | 3 | 4 | 5 | 5 | 6 | 7 | 8 | 9 | 0 |

| Metaplasia | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Urinary System | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cyst | | | | X | X | | | | | X | | X | | | | | | X | X | X | | | X | X | | | X | |
| Hydronephrosis | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | | | 1 | 1 | | 2 | | | | | 2 | 2 | 1 | | | | | | | | | | | | | | 1 | |
| Pelvis, Mineralization | | 1 | 1 | | | 1 | | | | 3 | | | 1 | 1 | | | | 1 | | | | | | | 2 | 1 | | 1 |
| Renal Tubule, Mineralization | | 1 | 1 | 1 | 2 | 2 | 1 | | | | 1 | | | 2 | 2 | 1 | 2 | 1 | 1 | | 1 | | | 2 | 2 | | | 2 |
| Urinary Bladder | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
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Experiment Number: 99930-93
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:02
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 5PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 4 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| | 3 | 3 | 3 | 3 | 3 | 6 | 6 | 6 | 8 | 9 | 9 | 9 | 9 | 9 | 1 | 1 | 1 | 6 |
| | 0 | 4 | 5 | 6 | 7 | 2 | 3 | 4 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | 6 |

***TOTALS**

Alimentary System

| | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 40 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis | | | | | | | | | | | | | 1 | | | | | | 2 1.5 |
| Basophilic Focus | | | | | | | | X | | | | | | | X | | X | | 7 |
| Bile Duct, Hyperplasia | | | | 1 | 1 | 2 | 1 | | | 1 | | | 1 | | | | 1 | | 18 1.2 |
| Biliar Tract, Fibrosis | | 2 | | | | | | | | | | | | | | | | | 7 1.9 |
| Degeneration, Cystic | | | | | | 1 | | | 2 | | | | | | | | | | 3 1.3 |
| Developmental Malformation | | | | | | | | X | | | | | | | | | | | 1 |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | 2 | | 3 1.3 |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | X | | | 1 |
| Infiltration Cellular, Lymphocyte | | 1 | | | | | | | | | | | 1 | | | | | | 2 1.0 |
| Inflammation, Chronic Active | | | | | 1 | | | | | 2 | | | | 1 | | | | | 3 1.3 |
| Necrosis | | | | | | | | | | | | | | | | 1 | | | 1 1.0 |
| Vacuolization Cytoplasmic | | | | | 2 | | | | | | | | | | | | | | 5 1.6 |
| Mesentery | | | | | | | | | | | | | | | | | | | 1 |

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 Lab: NCTR

**CD Rat Female
 F3 5PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | 4 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| | 3 | 3 | 3 | 3 | 3 | 6 | 6 | 6 | 8 | 9 | 9 | 9 | 9 | 1 | 1 | 1 | 6 | 6 |
| | 0 | 4 | 5 | 6 | 7 | 2 | 3 | 4 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | 6 |

***TOTALS**

| | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Polyarteritis | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Acinar Cell, Degeneration | | 1 | 1 | | 1 | 1 | | | 1 | 2 | | | | 1 | | | | | 23 | 1.8 | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Stomach | | | | | | | | | | | | | | | | | | + | 1 | | |
| Dilatation | | | | | | | | | | | | | | | | | | X | 1 | | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | 49 | | |
| Hyperplasia | | | | | | | | 2 | | | | | | | | | | 1 | 3 | 1.3 | |
| Inflammation | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 | |
| Keratin Cyst | | | | | | | | | | | X | | | | | | | | 1 | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cardiovascular System | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cardiomyopathy | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 | 1 | | 2 | 2 | 2 | 32 | 1.2 |
| Endocrine System | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | | | | | | 1 | | |
| Atrophy | | | | | | | | | 4 | | | | | | | | | | 1 | 4.0 | |
| Degeneration, Cystic | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 4 | 2 | 2 | 3 | 2 | 1 | 1 | 2 | 3 | 1 | 2 | 48 | 1.9 |
| Hyperplasia | 1 | | | | 2 | | 1 | 1 | | 1 | | 2 | | | | | | 1 | 2 | 14 | 1.4 |
| Hypertrophy | | 1 | 1 | | | | | | 4 | 1 | 3 | 3 | | | 1 | 2 | 2 | 1 | 2 | 21 | 2.0 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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M ..Missing tissue

