

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

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**

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

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

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

**Time Report Requested:** 14:21:07

**First Dose M/F:** NA / NA

**Lab:** NCTR

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

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
<b>Disposition Summary</b>						
Animals Initially In Study	54	50	50	50	50	50
<b>Early Deaths</b>						
Moribund	6	5	6	12	7	10
Natural Death	9	3		6	7	5
<b>Survivors</b>						
Moribund	2		1		2	1
Natural Death	1	1		1		2
Terminal Sacrifice	36	41	43	31	34	32
Animals Examined Microscopically	54	50	50	50	50	50
<b>ALIMENTARY SYSTEM</b>						
Esophagus	(53)	(50)	(50)	(50)	(50)	(47)
Adventitia, Fibrous Histiocytoma, Metastatic, Uncertain Primary Site						
Intestine Large, Cecum	(44)	(46)	(50)	(46)	(45)	(42)
Leukemia Granulocytic						
Lymphoma Malignant		1 (2%)	2 (4%)			
Serosa, Carcinoma, Metastatic, Prostate				1 (2%)		
Intestine Large, Colon	(46)	(46)	(50)	(46)	(45)	(43)
Adenocarcinoma						
Adenoma		1 (2%)				
Leukemia Granulocytic						
Lymphoma Malignant		2 (4%)				
Serosa, Carcinoma, Metastatic, Prostate				1 (2%)		
Intestine Large, Rectum	(37)	(42)	(43)	(34)	(37)	(33)
Leiomyosarcoma						
Intestine Small, Duodenum	(46)	(45)	(50)	(46)	(45)	(43)
Adenocarcinoma						

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Lymphoma Malignant						
Sarcoma						
Serosa, Carcinoma, Metastatic, Prostate				1 (2%)		
Intestine Small, Ileum	(43)	(47)	(50)	(44)	(44)	(42)
Adenocarcinoma		1 (2%)				1 (2%)
Leukemia Granulocytic						
Lymphoma Malignant		1 (2%)				
Intestine Small, Jejunum	(44)	(45)	(50)	(43)	(42)	(42)
Adenocarcinoma	1 (2%)	1 (2%)				
Leukemia Granulocytic						
Lymphoma Malignant			1 (2%)			
Liver	(51)	(48)	(50)	(48)	(49)	(47)
Carcinoma, Metastatic, Pancreas						
Carcinoma, Metastatic, Prostate				1 (2%)		
Cholangiocarcinoma						1 (2%)
Hepatocellular Adenoma	1 (2%)	2 (4%)	2 (4%)		1 (2%)	1 (2%)
Hepatocellular Carcinoma		1 (2%)				
Histiocytic Sarcoma						
Leukemia						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant	2 (4%)	3 (6%)	3 (6%)	2 (4%)		2 (4%)
Mesentery	(1)	(1)	(0)	(1)	(1)	(1)
Lymphoma Malignant				1 (100%)		
Oral Mucosa	(0)	(0)	(0)	(1)	(0)	(0)
Osteosarcoma				1 (100%)		
Pancreas	(50)	(49)	(50)	(49)	(49)	(46)
Acinar Cell, Adenoma						

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Carcinoma						
Carcinoma, Metastatic, Prostate				1 (2%)		
Histiocytic Sarcoma						
Leukemia Granulocytic						
Lymphoma Malignant	2 (4%)	2 (4%)	2 (4%)	2 (4%)		2 (4%)
Salivary Glands	(49)	(49)	(50)	(47)	(49)	(46)
Carcinoma, Metastatic, Pancreas						
Fibrous Histiocytoma, Metastatic, Uncertain Primary Site						
Leukemia Granulocytic						
Lymphoma Malignant	2 (4%)	1 (2%)	1 (2%)	1 (2%)		
Neurofibrosarcoma	1 (2%)					
Stomach, Forestomach	(45)	(46)	(50)	(46)	(47)	(45)
Stomach, Glandular	(45)	(47)	(50)	(44)	(46)	(44)
Lymphoma Malignant			1 (2%)			
Tongue	(0)	(0)	(0)	(0)	(0)	(0)
<b>CARDIOVASCULAR SYSTEM</b>						
Blood Vessel	(53)	(50)	(50)	(50)	(50)	(48)
Adventitia, Lymphoma Malignant						1 (2%)
Fibrous Histiocytoma, Metastatic, Uncertain Primary Site						
Heart	(52)	(50)	(50)	(50)	(48)	(48)
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant	2 (4%)	1 (2%)	1 (2%)			
Pericardium, Fibrous Histiocytoma, Metastatic, Uncertain Primary Site						
<b>ENDOCRINE SYSTEM</b>						

