

**Experiment Number:** 99930-99  
**Test Type:** SPECIAL STUDY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

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

**Test Compound:** Endocrine disruptor (Genistein)

**CAS Number:** 446-72-0

**Date Report Requested:** 10/22/2014

**Time Report Requested:** 14:12:42

**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	F0	0 PPM	F0	5 PPM	F0	100 PPM	F0	500 PPM
<b>Disposition Summary</b>								
Animals Initially In Study		25		25		25		25
Early Deaths								
Natural Death		1						
Survivors								
Terminal Sacrifice		24		25		25		25
Animals Examined Microscopically		25		25		25		25
<b>ALIMENTARY SYSTEM</b>								
Liver		(24)		(6)		(0)		(25)
Fibrosis		1 (4%)		1 (17%)				
Hemorrhage								1 (4%)
Hepatodiaphragmatic Nodule		3 (13%)		1 (17%)				2 (8%)
Inflammation, Chronic		18 (75%)						19 (76%)
Malformation				3 (50%)				2 (8%)
Necrosis		2 (8%)						4 (16%)
Perivascular, Fibrosis				1 (17%)				
Vacuolization Cytoplasmic		7 (29%)						8 (32%)
Mesentery		(0)		(0)		(0)		(1)
Fat, Inflammation, Chronic								1 (100%)
Salivary Glands		(1)		(0)		(0)		(0)
<b>CARDIOVASCULAR SYSTEM</b>								
Blood Vessel		(1)		(0)		(0)		(0)
Heart		(1)		(0)		(0)		(0)
<b>ENDOCRINE SYSTEM</b>								
Adrenal Cortex		(23)		(0)		(0)		(25)
Accessory Adrenal Cortical Nodule		1 (4%)						1 (4%)
Adrenal Medulla		(22)		(0)		(0)		(25)
Parathyroid Gland		(1)		(0)		(1)		(0)

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Pituitary Gland	(24)		(0)		(0)		(25)	
Pars Distalis, Cyst, Multiple							2 (8%)	
Thyroid Gland	(24)		(0)		(0)		(25)	
Inflammation, Chronic	1 (4%)						2 (8%)	
GENERAL BODY SYSTEM								
None								
GENITAL SYSTEM								
Coagulating Gland	(23)		(24)		(22)		(25)	
Epididymis	(24)		(25)		(25)		(25)	
Hypospermia	2 (8%)						1 (4%)	
Infiltration Cellular, Lymphocyte	1 (4%)		2 (8%)		2 (8%)			
Preputial Gland	(0)		(0)		(0)		(1)	
Duct, Dilatation							1 (100%)	
Inflammation, Suppurative							1 (100%)	
Prostate	(2)		(5)		(4)		(4)	
Prostate, Dorsal Lobe	(23)		(25)		(25)		(25)	
Inflammation, Chronic	6 (26%)		4 (16%)		6 (24%)		10 (40%)	
Inflammation, Suppurative	8 (35%)		9 (36%)		7 (28%)		16 (64%)	
Prostate, Ventral Lobe	(23)		(25)		(25)		(25)	
Inflammation, Chronic	17 (74%)		16 (64%)		19 (76%)		17 (68%)	
Inflammation, Suppurative	2 (9%)		2 (8%)		2 (8%)		2 (8%)	
Rete Testes	(24)		(25)		(24)		(25)	
Dilatation	2 (8%)							
Seminal Vesicle	(24)		(23)		(25)		(24)	
Dilatation	3 (13%)		1 (4%)				1 (4%)	
Epithelium, Degeneration	1 (4%)							
Malformation			1 (4%)					
Testes	(25)		(25)		(25)		(25)	
Autolysis	1 (4%)							