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**CD Rat Female
 F3 5PPM TO CTL**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|----|-----|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | | | |
| | 3 | 3 | 3 | 3 | 3 | 6 | 6 | 6 | 8 | 9 | 9 | 9 | 9 | 9 | 1 | 1 | 1 | 6 | | | |
| | 0 | 4 | 5 | 6 | 7 | 2 | 3 | 4 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | 6 | | | |
| | | | | | | | | | | | | | | | | | | | *TOTALS | | |
| Adrenal Medulla | + | | | | | | | | | | | | | | | | | | 46 | | |
| Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Islets, Pancreatic | + | | | | | | | | | | | | | | | | | | 50 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | 3 | 1.7 |
| Parathyroid Gland | + | | | | | | | | | | | | | | | | | | 41 | | |
| Pituitary Gland | + | | | | | | | | | | | | | | | | | | 50 | | |
| Pars Distalis, Hyperplasia | | | | | | | | | | | | | | | | | | | | 3 | 2.3 |
| Thyroid Gland | + | | | | | | | | | | | | | | | | | | 50 | | |
| Cyst, Squamous | | | | | | | | | | | | | | | | | | | | 8 | 1.3 |
| General Body System | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | |
| Genital System | | | | | | | | | | | | | | | | | | | | | |
| Clitoral Gland | + | | | | | | | | | | | | | | | | | | 47 | | |
| Duct, Dilatation | | | | | | | | | | | | | | | | | | | | 5 | 2.4 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Inflammation | | | | | | | | | | | | | | | | | | | | 18 | 1.7 |
| Parenchym Cell, Degeneration | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Ovary | + | | | | | | | | | | | | | | | | | | 50 | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | 35 | 2.4 |
| Cyst | | | | | | | | | | | | | | | | | | | | 15 | |
| Hyperplasia, Stromal | | | | | | | | | | | | | | | | | | | | 30 | 2.0 |
| Oviduct | + | | | | | | | | | | | | | | | | | | 49 | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:02
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 5PPM TO CTL**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------|--------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | | |
| | 3 | 3 | 3 | 3 | 3 | 6 | 6 | 6 | 8 | 9 | 9 | 9 | 9 | 9 | 1 | 1 | 1 | 6 | | |
| | 0 | 4 | 5 | 6 | 7 | 2 | 3 | 4 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | 6 | *TOTALS | |
| Cyst | | | | | | | | | | | | | | | | | | X | | 1 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 50 |
| Adenomyosis | | | | | | | | | 3 | | | | | | | | | 2 | | 2 2.5 |
| Hyperplasia, Cystic | 1 | 1 | 3 | 4 | 2 | | | | 3 | 1 | | | | 3 | | 1 | 1 | 3 | | 24 1.9 |
| Metaplasia | | | | | | | | | | | | 2 | | | | | | 1 | | 6 1.7 |
| Vagina | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 49 |
| Inflammation | | | | | | | | | | | | | | | | | | | | 4 1.3 |
| Hematopoietic System | | | | | | | | | | | | | | | | | | | | |
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 50 |
| Myeloid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | 2 | | 1 2.0 |
| Lymph Node | | | + | | + | | | | + | | | | | | | | | + | | 9 |
| Lumbar, Degeneration, Cystic | | | | 3 | | 1 | | | | | | | | | | | | 3 | | 5 2.6 |
| Lumbar, Infiltration Cellular, Plasma Cell | | | | | | 1 | | | 2 | | | | | | | | | 3 | | 7 2.0 |
| Pancreatic, Hemorrhage | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Renal, Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Renal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 49 |
| Cyst | | | | | | | | | | | | | | | | | | | | 2 |
| Infiltration Cellular, Plasma Cell | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | | 2 | 2 | 2 | | 1 | 2 | | 40 1.7 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | 50 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Inflammation, Granulomatous | 1 | 1 | 3 | 1 | 2 | 3 | 2 | 1 | 1 | 3 | 1 | 1 | 2 | 3 | 2 | 2 | 1 | 3 | | 47 1.9 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:03
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 5PPM TO CTL**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | |
|----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| ANIMAL ID | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | |
| | 3 | 3 | 3 | 3 | 3 | 6 | 6 | 6 | 6 | 8 | 9 | 9 | 9 | 9 | 1 | 1 | 1 | 6 | |
| | 0 | 4 | 5 | 6 | 7 | 2 | 3 | 4 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | |
| | | | | | | | | | | | | | | | | | | | *TOTALS |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hematopoietic Cell Proliferation | | 2 | | | | | | | 1 | | | | | | | | 4 | | 8 2.1 |
| Pigmentation | 1 | | | | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | | 2 | | 1 | 3 | 32 1.6 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | 45 |
| Atrophy | | | | | | | | | | | | 1 | | 2 | | 2 | 3 | | 7 2.0 |
| Cyst | | 2 | | 2 | | | | | | | | 2 | | 2 | | | 1 | 1 | 15 1.9 |
| Epithel Cell, Hyperplasia | | | | | | | | | | | | | | 3 | | 2 | | | 4 2.3 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Integumentary System | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Alveolus, Degeneration | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Alveolus, Hyperplasia | | | | | 1 | | | | 1 | 1 | | | 1 | | | 1 | 1 | | 14 1.4 |
| Atypical Focus | | | | | | | | | X | | | | X | | | | | | 7 |
| Galactocele | | | | | | | | | | | | | | | | | | | 6 2.0 |
| Lactation | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | | 1 | 38 1.5 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Foot, Inflammation, Chronic | 4 | 2 | | 3 | 4 | 2 | 2 | 3 | | | 2 | 3 | 3 | 4 | 3 | 3 | 3 | | 36 2.7 |
| Musculoskeletal System | | | | | | | | | | | | | | | | | | | |
| Bone, Femur | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Nervous System | | | | | | | | | | | | | | | | | | | |
| Brain, Brain Stem | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
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Experiment Number: 99930-93
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:03
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 5PPM TO CTL**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|-----|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | *TOTALS | |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | |
| Compression | 2 | | 2 | 2 | | | | | | | | | 2 | 1 | | | | | 26 | 1.8 |
| Brain, Cerebellum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Brain, Cerebrum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Respiratory System | | | | | | | | | | | | | | | | | | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Alveolar Epith, Hyperplasia | | | | | | | | | | | | | | | | | 2 | | 1 | 2.0 |
| Atelectasis | | | | | | | | | | | | | | 2 | | | | | 1 | 2.0 |
| Infiltration Cellular, Histiocyte | | | | 1 | | | | | 1 | | | | | | | | 1 | | 10 | 1.1 |
| Inflammation | 2 | | | | | | | | | | | | | | | | | | 3 | 2.0 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation | 2 | | | | | | | | | | | | | | | | | | 2 | 1.5 |
| Nasolacrim Dct, Inflammation | | | | | | | | | | | | | | | | | | | 2 | 1.5 |
| Upper Molar, Inflammation | | | | | | | | | | | X | | | | | X | X | | 6 | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Special Senses System | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 41 | |
| Bilateral, Retina, Degeneration | | | | | 3 | 3 | | | | 2 | 3 | | | 3 | 3 | | | | 9 | 2.6 |
| Retina, Degeneration | | | | | | | | | | | | | | | | | 2 | | 4 | 2.0 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 40 | |
| Epithelium, Degeneration | | | | | 2 | 2 | | 1 | 2 | | 1 | | | 1 | | 3 | 2 | | 17 | 1.5 |
| Hypertrophy | | | | | | | | | | | | | | | | | 1 | | 5 | 1.4 |
| Lacrimal Gland | | | | | | | | | | | | | | | | | | | 1 | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 13:00:03

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female
F3 5PPM TO CTL

| | | | | | | | | | | | | | | | | | | | |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | 4 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| | 3 | 3 | 3 | 3 | 3 | 6 | 6 | 6 | 8 | 9 | 9 | 9 | 9 | 1 | 1 | 1 | 1 | 6 | 6 |
| | 0 | 4 | 5 | 6 | 7 | 2 | 3 | 4 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 5 | 6 | 5 | 6 |
| | *TOTALS | | | | | | | | | | | | | | | | | | |

Metaplasia 1 1.0

Urinary System

| | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | X | X | X | X | | | | | | X | X | | | | | | | | X | 17 |
| Hydronephrosis | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Nephropathy | | | | | 1 | | 1 | 2 | 2 | | | | 1 | | | | 1 | | | 14 1.4 |
| Pelvis, Mineralization | 1 | | | | | | | | 2 | | | 2 | 1 | 1 | 2 | 1 | 1 | 2 | | 19 1.4 |
| Renal Tubule, Mineralization | 1 | 1 | 2 | 2 | 1 | 3 | 1 | 3 | 2 | 2 | | 1 | 1 | | 2 | 2 | 1 | | | 33 1.5 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | 47 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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1) Minimal 3) Moderate

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Experiment Number: 99930-93
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 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

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

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CD Rat Female | 3 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| F3 100PPM TO CTL | 7 | 5 | 8 | 0 | 0 | 1 | 1 | 3 | 4 | 4 | 6 | 7 | 7 | 8 | 8 | 8 | 1 | 2 | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 9 | 8 | 5 | 5 | 6 | 8 | 5 | 1 | 8 | 5 | 4 | 8 | 3 | 6 | 8 | 2 | 0 | 8 | 6 | 4 | 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 2 | 6 | 9 | 9 | 1 | 1 | 5 | 5 | 7 | 1 | 2 | 2 | 4 | 5 | 5 | 3 | 3 | 3 | 4 | 4 | 6 | 6 | 1 | 1 | 2 | 2 | 2 |
| | 5 | 2 | 6 | 2 | 3 | 3 | 4 | 5 | 8 | 3 | 2 | 3 | 6 | 2 | 4 | 6 | 1 | 5 | 7 | 5 | 9 | 3 | 4 | 8 | 9 | 0 | 1 | 1 |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum | + | + | + | + | + | A | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | X | | | | | | | | | | | X | | | | | | | | | | | X | | X |
| Bile Duct, Hyperplasia | | | | | 2 | | | | | | 1 | 1 | | 2 | | | | | | 2 | 2 | | | | 1 | | | 2 |
| Biliar Tract, Fibrosis | | | | | | | | | | | | | 1 | 2 | | | | 2 | | | | | | | | 2 | | |
| Cyst | | X | | | | | | | | | | X | | | | | | | | | | | | | | | | |
| Developmental Malformation | | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | 2 | |
| Hemorrhage | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | | X |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
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 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
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Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 13:00:04

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female
F3 100PPM TO CTL

Table with columns for DAY ON TEST and ANIMAL ID, and rows for 30 individual animals. Each cell contains a numerical value representing the severity of lesions.