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CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Adrenal Cortex	(49)	(47)	(50)	(48)	(47)	(46)
Adenoma	1 (2%)	1 (2%)		1 (2%)	2 (4%)	1 (2%)
Leukemia Granulocytic						
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant	2 (4%)	1 (2%)	1 (2%)	1 (2%)		
Adrenal Medulla	(47)	(49)	(50)	(49)	(47)	(46)
Bilateral, Pheochromocytoma Benign	1 (2%)				1 (2%)	
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant	1 (2%)			1 (2%)		
Pheochromocytoma Benign	1 (2%)	1 (2%)	2 (4%)	7 (14%)	2 (4%)	
Pheochromocytoma Complex	1 (2%)					
Pheochromocytoma Malignant		1 (2%)			1 (2%)	1 (2%)
Islets, Pancreatic	(49)	(49)	(50)	(49)	(49)	(46)
Adenoma	1 (2%)	3 (6%)	1 (2%)	5 (10%)		1 (2%)
Carcinoma				1 (2%)		
Carcinoma, Metastatic, Prostate				1 (2%)		
Leukemia Granulocytic						
Lymphoma Malignant	2 (4%)	1 (2%)	1 (2%)	2 (4%)		1 (2%)
Parathyroid Gland	(47)	(47)	(47)	(47)	(48)	(47)
Adenoma	1 (2%)					
Lymphoma Malignant		1 (2%)				
Pituitary Gland	(49)	(46)	(50)	(49)	(49)	(48)
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant	2 (4%)	2 (4%)	1 (2%)	2 (4%)		1 (2%)
Pars Distalis, Adenoma	22 (45%)	14 (30%)	22 (44%)	21 (43%)	18 (37%)	13 (27%)
Pars Distalis, Adenoma, Multiple	1 (2%)			1 (2%)		
Thyroid Gland	(49)	(47)	(50)	(46)	(46)	(44)
Bilateral, C Cell, Adenoma						

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C Cell, Adenoma	1 (2%)	2 (4%)	1 (2%)	1 (2%)	1 (2%)	
C Cell, Carcinoma		1 (2%)		1 (2%)		1 (2%)
Follicular Cel, Adenoma					1 (2%)	
Leukemia Granulocytic						
Lymphoma Malignant	1 (2%)		1 (2%)			
<b>GENERAL BODY SYSTEM</b>						
Tissue NOS	(0)	(0)	(1)	(1)	(0)	(0)
Abdominal, Carcinoma, Metastatic, Prostate				1 (100%)		
Abdominal, Sarcoma						
Chondrosarcoma			1 (100%)			
Squamous Cell Carcinoma						
<b>GENITAL SYSTEM</b>						
Coagulating Gland	(47)	(49)	(50)	(45)	(45)	(45)
Adenocarcinoma, Metastatic, Prostate	1 (2%)					1 (2%)
Adventitia, Lymphoma Malignant			1 (2%)			
Carcinoma, Metastatic, Prostate				1 (2%)		
Histiocytic Sarcoma						
Leukemia Granulocytic						
Lymphoma Malignant		1 (2%)				
Sarcoma, Metastatic, Uncertain Primary Site						
Epididymis	(51)	(48)	(50)	(49)	(50)	(47)
Carcinoma, Metastatic, Prostate				1 (2%)		
Leukemia Granulocytic						
Lymphoma Malignant		1 (2%)	1 (2%)			
Mesothelioma Malignant			1 (2%)			
Penis	(0)	(1)	(0)	(0)	(1)	(0)
Preputial Gland	(49)	(48)	(49)	(49)	(50)	(48)