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Edema								1 (4%)
Seminif Tub, Degeneration	3 (12%)		2 (8%)		2 (8%)			2 (8%)
<b>HEMATOPOIETIC SYSTEM</b>								
Bone Marrow	(24)		(0)		(0)			(25)
Spleen	(24)		(0)		(0)			(25)
Adventitia, Inflammation, Chronic								2 (8%)
Capsule, Fibrosis								1 (4%)
Capsule, Inflammation, Chronic								1 (4%)
Pigmentation	5 (21%)							9 (36%)
Thymus	(24)		(0)		(0)			(23)
<b>INTEGUMENTARY SYSTEM</b>								
Mammary Gland	(23)		(24)		(23)			(24)
Alveolus, Hyperplasia	1 (4%)		3 (13%)		2 (9%)			5 (21%)
Duct, Hyperplasia								1 (4%)
Skin	(25)		(0)		(0)			(25)
<b>MUSCULOSKELETAL SYSTEM</b>								
Bone, Femur	(25)		(0)		(0)			(25)
<b>NERVOUS SYSTEM</b>								
None								
<b>RESPIRATORY SYSTEM</b>								
None								
<b>SPECIAL SENSES SYSTEM</b>								
None								
<b>URINARY SYSTEM</b>								
Kidney	(24)		(0)		(1)			(25)
Casts Protein	1 (4%)							1 (4%)
Cortex, Cyst					1 (100%)			

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<b>CD Rat MALE</b>	<b>F0</b>	<b>0 PPM</b>	<b>F0</b>	<b>5 PPM</b>	<b>F0</b>	<b>100 PPM</b>	<b>F0</b>	<b>500 PPM</b>
Hyaline Droplet	2	(8%)						
Inflammation, Chronic	20	(83%)					18	(72%)
Interstitialium, Fibrosis	2	(8%)						
Renal Tubule, Dilatation	8	(33%)					8	(32%)
Renal Tubule, Mineralization	1	(4%)						
Renal Tubule, Regeneration	10	(42%)					7	(28%)

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\*\*\*END OF MALE DATA\*\*\*

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<b>Disposition Summary</b>								
Animals Initially In Study		26		25		26		25
Early Deaths								
Moribund		1				1		
Survivors								
Terminal Sacrifice		25		25		25		25
Animals Examined Microscopically		26		25		26		25
<b>ALIMENTARY SYSTEM</b>								
Esophagus		(1)		(0)		(1)		(0)
Dilatation		1 (100%)						
Intestine Large, Cecum		(1)		(0)		(1)		(0)
Intestine Large, Colon		(1)		(0)		(1)		(0)
Intestine Small, Duodenum		(1)		(0)		(1)		(0)
Intestine Small, Ileum		(1)		(0)		(1)		(0)
Intestine Small, Jejunum		(1)		(0)		(1)		(0)
Liver		(26)		(1)		(1)		(25)
Crystals						1 (100%)		
Developmental Malformation		3 (12%)		1 (100%)				
Inflammation, Chronic Active		1 (4%)						2 (8%)
Left Lat Lobe, Developmental Malformation								2 (8%)
Median Lobe, Developmental Malformation								1 (4%)
Pancreas		(1)		(0)		(1)		(0)
Salivary Glands		(1)		(0)		(1)		(0)
Stomach, Forestomach		(1)		(0)		(1)		(0)
Stomach, Glandular		(1)		(0)		(1)		(0)
<b>CARDIOVASCULAR SYSTEM</b>								
Heart		(1)		(0)		(1)		(0)
Cardiomyopathy		1 (100%)						