Table listing various lesions such as Pigmentation, Vacuolization, Mesentery, Fat, Necrosis, Oral Mucosa, Keratin Cyst, Pancreas, Salivary Glands, Stomach, Hyperplasia, Ulcer, Stomach, Glandular Mineralization, Cardiovascular System, Blood Vessel, Heart, and Mineralization. Each lesion is followed by a row of 30 numerical values corresponding to the animals in the table above.

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

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Experiment Number: 99930-93

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Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 13:00:04

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female
F3 100PPM TO CTL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANIMAL ID | 3 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 7 | 5 | 8 | 0 | 0 | 1 | 1 | 3 | 4 | 4 | 6 | 7 | 7 | 8 | 8 | 8 | 1 | 2 | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 9 | 8 | 5 | 5 | 6 | 8 | 5 | 1 | 8 | 5 | 4 | 8 | 3 | 6 | 8 | 2 | 0 | 8 | 6 | 4 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 2 | 6 | 9 | 9 | 1 | 1 | 5 | 5 | 7 | 1 | 2 | 2 | 4 | 5 | 5 | 3 | 3 | 3 | 4 | 4 | 6 | 6 | 1 | 1 | 2 | 2 | 2 | 2 |
| | 5 | 2 | 6 | 2 | 3 | 3 | 4 | 5 | 8 | 3 | 2 | 3 | 6 | 2 | 4 | 6 | 1 | 5 | 7 | 5 | 9 | 3 | 4 | 8 | 9 | 0 | 1 | 1 | 1 |

Endocrine System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | | | 1 | | 2 | 1 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 3 | |
| Hematopoietic Cell Proliferation | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | 2 | | 1 | 1 | | | | 1 | 1 | 2 | | | 2 | | | | | | | | 2 | | 2 | | |
| Hypertrophy | | | 3 | | | | 2 | | | 1 | | | 1 | 3 | | | 1 | | 2 | 2 | | | 2 | | | | 3 | 3 | 3 | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Hyperplasia, Focal | | | 2 | | | | 2 | | | 1 | | | | | 1 | | | | | | 1 | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Hyperplasia | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | |
| Hyperplasia, Diffuse | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Focal | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Pars Distalis, Hyperplasia | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | 2 | | 2 | | 1 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cyst, Squamous | | | 1 | | | | | | | | | | | | | | 1 | 2 | | | | | | | 1 | | | | | | |

General Body System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 13:00:05

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

**CD Rat Female
F3 100PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 7 | 5 | 8 | 0 | 0 | 1 | 1 | 3 | 4 | 4 | 6 | 7 | 7 | 8 | 8 | 8 | 1 | 2 | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 9 | 8 | 5 | 5 | 6 | 8 | 5 | 1 | 8 | 5 | 4 | 8 | 3 | 6 | 8 | 2 | 0 | 8 | 6 | 4 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | 2 | 6 | 9 | 9 | 1 | 1 | 5 | 5 | 7 | 1 | 2 | 2 | 4 | 5 | 5 | 3 | 3 | 3 | 4 | 4 | 6 | 6 | 1 | 1 | 2 | 2 | 2 | 2 |
| | 5 | 2 | 6 | 2 | 3 | 3 | 4 | 5 | 8 | 3 | 2 | 3 | 6 | 2 | 4 | 6 | 1 | 5 | 7 | 5 | 9 | 3 | 4 | 8 | 9 | 0 | 1 | 1 | |

Genital System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Duct, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parenchym Cell, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Stromal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oviduct | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Stromal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenomyosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Metaplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vagina | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Hematopoietic System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue

M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

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Time Report Requested: 13:00:05

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CD Rat Female | 3 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| F3 100PPM TO CTL | 7 | 5 | 8 | 0 | 0 | 1 | 1 | 3 | 4 | 4 | 6 | 7 | 7 | 8 | 8 | 1 | 2 | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 9 | 8 | 5 | 5 | 6 | 8 | 5 | 1 | 8 | 5 | 4 | 8 | 3 | 6 | 8 | 2 | 0 | 8 | 6 | 4 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Hypocellularity | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Myeloid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Degeneration, Cystic | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Infiltration Cellular, Plasma Cell | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mandibular | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Plasma Cell | 2 2 1 2 2 1 1 1 1 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Granulomatous | 2 2 2 1 2 1 2 2 1 1 2 2 1 2 2 2 2 2 2 2 3 2 2 1 1 2 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | 2 2 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymphocyte, Atrophy | 2 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigmentation | 1 2 2 2 3 3 3 2 2 2 2 3 2 2 1 2 1 1 1 2 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | M + + + + M + + + + + + + + + + + + + + + M + + + + + + + + + + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrophy | 2 4 2 2 1 2 1 3 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | 2 4 1 1 2 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ectopic Thyroid | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Integumentary System | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically M ..Missing tissue 1-4 ..Lesion qualified as:
X ..Lesion present A ..Autolysis precludes evaluation 1) Minimal 3) Moderate
I ..Insufficient tissue BLANK ..Not examined microscopically 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Test Compound: Endocrine disruptor (Genistein)
CAS Number: 446-72-0

Date Report Requested: 10/17/2014
Time Report Requested: 13:00:05
First Dose M/F: NA / NA
Lab: NCTR

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 3 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | 5 | 9 | 8 | 5 | 5 | 6 | 8 | 5 | 1 | 8 | 5 | 4 | 8 | 3 | 6 | 8 | 8 | 2 | 0 | 8 | 6 | 4 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 0 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 9 | 2 | 6 | 9 | 9 | 1 | 1 | 5 | 5 | 7 | 1 | 2 | 2 | 4 | 5 | 5 | 3 | 3 | 3 | 4 | 4 | 6 | 6 | 1 | 1 | 2 | 2 | 2 | 2 | | | |
| | 5 | 2 | 6 | 2 | 3 | 3 | 4 | 5 | 8 | 3 | 2 | 3 | 6 | 2 | 4 | 6 | 1 | 5 | 7 | 5 | 9 | 4 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Alveolus, Degeneration | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolus, Hyperplasia | | | 2 | | | | | | 2 | | | | | 2 | 1 | | | | 1 | | | 3 | | | | 1 | | | | | | |
| Atypical Focus | | | | | | | | | X | | | | | | | | | | | | X | | | | | | | | | | | |
| Galactocele | | | | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | |
| Lactation | | | 2 | 2 | | 1 | 2 | 1 | 2 | 2 | 1 | | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 3 | 2 | 2 | | 2 | 1 | 1 | 3 | 2 | 1 | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| Foot, Inflammation, Chronic | | | | | | 3 | 1 | | 1 | 3 | 2 | 3 | 4 | 2 | 2 | 1 | 3 | 3 | 3 | | | 3 | 3 | 2 | 3 | | 3 | 2 | 3 | 2 | | |
| Musculoskeletal System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | | | | | | | | | | | | | + | | | | | | | | | | | | | | | | | | | |
| Bone, Femur | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Fibrous Osteodystrophy | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nervous System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain, Brain Stem | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Compression | | | 2 | 1 | 2 | | 1 | 3 | 2 | 1 | 1 | | 2 | 1 | 3 | 2 | 2 | 2 | | 2 | 2 | 3 | | | | 2 | | | 3 | | | |
| Brain, Cerebellum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Brain, Cerebrum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hydrocephalus | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 13:00:05

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female
F3 100PPM TO CTL

Table with columns for DAY ON TEST and ANIMAL ID, and 30 columns of numerical data representing counts for each animal.