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Adventitia, Squamous Cell Carcinoma						1 (2%)
Carcinoma						
Leukemia Granulocytic						
Lymphoma Malignant		2 (4%)	1 (2%)			1 (2%)
Sarcoma					1 (2%)	
Squamous Cell Carcinoma	1 (2%)	3 (6%)	1 (2%)	2 (4%)	2 (4%)	1 (2%)
Prostate	(8)	(9)	(2)	(2)	(8)	(6)
Prostate, Dorsal Lobe	(48)	(49)	(50)	(49)	(49)	(50)
Adenocarcinoma	2 (4%)					1 (2%)
Carcinoma				1 (2%)		
Carcinoma, Metastatic, Urinary Bladder						
Histiocytic Sarcoma						
Leukemia Granulocytic						
Lymphoma Malignant	1 (2%)	2 (4%)	2 (4%)	1 (2%)		1 (2%)
Mesothelioma Malignant						
Sarcoma, Metastatic, Uncertain Primary Site						
Prostate, Ventral Lobe	(48)	(49)	(50)	(48)	(49)	(48)
Adenocarcinoma	1 (2%)					1 (2%)
Adenoma					1 (2%)	
Carcinoma				1 (2%)		
Carcinoma, Metastatic, Urinary Bladder						
Leukemia Granulocytic						
Lymphoma Malignant		2 (4%)	2 (4%)	1 (2%)		1 (2%)
Rete Testes	(44)	(47)	(47)	(44)	(50)	(46)
Seminal Vesicle	(47)	(48)	(50)	(45)	(43)	(45)
Adenocarcinoma, Metastatic, Prostate	2 (4%)					1 (2%)
Adenoma						
Carcinoma, Metastatic, Prostate				1 (2%)		

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Histiocytic Sarcoma						
Lymphoma Malignant						
Sarcoma						
Sarcoma, Metastatic, Uncertain Primary Site						
Testes	(50)	(50)	(50)	(49)	(49)	(47)
Capsule, Carcinoma, Metastatic, Prostate				1 (2%)		
Interstit Cell, Adenoma						
Mesothelioma Benign	1 (2%)					
Mesothelioma Malignant			1 (2%)			
Seminoma Benign				1 (2%)		
<b>HEMATOPOIETIC SYSTEM</b>						
Bone Marrow	(49)	(49)	(50)	(48)	(48)	(47)
Carcinoma, Metastatic, Pancreas						
Histiocytic Sarcoma						
Leukemia						
Leukemia Granulocytic						
Lymphoma Malignant	2 (4%)	3 (6%)	3 (6%)	1 (2%)		2 (4%)
Lymph Node	(15)	(13)	(16)	(8)	(14)	(14)
Axillary, Lymphoma Malignant		1 (8%)		1 (13%)		
Deep Cervical, Leukemia Granulocytic	1 (7%)					
Deep Cervical, Lymphoma Malignant				1 (13%)		
Inguinal, Leukemia						
Inguinal, Leukemia Granulocytic						
Inguinal, Lymphoma Malignant	1 (7%)	1 (8%)	1 (6%)			
Lumbar, Histiocytic Sarcoma						
Lumbar, Leukemia Granulocytic	1 (7%)					
Lumbar, Lymphoma Malignant	1 (7%)	2 (15%)		1 (13%)		

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Lumbar, Squamous Cell Carcinoma, Metastatic, Preputial Gland						
Mediastinal, Histiocytic Sarcoma						
Mediastinal, Lymphoma Malignant			2 (13%)		1 (13%)	
Pancreatic, Lymphoma Malignant			1 (6%)			
Popliteal, Lymphoma Malignant					1 (13%)	
Renal, Histiocytic Sarcoma						
Renal, Leukemia Granulocytic	1 (7%)					
Renal, Lymphoma Malignant	1 (7%)					
Thoracic, Leukemia Granulocytic						
Thoracic, Lymphoma Malignant	1 (7%)		2 (13%)			
Lymph Node, Mandibular	(52)	(50)	(49)	(46)	(49)	(45)
Fibrosarcoma, Metastatic, Skin					1 (2%)	
Fibrous Histiocytoma, Metastatic, Uncertain Primary Site						
Histiocytic Sarcoma						
Leukemia						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant	2 (4%)	3 (6%)	2 (4%)	2 (4%)		2 (4%)
Lymph Node, Mesenteric	(48)	(50)	(50)	(46)	(47)	(45)
Histiocytic Sarcoma						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant	2 (4%)	3 (6%)	2 (4%)	2 (4%)		2 (4%)
Spleen	(52)	(48)	(50)	(48)	(50)	(47)
Carcinoma, Metastatic, Pancreas						
Hemangiosarcoma						1 (2%)
Histiocytic Sarcoma						