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ENDOCRINE SYSTEM								
Adrenal Cortex		(26)		(0)		(1)		(25)
Adrenal Medulla		(26)		(0)		(1)		(25)
Bilateral, Vacuolization Cytoplasmic		1 (4%)						
Pituitary Gland		(26)		(0)		(1)		(25)
Thyroid Gland		(25)		(0)		(1)		(25)
GENERAL BODY SYSTEM								
None								
GENITAL SYSTEM								
Clitoral Gland		(0)		(1)		(1)		(1)
Abscess								1 (100%)
Inflammation, Chronic Active				1 (100%)				
Keratin Cyst								1 (100%)
Ovary		(26)		(25)		(26)		(25)
Corpus Luteum, Hypertrophy						1 (4%)		
Diestrus		10 (38%)		9 (36%)		7 (27%)		6 (24%)
Estrus		2 (8%)		2 (8%)		1 (4%)		
Metestrus		6 (23%)		6 (24%)		8 (31%)		13 (52%)
Proestrus		8 (31%)		8 (32%)		9 (35%)		6 (24%)
Oviduct		(26)		(25)		(26)		(25)
Estrus								1 (4%)
Uterus		(26)		(25)		(26)		(25)
Decidual Reaction		24 (92%)		24 (96%)		24 (92%)		23 (92%)
Diestrus		10 (38%)		9 (36%)		7 (27%)		6 (24%)
Estrus		2 (8%)		2 (8%)		1 (4%)		
Infiltration Cellular, Eosinophil		1 (4%)						
Metestrus		7 (27%)		5 (20%)		8 (31%)		13 (52%)
Pregnancy						1 (4%)		
Proestrus		7 (27%)		8 (32%)		9 (35%)		6 (24%)

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Vagina		(26)		(25)		(26)		(25)
Diestrus	10	(38%)	9	(36%)	8	(31%)	7	(28%)
Estrus	3	(12%)	6	(24%)	2	(8%)	1	(4%)
Infiltration Cellular, Eosinophil	1	(4%)						
Keratin Cyst							1	(4%)
Metestrus	7	(27%)	6	(24%)	8	(31%)	12	(48%)
Mucocyte, Hyperplasia					1	(4%)		
Mucocyte, Hypertrophy	1	(4%)			1	(4%)		
Proestrus	6	(23%)	4	(16%)	7	(27%)	5	(20%)
HEMATOPOIETIC SYSTEM								
Bone Marrow		(26)		(0)		(1)		(25)
Lymph Node, Mandibular		(1)		(0)		(1)		(0)
Lymph Node, Mesenteric		(1)		(0)		(1)		(0)
Spleen		(25)		(0)		(1)		(24)
Pigmentation	1	(4%)						
Thymus		(26)		(0)		(1)		(25)
Atrophy	1	(4%)						
INTEGUMENTARY SYSTEM								
Mammary Gland		(25)		(25)		(26)		(25)
Alveolus, Hyperplasia	10	(40%)	12	(48%)	8	(31%)	8	(32%)
Duct, Hyperplasia					1	(4%)		
Lobules, Hyperplasia	3	(12%)	1	(4%)	3	(12%)	1	(4%)
Skin		(26)		(0)		(2)		(25)
MUSCULOSKELETAL SYSTEM								
Bone		(1)		(0)		(0)		(0)
Necrosis, Focal	1	(100%)						
Bone, Femur		(26)		(0)		(1)		(25)
NERVOUS SYSTEM								

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Brain, Brain Stem	(1)		(0)		(1)		(0)	
Brain, Cerebellum	(1)		(0)		(1)		(0)	
Brain, Cerebrum	(1)		(0)		(1)		(0)	
RESPIRATORY SYSTEM								
Lung	(1)		(0)		(1)		(0)	
Inflammation, Multifocal, Chronic Active	1	(100%)						
Nose	(1)		(0)		(1)		(0)	
Trachea	(0)		(0)		(1)		(0)	
SPECIAL SENSES SYSTEM								
Eye	(1)		(0)		(0)		(0)	
Cornea, Edema	1	(100%)						
URINARY SYSTEM								
Kidney	(26)		(25)		(26)		(25)	
Apoptosis					1	(4%)		
Bilateral, Nephropathy	1	(4%)						
Bilateral, Parenchym Cell, Proliferation					1	(4%)		
Bilateral, Pelvis, Dilatation			1	(4%)				
Inflammation, Chronic Active			1	(4%)	2	(8%)		
Left, Cyst							1	(4%)
Left, Pelvis, Dilatation	1	(4%)						
Mineralization	17	(65%)	21	(84%)	22	(85%)	14	(56%)
Pelvis, Dilatation	1	(4%)						
Urinary Bladder	(0)		(0)		(1)		(0)	

\*\* END OF REPORT \*\*