Main table listing various anatomical systems (Alveolar Epith, Hemorrhage, Infiltration Cellular, etc.) and their corresponding counts across 30 animals.

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
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Experiment Number: 99930-93
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:06
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 100PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 4 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 3 | 3 | 4 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 6 | 6 | 9 |
| | 8 | 9 | 0 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 6 | 7 | 8 | 9 | 5 | 7 | 8 |
| | *TOTALS | | | | | | | | | | | | | | | | | |

Alimentary System

| | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 40 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis | | | | 1 | | | | | | | | | | | | | | | 1 1.0 |
| Basophilic Focus | | | X | | | | | X | | | | | | | | | | | 6 |
| Bile Duct, Hyperplasia | 2 | 1 | 1 | 1 | | | | | 2 | | | | | | 2 | | | | 14 1.6 |
| Biliar Tract, Fibrosis | | | | | | | | | | | | | | | | | | | 4 1.8 |
| Cyst | | X | | | | | | | | | | | | | | | | | 3 |
| Developmental Malformation | | | | | | | | | | | | | | | | | | | 1 |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | X | | 1 |
| Hematopoietic Cell Proliferation | | | | | | 1 | | | | | | 1 | | | | | | | 4 1.3 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | 1 |
| Infiltration Cellular, Lymphocyte | | | | 1 | 1 | | | 3 | | | | | | | | | | | 4 1.5 |
| Inflammation, Chronic Active | 3 | | | | | | | | | | | | | | | | 1 | | 3 1.7 |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | 1 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 13:00:06

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female
F3 100PPM TO CTL

Table with columns for DAY ON TEST and ANIMAL ID, and 20 columns of numerical data representing lesion counts for each animal.

*TOTALS

Main table listing various lesions (e.g., Pigmentation, Vacuolization, Mesentery, etc.) and their corresponding counts and mean severity grades across the 20 animals.

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:06
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 100PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 4 | 6 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 3 | 3 | 4 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 6 | 6 | 9 |
| | 8 | 9 | 0 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 6 | 7 | 8 | 9 | 5 | 7 | 8 | 7 |
| | *TOTALS | | | | | | | | | | | | | | | | | | |

Endocrine System

| | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Angiectasis | | | | | | | | | | | | | | | | | | 2 | | 1 | 2.0 |
| Degeneration, Cystic | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | 2 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | | 2 | | 45 | 1.8 |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Hyperplasia | | | | | | | | | 1 | 1 | | | 2 | | 2 | | | | | 13 | 1.5 |
| Hypertrophy | 3 | 2 | 2 | | | 3 | 2 | | 1 | | 1 | 3 | 3 | | | | | 4 | | 22 | 2.3 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia, Focal | | | 2 | | | | | | | | | | | | | 2 | | | | 7 | 1.6 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | | | | 1 | | | | | | | | | 3 | 1.0 |
| Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | M | 47 | |
| Hyperplasia, Diffuse | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Hyperplasia, Focal | | | | | | | | | | | 2 | | | | | | | | | 2 | 1.5 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst | | | | | | | | | | | | | | | | | | | | 2 | |
| Pars Distalis, Hyperplasia | | | | | | | | | | | | | | | | | | | | 4 | 2.0 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst, Squamous | | | | 1 | 1 | | | | | | | | | | 1 | | | | | 7 | 1.1 |

General Body System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:07
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 100PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 4 | 6 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 3 | 3 | 4 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 6 | 6 | 6 | 9 | |
| | 8 | 9 | 0 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 2 | 3 | 6 | 7 | 8 | 9 | 5 | 7 | 8 | 7 |
| | *TOTALS | | | | | | | | | | | | | | | | | | | |

Genital System

| | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Duct, Dilatation | 2 | 2 | | | | | 2 | | 1 | 3 | | | | | | | | | | 8 2.3 |
| Hyperplasia | | | | | | | | | | | 1 | | | | | | | | | 2 1.0 |
| Inflammation | | 2 | 1 | | 1 | | | 1 | 1 | | | 1 | 1 | 1 | | 1 | | | 3 | 29 1.5 |
| Parenchym Cell, Degeneration | | | | | | | | | | | | | | 2 | | | | | | 1 2.0 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Atrophy | 2 | 2 | 2 | | | 2 | | 2 | 3 | 2 | | | | | 2 | 2 | | 2 | 2 | 32 2.0 |
| Cyst | X | | X | X | X | | X | X | X | | | | X | | X | | | | | 16 |
| Hyperplasia, Stromal | 1 | 1 | 1 | | | 3 | 1 | | 1 | 1 | 1 | 2 | 2 | | 2 | 1 | | 2 | 2 | 27 1.5 |
| Oviduct | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Atrophy | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Hyperplasia, Stromal | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenomyosis | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Hyperplasia, Cystic | 2 | 2 | | 3 | | 1 | | | 1 | 2 | | 3 | | | 3 | | | 2 | | 24 2.0 |
| Metaplasia | | | | | | | | | | | | | | | | | | | | 5 1.4 |
| Vagina | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Inflammation | | | | | | | | | | | | | | | | | | | | 5 1.6 |

Hematopoietic System

| | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 13:00:07

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female
F3 100PPM TO CTL

Table with columns for DAY ON TEST and ANIMAL ID, containing numerical data for 20 animals across 20 days.

*TOTALS

Main data table listing various lesions (e.g., Hypocellularity, Myeloid Cell, Hyperplasia) and their counts/grades across 20 animals.