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Leukemia						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant	2 (4%)	3 (6%)	3 (6%)	2 (4%)		2 (4%)
Sarcoma				1 (2%)		
Thymus	(42)	(44)	(45)	(42)	(47)	(40)
Adventitia, Fibrous Histiocytoma, Metastatic, Uncertain Primary Site						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant	2 (5%)	2 (5%)	2 (4%)	2 (5%)	1 (2%)	2 (5%)
<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(41)	(43)	(40)	(42)	(42)	(34)
Adenocarcinoma			1 (3%)			
Fibroadenoma		1 (2%)		2 (5%)		
Fibroma						
Lymphoma Malignant						
Skin	(51)	(49)	(50)	(50)	(50)	(50)
Basal Cell Adenoma		1 (2%)				
Fibroma	1 (2%)	1 (2%)		1 (2%)	2 (4%)	
Fibrosarcoma			1 (2%)		1 (2%)	
Keratoacanthoma		1 (2%)		1 (2%)		1 (2%)
Leukemia Granulocytic						
Lipoma	1 (2%)			2 (4%)	1 (2%)	1 (2%)
Lymphoma Malignant			1 (2%)			
Neurofibrosarcoma						
Sarcoma	1 (2%)	1 (2%)	1 (2%)		1 (2%)	1 (2%)
Schwannoma Benign						1 (2%)

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Schwannoma Malignant					1 (2%)	
Sebaceous GI, Carcinoma					1 (2%)	
Squamous Cell Carcinoma					1 (2%)	1 (2%)
Squamous Cell Papilloma		1 (2%)				
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone	(0)	(0)	(0)	(0)	(0)	(0)
Chordoma						
Bone, Cranium	(0)	(0)	(0)	(0)	(0)	(1)
Osteoma						1 (100%)
Bone, Femur	(53)	(50)	(50)	(50)	(49)	(50)
Skeletal Muscle	(0)	(0)	(0)	(1)	(0)	(0)
Carcinoma, Metastatic, Pancreas						
Carcinoma, Metastatic, Prostate				1 (100%)		
Fibrous Histiocytoma, Metastatic, Uncertain Primary Site						
<b>NERVOUS SYSTEM</b>						
Brain, Brain Stem	(50)	(48)	(50)	(48)	(50)	(48)
Astrocytoma Malignant						
Glioma Malignant						
Lymphoma Malignant		1 (2%)	1 (2%)			1 (2%)
Reticulosis Malignant						
Brain, Cerebellum	(50)	(48)	(50)	(47)	(49)	(48)
Astrocytoma Malignant						1 (2%)
Granular Cell Tumor Benign					1 (2%)	
Granular Cell Tumor Malignant	1 (2%)					1 (2%)
Lymphoma Malignant			1 (2%)			
Meninges, Lymphoma Malignant						1 (2%)
Reticulosis Malignant						

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Brain, Cerebrum	(50)	(48)	(50)	(48)	(50)	(48)
Astrocytoma Malignant						1 (2%)
Glioma Malignant						
Granular Cell Tumor Benign			1 (2%)			1 (2%)
Granular Cell Tumor Malignant		1 (2%)		1 (2%)		1 (2%)
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant		2 (4%)	1 (2%)			
Meninges, Lymphoma Malignant						1 (2%)
Reticulosis Malignant						
<b>RESPIRATORY SYSTEM</b>						
Lung	(49)	(47)	(50)	(47)	(48)	(44)
Adenocarcinoma						
Alveolar Epith, Adenoma		1 (2%)				
Alveolar/Bronchiolar Carcinoma	1 (2%)					
Carcinoma, Metastatic, Pancreas						
Carcinoma, Metastatic, Prostate				1 (2%)		
Carcinoma, Metastatic, Uncertain Primary Site						
Chondrosarcoma, Metastatic, Uncertain Primary Site			1 (2%)			
Fibrosarcoma, Metastatic, Skin			1 (2%)		1 (2%)	
Fibrous Histiocytoma, Metastatic, Uncertain Primary Site						
Histiocytic Sarcoma						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant	2 (4%)	2 (4%)	3 (6%)	2 (4%)	1 (2%)	2 (5%)
Squamous Cell Carcinoma, Metastatic, Preputial Gland					1 (2%)	

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

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

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** Endocrine disruptor (Genistein)  
**CAS Number:** 446-72-0