Integumentary System

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:07
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 100PPM TO CTL**

| DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | *TOTALS |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 4 | 6 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 3 | 3 | 4 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 6 | 6 | 6 | 9 | 9 |
| | 8 | 9 | 0 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 2 | 3 | 6 | 7 | 8 | 9 | 5 | 7 | 8 | 7 |
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Alveolus, Degeneration | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Alveolus, Hyperplasia | | | 1 | 2 | 3 | 1 | | 1 | 1 | | | 1 | 1 | 1 | | | | | 2 | 18 1.5 |
| Atypical Focus | | | | | | | | | | X | | | | | X | | | | | 4 |
| Galactocele | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Lactation | 2 | 2 | 3 | 2 | | 2 | 2 | 1 | 1 | 2 | | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 43 1.7 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | 1 |
| Foot, Inflammation, Chronic | | | 2 | 3 | 3 | 3 | 2 | | 2 | 3 | 1 | 3 | 4 | 3 | 2 | 2 | 4 | 2 | 3 | 37 2.5 |
| Musculoskeletal System | | | | | | | | | | | | | | | | | | | | |
| Bone | | | | | | | | | | | | | | | | | | | | 1 |
| Bone, Femur | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Fibrous Osteodystrophy | | | | | | | | | | | | | | | | | | | | 1 |
| Nervous System | | | | | | | | | | | | | | | | | | | | |
| Brain, Brain Stem | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Compression | 2 | 2 | 1 | | | 2 | | | 2 | 2 | | | | | | 2 | | 2 | | 28 1.9 |
| Brain, Cerebellum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Brain, Cerebrum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hydrocephalus | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Respiratory System | | | | | | | | | | | | | | | | | | | | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 13:00:07

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female
F3 100PPM TO CTL

Table with columns for DAY ON TEST and ANIMAL ID, and rows for 0-8 days and 1-8 animals. Contains numerical data for each cell.

*TOTALS

Main data table listing various anatomical systems (Alveolar Epith, Hemorrhage, Infiltration Cellular, etc.) and their corresponding counts and severity grades across 20 animals.

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:08
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 100PPM TO CTL**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------|-----|--|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 4 | 6 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 3 | 3 | 4 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 6 | 6 | 9 | | |
| | 8 | 9 | 0 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 6 | 7 | 8 | 9 | 5 | 7 | 8 | 7 | | |
| | | | | | | | | | | | | | | | | | | | *TOTALS | | |
| Pelvis, Mineralization | | | | | | | | | | | | | | | | | | | 28 | 1.6 | |
| Renal Tubule, Mineralization | | | | | | | | | | | | | | | | | | | 43 | 1.7 | |
| Urinary Bladder | | | | | | | | | | | | | | | | | | | 48 | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 99930-93

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/17/2014

Test Type: SPECIAL STUDY

Test Compound: Endocrine disruptor (Genistein)

Time Report Requested: 13:00:08

Route: DOSED FEED

CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

**CD Rat Female
F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 2 | 9 | 9 | 2 | 2 | 4 | 5 | 8 | 9 | 3 | 4 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 9 | 0 | 0 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 4 | 4 | 5 | 5 | 7 | 7 | 9 | 9 | 1 | 1 | 0 | 0 | 5 | 8 | 7 | 9 | 6 | 9 | 6 | 7 | 7 | 6 | 2 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| | 6 | 4 | 4 | 8 | 8 | 0 | 2 | 6 | 7 | 4 | 7 | 7 | 1 | 1 | 1 | 1 | 2 | 5 | 5 | 2 | 6 | 2 | 3 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| | 7 | 1 | 2 | 1 | 3 | 5 | 3 | 0 | 6 | 0 | 1 | 5 | 1 | 4 | 5 | 6 | 8 | 2 | 5 | 5 | 1 | 7 | 9 | 1 | 5 | 6 | 7 | 8 | 9 | 9 | 9 | 9 | |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Intestine Large, Rectum | | | | | | | | | | | | | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Angiectasis | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atypical Cells | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | | | | | | | | X | X | | | | | | | | | | | | | | | | | | | | | | | X | |
| Bile Duct, Hyperplasia | | | | | | | | | | | | 1 | | 1 | | 1 | | | | | | 2 | | | | | | | | | | 1 | 1 | | 2 | |
| Clear Cell Focus | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Developmental Malformation | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hepatodiaphragmatic Nodule | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:09
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 2 | 9 | 9 | 2 | 2 | 4 | 5 | 8 | 9 | 3 | 4 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 9 | 0 | 0 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 4 | 4 | 5 | 5 | 7 | 7 | 9 | 9 | 1 | 1 | 0 | 0 | 5 | 8 | 7 | 9 | 6 | 7 | 7 | 6 | 2 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| | 6 | 4 | 4 | 8 | 8 | 0 | 2 | 6 | 7 | 4 | 7 | 1 | 1 | 1 | 1 | 2 | 5 | 5 | 2 | 6 | 2 | 3 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | |
| | 7 | 1 | 2 | 1 | 3 | 5 | 3 | 0 | 6 | 0 | 1 | 5 | 1 | 4 | 5 | 6 | 8 | 2 | 5 | 1 | 7 | 9 | 1 | 5 | 6 | 6 | 7 | 8 | 9 | 6 | 7 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oval Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Acinar Cell, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Polyarteritis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Erosion | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cardiovascular System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Atrium Lft, Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrium Rgt, Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cardiomyopathy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Endocrine System

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 13:00:09

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female
F3 500PPM TO CTL

Table with columns for DAY ON TEST (0-30) and ANIMAL ID (0-30). Each cell contains a numerical value representing the count of animals with a specific lesion.

Main table listing various anatomical systems and lesions (e.g., Adrenal Cortex, Atrophy, Degeneration, Cystic Hyperplasia) with corresponding counts for each of the 30 animals.

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
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Experiment Number: 99930-93

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CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

| CD Rat Female
F3 500PPM TO CTL | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | | |
| | 6 | 4 | 4 | 8 | 8 | 0 | 2 | 6 | 7 | 4 | 7 | 7 | 1 | 1 | 1 | 1 | 2 | 5 | 5 | 2 | 6 | 2 | 3 | 4 | 6 | 6 | 6 | 6 | | | |
| | 7 | 1 | 2 | 1 | 3 | 5 | 3 | 0 | 6 | 0 | 1 | 5 | 1 | 4 | 5 | 6 | 8 | 2 | 5 | 5 | 1 | 7 | 9 | 1 | 5 | 6 | 7 | 8 | 9 | | |
| Hyperplasia | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | 2 | 3 | | | 2 | 1 | 2 | | 1 | 3 | | 2 | 1 | 3 | 3 | 1 | | 1 | 3 | 1 | 4 | 3 | 1 | | 1 | | 1 | 3 | 1 | 2 | |
| Parenchym Cell, Degeneration | | | 1 | | | 2 | | | | | | | | | | | | | | | | | 2 | | | 2 | | | | | |
| Vacuolization Cytoplasmic | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Atrophy | 2 | 2 | 3 | | 2 | 3 | | 3 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | 2 | | 2 | | 3 | 2 | 3 | | 3 | | 2 | 3 | | 2 | 3 | |
| Cyst | X | | | | | X | | X | | X | | | | | | | | | | X | X | | | X | | | | | | | |
| Hyperplasia, Stromal | | | | | 1 | | 2 | 1 | 2 | | 3 | | 2 | 2 | | 2 | | | | 3 | 2 | | | | | 1 | | 1 | | 2 | 1 |
| Oviduct | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Adenomyosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Hyperplasia, Cystic | | | 1 | | | 1 | 2 | | | | | 3 | 1 | 2 | | | | | | 2 | | | 2 | | 1 | 1 | 3 | | 1 | 2 | |
| Metaplasia | | | | | | 1 | | | | | | | | 1 | | | | | | 2 | | 3 | | | | | | | | | |
| Vagina | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation | | | | | | 1 | | | | 2 | | | | | | | | | | 2 | 3 | | | 2 | | | | | | | |
| Hematopoietic System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hypocellularity | | | | | | | | | | | | | | | | | | | | 3 | | | | | | | 2 | | | | |
| Myeloid Cell, Hyperplasia | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node | | | | | | | | | | | | | | | + | + | | | | | | + | + | | | | | | | + | |
| Lumbar, Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Lumbar, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | 2 | 2 | | 2 | | | | | | | | | | | | 2 | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
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CAS Number: 446-72-0

First Dose M/F: NA / NA

Species/Strain: Rat/CD

Lab: NCTR

| CD Rat Female
F3 500PPM TO CTL | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 2 | 9 | 9 | 2 | 2 | 4 | 5 | 8 | 9 | 3 | 4 | 5 | 6 | 6 | 6 | 6 | 7 | 8 | 8 | 9 | 0 | 0 | 3 | 3 | 5 | 5 | 5 | 5 | 5 |
| | 4 | 4 | 5 | 5 | 7 | 7 | 9 | 9 | 1 | 1 | 0 | 0 | 5 | 8 | 7 | 9 | 6 | 9 | 6 | 7 | 7 | 6 | 2 | 6 | 1 | 1 | 1 | 1 | 1 |
| Mediastinal, Hemorrhage | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mediastinal, Infiltration Cellular, Plasma Cell | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pancreatic, Hemorrhage | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| Popliteal, Infiltration Cellular, Plasma Cell | 6 | 4 | 4 | 8 | 8 | 0 | 2 | 6 | 7 | 4 | 7 | 7 | 1 | 1 | 1 | 1 | 2 | 5 | 5 | 2 | 6 | 2 | 3 | 4 | 6 | 6 | 6 | 6 | 2 |
| Renal, Infiltration Cellular, Plasma Cell | 7 | 1 | 2 | 1 | 3 | 5 | 3 | 0 | 6 | 0 | 1 | 5 | 1 | 4 | 5 | 6 | 8 | 2 | 5 | 5 | 1 | 7 | 3 | 9 | 1 | 5 | 6 | 7 | 8 |
| Lymph Node, Mandibular | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymphocyte, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Red Pulp, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithel Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
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 First Dose M/F: NA / NA
 Lab: NCTR

CD Rat Female
 F3 500PPM TO CTL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 2 | 9 | 9 | 2 | 2 | 4 | 5 | 8 | 9 | 3 | 4 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 9 | 0 | 0 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | |
| | 4 | 4 | 5 | 5 | 7 | 7 | 9 | 9 | 1 | 1 | 0 | 0 | 5 | 8 | 7 | 9 | 6 | 9 | 6 | 7 | 7 | 6 | 2 | 6 | 1 | 1 | 1 | 1 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| | 6 | 4 | 4 | 8 | 8 | 0 | 2 | 6 | 7 | 4 | 7 | 7 | 1 | 1 | 1 | 1 | 2 | 5 | 5 | 2 | 6 | 2 | 3 | 4 | 6 | 6 | 6 | 6 | |
| | 7 | 1 | 2 | 1 | 3 | 5 | 3 | 0 | 6 | 0 | 1 | 5 | 1 | 4 | 5 | 6 | 8 | 2 | 5 | 5 | 1 | 7 | 9 | 1 | 5 | 6 | 7 | 8 | |

Integumentary System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Alveolus, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Alveolus, Hyperplasia | | | | | | | | | | 1 | | | | | 1 | | | 2 | | | | | 1 | | | | | 1 |
| Atypical Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Galactocele | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lactation | | | 1 | 1 | 1 | | 1 | 1 | | | 2 | | 1 | | | | | 2 | 2 | | 1 | 1 | | 1 | 1 | 2 | | 2 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Foot, Inflammation, Chronic | | | 3 | | 3 | 1 | | | 1 | | 4 | | 3 | | | 4 | 2 | 2 | 4 | 2 | | 3 | 3 | 2 | 2 | | 3 | 3 |

Musculoskeletal System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone, Femur | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

Nervous System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain, Brain Stem | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + |
| Compression | | | 2 | | | | 1 | 3 | 1 | 2 | 3 | 3 | | | 2 | 2 | | 3 | | 2 | 2 | 2 | | 2 | | 1 | | 3 |
| Brain, Cerebellum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + |
| Brain, Cerebrum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + |
| Hydrocephalus | | | | 1 | | | | | | | | | | | | | 2 | | | | 2 | | | | | | | |

Respiratory System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 13:00:10

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female
F3 500PPM TO CTL

Table with columns for DAY ON TEST and ANIMAL ID, and rows of numerical data representing counts or severity grades for 30 animals.

Table listing lesions for Lung, Nose, and Trachea across 30 animals, with symbols (+, -, M, X) indicating presence or absence of lesions.

Special Senses System

Table listing lesions for Eye and Harderian Gland across 30 animals, with symbols (+, -, M, X) indicating presence or absence of lesions.

Urinary System

Table listing lesions for Kidney across 30 animals, with symbols (+, -, M, X) indicating presence or absence of lesions.

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
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Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 13:00:11

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Female
F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 2 | 9 | 9 | 2 | 2 | 4 | 5 | 8 | 9 | 3 | 4 | 5 | 6 | 6 | 6 | 7 | 8 | 8 | 9 | 0 | 0 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | |
| | 4 | 4 | 5 | 5 | 7 | 7 | 9 | 9 | 1 | 1 | 0 | 0 | 5 | 8 | 7 | 9 | 6 | 9 | 6 | 7 | 7 | 6 | 2 | 6 | 1 | 1 | 1 | 1 | 1 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| | 6 | 4 | 4 | 8 | 8 | 0 | 2 | 6 | 7 | 4 | 7 | 7 | 1 | 1 | 1 | 1 | 2 | 5 | 5 | 2 | 6 | 2 | 3 | 4 | 6 | 6 | 6 | 6 | |
| | 7 | 1 | 2 | 1 | 3 | 5 | 3 | 0 | 6 | 0 | 1 | 5 | 1 | 4 | 5 | 6 | 8 | 2 | 5 | 5 | 1 | 7 | 9 | 1 | 5 | 6 | 7 | 7 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|
| Infarct | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pelvis, Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal Tubule, Mineralization | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:11
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 1 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 3 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 2 | 2 | 4 | 4 | 4 | 6 | 9 | 9 | 9 | 0 | 2 | 2 | 6 | 7 | 7 | 7 | 7 | 9 | |
| | 8 | 9 | 1 | 2 | 3 | 5 | 5 | 6 | 7 | 7 | 4 | 5 | 9 | 0 | 1 | 2 | 3 | 4 | 8 |