**Date Report Requested:** 10/22/2014  
**Time Report Requested:** 14:21:09  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Nose	(48)	(48)	(50)	(48)	(47)	(45)
Adventitia, Squamous Cell Carcinoma						
Leukemia Granulocytic						
Lymphoma Malignant	2 (4%)	3 (6%)	2 (4%)	1 (2%)		2 (4%)
Squamous Cell Carcinoma				2 (4%)		1 (2%)
Trachea	(47)	(47)	(50)	(46)	(47)	(46)
Adventitia, Fibrous Histiocytoma, Metastatic, Uncertain Primary Site						
Lymphoma Malignant	1 (2%)	1 (2%)	1 (2%)			
<b>SPECIAL SENSES SYSTEM</b>						
Ear	(0)	(0)	(0)	(0)	(0)	(0)
Neural Crest Tumor						
Eye	(37)	(42)	(43)	(35)	(37)	(33)
Adventitia, Squamous Cell Carcinoma				1 (3%)		
Lymphoma Malignant						1 (3%)
Retrolbulbar, Carcinoma						
Harderian Gland	(39)	(42)	(43)	(37)	(39)	(33)
Adenoma	1 (3%)					
Adventitia, Squamous Cell Carcinoma						
Lymphoma Malignant						1 (3%)
Lacrimal Gland	(10)	(9)	(10)	(14)	(14)	(12)
Zymbal's Gland	(0)	(1)	(0)	(1)	(0)	(1)
Adenoma						
Carcinoma						1 (100%)
Squamous Cell Carcinoma		1 (100%)		1 (100%)		
<b>URINARY SYSTEM</b>						
Kidney	(48)	(48)	(50)	(48)	(48)	(46)
Adenoma, Tubular	1 (2%)					

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**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

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

CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Adventitia, Carcinoma, Metastatic, Pancreas						
Fibrosarcoma, Metastatic, Skin			1 (2%)			
Histiocytic Sarcoma						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant	2 (4%)	2 (4%)	2 (4%)	2 (4%)		2 (4%)
Transit Epithe, Papilloma						
Urethra	(0)	(0)	(1)	(1)	(1)	(1)
Urinary Bladder	(47)	(48)	(50)	(46)	(48)	(46)
Lymphoma Malignant		1 (2%)				
Serosa, Carcinoma, Metastatic, Prostate				1 (2%)		
Transit Epithe, Carcinoma						
<b>SYSTEMIC LESIONS</b>						
Multiple Organ	*(54)	*(50)	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma						
Leukemia						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear					1 (2%)	
Lymphoma Malignant	2 (4%)	3 (6%)	3 (6%)	2 (4%)	1 (2%)	2 (4%)
Mesothelioma Benign	1 (2%)					
Mesothelioma Malignant			1 (2%)			

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 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)  
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 Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
<b>Disposition Summary</b>					
Animals Initially In Study	50	52	50	50	50
<b>Early Deaths</b>					
Moribund	5	6		8	3
Natural Death	7	9	6	5	8
<b>Survivors</b>					
Moribund		2	1	3	1
Natural Death		2	1	1	2
Terminal Sacrifice	38	33	42	33	36
Animals Examined Microscopically	50	52	50	49	49

ALIMENTARY SYSTEM

Esophagus	(49)	(49)	(49)	(48)	(49)
Adventitia, Fibrous Histiocytoma, Metastatic, Uncertain Primary Site		1 (2%)			
Intestine Large, Cecum	(44)	(41)	(43)	(46)	(45)
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)				
Serosa, Carcinoma, Metastatic, Prostate					
Intestine Large, Colon	(46)	(41)	(43)	(46)	(45)
Adenocarcinoma		1 (2%)			
Adenoma	1 (2%)				
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)				
Serosa, Carcinoma, Metastatic, Prostate					
Intestine Large, Rectum	(39)	(38)	(42)	(38)	(38)
Leiomyosarcoma		1 (3%)			
Intestine Small, Duodenum	(45)	(41)	(43)	(46)	(43)
Adenocarcinoma		2 (5%)			