***TOTALS**

Alimentary System

| | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|--------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 37 | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Intestine Small, Ileum | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Intestine Small, Jejunum | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Angiectasis | | | | | | | | | | 2 | 3 | | | | | | | | | 3 2.0 | |
| Atypical Cells | | | | | | | | | | 3 | | | | | | | | | | 1 3.0 | |
| Basophilic Focus | | | | | | | | | | | X | | | | | | | | X | 5 | |
| Bile Duct, Hyperplasia | | | | | 1 | | | | | 1 | | | 2 | 1 | 1 | | 1 | 2 | 1 | 1 | 16 1.3 |
| Clear Cell Focus | | | | | | | | | | | | | | | | | | | | | 1 |
| Congestion | | | | | | | | | | | | | | | | | | | 2 | | 2 2.5 |
| Cyst | | | | | | | | | | | | | | | X | | | | | | 1 |
| Degeneration, Cystic | | | | | | | | | | 3 | | | | | | | | | | | 1 3.0 |
| Developmental Malformation | | | | | | | | | | | | | | | | | | | | | 1 |
| Eosinophilic Focus | | | X | | | | | | | | X | | | | | | | | X | | 4 |
| Hematopoietic Cell Proliferation | | 1 | | | | | | | | | | | | | | | | | | | 3 1.0 |
| Hepatodiaphragmatic Nodule | | | X | | | | | | | | | | | | | | | | | | 3 |
| Infiltration Cellular, Lymphocyte | | | | | | 1 | | | | | | | | | | 1 | | | | | 3 1.0 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

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 Lab: NCTR

**CD Rat Female
 F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 1 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 3 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 2 | 2 | 4 | 4 | 4 | 6 | 9 | 9 | 9 | 0 | 2 | 2 | 6 | 7 | 7 | 7 | 7 | 9 | |
| | 8 | 9 | 1 | 2 | 3 | 5 | 5 | 6 | 7 | 7 | 4 | 5 | 9 | 0 | 1 | 2 | 3 | 4 | 8 |

***TOTALS**

| | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|--|--|--|---|---|---|---|--|--|---|---|---|---|----|-----|-----|
| Inflammation, Chronic Active | 1 | | | | | | | | | | | | | | | | | | 5 | 1.4 | |
| Necrosis | 2 | | | | | | | | | | | | | | | | | | 2 | 2.0 | |
| Oval Cell, Hyperplasia | 3 | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Vacuolization Cytoplasmic | 3 | | | | | | | | | | | | | | | | | | 1 | 4 | 2.3 |
| Oral Mucosa | | | | | | | | | | | | | | | | | | | 1 | | |
| Pancreas | + | | | | | | | | | | | | | | | | | | 49 | | |
| Acinar Cell, Degeneration | 1 | 1 | | 1 | 3 | | | | 2 | | 3 | 1 | | | 1 | 1 | 2 | 3 | 1 | 18 | 1.6 |
| Polyarteritis | 1 | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Salivary Glands | + | | | | | | | | | | | | | | | | | | 49 | | |
| Atrophy | | | | | | | | | | | | | | | | | | | 2 | 2.5 | |
| Stomach, Forestomach | + | | | | | | | | | | | | | | | | | | 49 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Stomach, Glandular | + | | | | | | | | | | | | | | | | | | 49 | | |
| Erosion | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 |
| Cardiovascular System | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | + | | | | | | | | | | | | | | | | | | 49 | | |
| Mineralization | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Heart | + | | | | | | | | | | | | | | | | | | 49 | | |
| Atrium Lft, Thrombosis | X | | | | | | | | | | | | | | | | | | 1 | | |
| Atrium Rgt, Dilatation | 2 | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Cardiomyopathy | 1 | 1 | 1 | | | | | | 2 | 1 | 1 | 1 | | | 1 | | 1 | | 2 | 26 | 1.1 |
| Endocrine System | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

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 Lab: NCTR

**CD Rat Female
 F3 500PPM TO CTL**

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------|--------|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 2 | 3 |
| | 1 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 3 | 3 | 2 | 3 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2 | 2 | 4 | 4 | 4 | 6 | 9 | 9 | 9 | 0 | 2 | 2 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 9 |
| | 8 | 9 | 1 | 2 | 3 | 5 | 5 | 6 | 7 | 7 | 4 | 5 | 9 | 0 | 1 | 2 | 3 | 4 | 8 | |
| | | | | | | | | | | | | | | | | | | | *TOTALS | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Atrophy | | | | | | | | | | | | | 3 | | | | | | | 1 3.0 |
| Degeneration, Cystic | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 1 | 2 | 3 | | 1 | 3 | 1 | 2 | 47 2.2 |
| Hyperplasia | | 2 | | | | 1 | | | | 2 | 2 | | | 1 | | 1 | | 1 | | 16 1.4 |
| Hypertrophy | | | | 1 | | 3 | | 2 | 3 | | | 3 | 3 | | 1 | 1 | | 1 | 3 | 23 2.0 |
| Vacuolization Cytoplasmic | | | | | | | | | | 4 | | | | | | | | | | 2 3.5 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Hyperplasia, Focal | | | | 2 | | 2 | | | 3 | 2 | | | | | 1 | | | | | 7 1.9 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hyperplasia | | | | | | | | | | | | | | 1 | | | | | | 1 1.0 |
| Parathyroid Gland | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | 46 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Pars Distalis, Hyperplasia | | | | | | | | | | | | 3 | | | | | | 1 | 4 | 6 2.3 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| C Cell, Hyperplasia | | | | 2 | | | 1 | | | | | | | | | | | | 2 | 3 1.7 |
| Cyst, Squamous | | | | 1 | | | | | | | | | | | | | | | | 5 1.6 |
| General Body System | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | |
| Genital System | | | | | | | | | | | | | | | | | | | | |
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Duct, Dilatation | | | | | | | 1 | | | | | | 3 | 2 | | 2 | | | | 8 2.1 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:12
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 1 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 3 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2 | 2 | 4 | 4 | 4 | 6 | 9 | 9 | 9 | 0 | 2 | 2 | 6 | 7 | 7 | 7 | 7 | 9 |
| | 8 | 9 | 1 | 2 | 3 | 5 | 5 | 6 | 7 | 4 | 5 | 9 | 0 | 1 | 2 | 3 | 4 | 8 |

***TOTALS**

| | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|-----|-----|-----|
| Hyperplasia | | | | | | | | | | | | | | | | | | | 3 | 1.3 | | | |
| Inflammation | 1 | | 1 | | 1 | | | | | | | | 2 | 1 | 2 | 1 | 2 | | 1 | 32 | 1.8 | | |
| Parenchym Cell, Degeneration | | | | | | | | | | | 3 | | | | 3 | | 2 | | 2 | 8 | 2.1 | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | | |
| Atrophy | | | 3 | 3 | | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 1 | 4 | 3 | 2 | 2 | 3 | | 3 | 39 | 2.4 | |
| Cyst | | | X | X | X | X | | | | X | X | | | | X | | | | | | 16 | | |
| Hyperplasia, Stromal | 1 | | | 1 | 1 | | 2 | 1 | | | | | | | 1 | | 2 | 2 | 2 | | 2 | 24 | 1.7 |
| Oviduct | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Adenomyosis | | | | | | | | | | | | 2 | | | | | | | | | | 2 | 1.5 |
| Hyperplasia, Cystic | | | | | | 2 | 1 | 1 | | 3 | 1 | 3 | 3 | | | 1 | 2 | 1 | | 2 | 24 | 1.8 | |
| Metaplasia | | | | 2 | | | | | | | | | | | | | | | | | 1 | 6 | 1.7 |
| Vagina | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | 48 | | |
| Inflammation | | | 1 | | | | | | | | | | | | | | | | 1 | | | 7 | 1.7 |
| Hematopoietic System | | | | | | | | | | | | | | | | | | | | | | | |
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Hypocellularity | | | 2 | | | | | | | | | 2 | | | | | | | | | | 4 | 2.3 |
| Myeloid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Lymph Node | | | | | | | | + | + | + | | | | + | | | M | + | | + | | 12 | |
| Lumbar, Degeneration, Cystic | | | | | | | 2 | | 3 | | | | | | | | | | 1 | | | 4 | 2.3 |
| Lumbar, Infiltration Cellular, Plasma Cell | | | | | | | 3 | | 2 | 2 | | | | | 2 | | | | 2 | | 2 | 10 | 2.1 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:12
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 1 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 3 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 2 | 2 | 4 | 4 | 4 | 6 | 9 | 9 | 9 | 0 | 2 | 2 | 6 | 7 | 7 | 7 | 7 | 9 | |
| | 8 | 9 | 1 | 2 | 3 | 5 | 5 | 6 | 7 | 7 | 4 | 5 | 9 | 0 | 1 | 2 | 3 | 4 | 8 |

***TOTALS**

| | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Mediastinal, Hemorrhage | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Mediastinal, Infiltration Cellular, Plasma Cell | | | | | | | | | | 2 | | | | | | | | | | 2 | 2.0 | |
| Pancreatic, Hemorrhage | | | | | | | | | | 2 | | | | | | | | | | 2 | 2.0 | |
| Popliteal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Renal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Degeneration, Cystic | | | | | | | | | | | | | 1 | | | | | | | 3 | 1.3 | |
| Infiltration Cellular, Plasma Cell | 2 | 2 | 2 | 1 | 1 | | 2 | 2 | 2 | 3 | 3 | | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 42 | 1.9 | |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Hemorrhage | | | | | | | | | | 3 | | | | | | | | | | 1 | 3.0 | |
| Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Inflammation, Granulomatous | 2 | 2 | 2 | 3 | 2 | 1 | 2 | | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 44 | 1.9 | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Hematopoietic Cell Proliferation | 1 | | | | | | 2 | | 1 | 2 | | | | 2 | | | | 1 | | 10 | 1.6 | |
| Lymphocyte, Atrophy | | | 2 | | | | | | | | | | | | | | | | 2 | 3 | 2.3 | |
| Pigmentation | | | 3 | 2 | 2 | 2 | | 2 | 1 | | 2 | | 3 | 3 | 1 | 2 | 2 | 1 | 2 | 30 | 1.9 | |
| Red Pulp, Atrophy | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | | |
| Atrophy | | | 3 | | | | | | | | 3 | | 1 | | 2 | | | 2 | | 9 | 2.4 | |
| Cyst | | | | | 2 | | | 3 | 2 | | 2 | | | 2 | | | | 2 | 2 | 2 | 17 | 1.8 |
| Epithel Cell, Hyperplasia | | | | | | | | | | | | | 2 | | | | | | | 2 | 2.0 | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | 2 | 2.5 | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:12
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 1 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 3 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2 | 2 | 4 | 4 | 4 | 6 | 9 | 9 | 9 | 0 | 2 | 2 | 6 | 7 | 7 | 7 | 7 | 9 |
| | 8 | 9 | 1 | 2 | 3 | 5 | 5 | 6 | 7 | 7 | 4 | 5 | 9 | 0 | 1 | 2 | 3 | 8 |
| | *TOTALS | | | | | | | | | | | | | | | | | |

Integumentary System

| | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|--------|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Alveolus, Degeneration | | | | | | | | | | 3 | | | 2 | 1 | | | 2 | | 5 1.8 | |
| Alveolus, Hyperplasia | | | 1 | 3 | | 2 | 1 | | 2 | 1 | 1 | | | | 4 | | 1 | 1 | 1 | 17 1.5 |
| Atypical Focus | | | X | | | | X | | X | | | | | | X | | | | | 5 |
| Galactocele | | | | | | | | | | | 3 | | | 3 | | | | | | 3 3.0 |
| Hyperplasia | | | | | 2 | | | | | | | | | | | | | | | 1 2.0 |
| Lactation | | | 1 | 2 | | 1 | 2 | 2 | 2 | 1 | 3 | 1 | 1 | | 1 | 1 | 1 | 2 | 2 | 33 1.5 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst Epithelial Inclusion | | | | | | | | | | | | X | | | | | | | | 1 |
| Foot, Inflammation, Chronic | 3 | 1 | 1 | 3 | 3 | 4 | 2 | 2 | 2 | | 3 | 3 | 2 | 2 | | 2 | 3 | | 3 | 35 2.5 |

Musculoskeletal System

| | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone, Femur | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

Nervous System

| | | | | | | | | | | | | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Brain, Brain Stem | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Compression | | | 1 | 1 | 2 | 2 | 2 | | 1 | 1 | 1 | | | | 2 | 3 | 2 | 2 | | 29 1.9 |
| Brain, Cerebellum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Brain, Cerebrum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hydrocephalus | | | | | | | | | | | | | | | | | | | | 3 1.7 |

Respiratory System

| | | | | | | | | | | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
 1-4 ..Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 99930-93

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Endocrine disruptor (Genistein)

CAS Number: 446-72-0

Date Report Requested: 10/17/2014

Time Report Requested: 13:00:12

First Dose M/F: NA / NA

Lab: NCTR

CD Rat Female
F3 500PPM TO CTL

Table with columns for DAY ON TEST (0-7) and ANIMAL ID (0-8) across 19 rows.

*TOTALS

Main data table with columns for lesion types (Lung, Nose, Trachea, Eye, Harderian Gland, Urinary System) and counts/severity grades.

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

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

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: Endocrine disruptor (Genistein)
 CAS Number: 446-72-0

Date Report Requested: 10/17/2014
 Time Report Requested: 13:00:13
 First Dose M/F: NA / NA
 Lab: NCTR

**CD Rat Female
 F3 500PPM TO CTL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|------------------------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| | 1 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 3 | 3 | 2 | 3 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 2 | 2 | 4 | 4 | 4 | 6 | 9 | 9 | 0 | 2 | 2 | 6 | 7 | 7 | 7 | 7 | 7 | 9 | 9 | |
| | 8 | 9 | 1 | 2 | 3 | 5 | 5 | 6 | 7 | 7 | 4 | 5 | 9 | 0 | 1 | 2 | 3 | 4 | 8 | |
| | *TOTALS | | | | | | | | | | | | | | | | | | | |
| Infarct | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Inflammation | | | | | | | | | | | | | | | | | | | 5 | 1.2 |
| Nephropathy | | | | | | | | | | | | | | | | | | | 18 | 1.6 |
| Pelvis, Mineralization | | | | | | | | | | | | | | | | | | | 24 | 1.1 |
| Renal Tubule, Mineralization | | | | | | | | | | | | | | | | | | | 27 | 1.8 |
| Urinary Bladder | | | | | | | | | | | | | | | | | | | 47 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Inflammation | | | | | | | | | | | | | | | | | | | 1 | 2.0 |

**** END OF REPORT ****

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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