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CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Lymphoma Malignant	1 (2%)				
Sarcoma	1 (2%)				
Serosa, Carcinoma, Metastatic, Prostate					
Intestine Small, Ileum	(43)	(40)	(42)	(45)	(43)
Adenocarcinoma					
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)				
Intestine Small, Jejunum	(42)	(40)	(43)	(45)	(41)
Adenocarcinoma					1 (2%)
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)				
Liver	(48)	(49)	(47)	(47)	(48)
Carcinoma, Metastatic, Pancreas					1 (2%)
Carcinoma, Metastatic, Prostate					
Cholangiocarcinoma					
Hepatocellular Adenoma	1 (2%)	1 (2%)			1 (2%)
Hepatocellular Carcinoma		1 (2%)	1 (2%)		
Histiocytic Sarcoma				1 (2%)	
Leukemia		1 (2%)			
Leukemia Granulocytic					1 (2%)
Leukemia Mononuclear				1 (2%)	
Lymphoma Malignant	1 (2%)	2 (4%)			
Mesentery	(1)	(0)	(1)	(0)	(0)
Lymphoma Malignant					
Oral Mucosa	(0)	(0)	(0)	(0)	(0)
Osteosarcoma					
Pancreas	(48)	(45)	(47)	(48)	(47)
Acinar Cell, Adenoma	1 (2%)			2 (4%)	

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**Lab:** NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Carcinoma					1 (2%)
Carcinoma, Metastatic, Prostate					
Histiocytic Sarcoma				1 (2%)	
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)				
Salivary Glands	(50)	(49)	(47)	(47)	(48)
Carcinoma, Metastatic, Pancreas					1 (2%)
Fibrous Histiocytoma, Metastatic, Uncertain Primary Site		1 (2%)			
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)	2 (4%)			
Neurofibrosarcoma					
Stomach, Forestomach	(49)	(44)	(45)	(48)	(47)
Stomach, Glandular	(45)	(41)	(43)	(46)	(46)
Lymphoma Malignant	1 (2%)				
Tongue	(0)	(0)	(0)	(1)	(0)
<b>CARDIOVASCULAR SYSTEM</b>					
Blood Vessel	(49)	(51)	(50)	(49)	(47)
Adventitia, Lymphoma Malignant					
Fibrous Histiocytoma, Metastatic, Uncertain Primary Site		1 (2%)			
Heart	(50)	(51)	(48)	(49)	(47)
Leukemia Granulocytic					1 (2%)
Leukemia Mononuclear					
Lymphoma Malignant	1 (2%)	1 (2%)			
Pericardium, Fibrous Histiocytoma, Metastatic, Uncertain Primary Site		1 (2%)			
<b>ENDOCRINE SYSTEM</b>					

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CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Adrenal Cortex	(46)	(48)	(47)	(47)	(47)
Adenoma	1 (2%)			1 (2%)	
Leukemia Granulocytic					1 (2%)
Leukemia Mononuclear				1 (2%)	
Lymphoma Malignant		1 (2%)			
Adrenal Medulla	(45)	(48)	(46)	(47)	(45)
Bilateral, Pheochromocytoma Benign					
Leukemia Mononuclear				1 (2%)	
Lymphoma Malignant		1 (2%)			
Pheochromocytoma Benign	4 (9%)	4 (8%)	3 (7%)	4 (9%)	2 (4%)
Pheochromocytoma Complex	1 (2%)				
Pheochromocytoma Malignant	2 (4%)	1 (2%)			
Islets, Pancreatic	(48)	(45)	(49)	(48)	(48)
Adenoma	3 (6%)	3 (7%)	3 (6%)	2 (4%)	
Carcinoma				1 (2%)	
Carcinoma, Metastatic, Prostate					
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)	1 (2%)			
Parathyroid Gland	(46)	(41)	(46)	(48)	(43)
Adenoma	1 (2%)			1 (2%)	
Lymphoma Malignant	1 (2%)	1 (2%)			
Pituitary Gland	(48)	(49)	(46)	(48)	(48)
Leukemia Mononuclear					
Lymphoma Malignant	1 (2%)	2 (4%)			
Pars Distalis, Adenoma	15 (31%)	16 (33%)	18 (39%)	17 (35%)	14 (29%)
Pars Distalis, Adenoma, Multiple	1 (2%)	1 (2%)			1 (2%)
Thyroid Gland	(48)	(44)	(46)	(46)	(45)
Bilateral, C Cell, Adenoma		1 (2%)			

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**Lab:** NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
C Cell, Adenoma	1 (2%)	1 (2%)			1 (2%)
C Cell, Carcinoma					1 (2%)
Follicular Cel, Adenoma	1 (2%)				
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)	2 (5%)			
<b>GENERAL BODY SYSTEM</b>					
Tissue NOS	(0)	(0)	(1)	(0)	(2)
Abdominal, Carcinoma, Metastatic, Prostate					
Abdominal, Sarcoma			1 (100%)		
Chondrosarcoma					
Squamous Cell Carcinoma					1 (50%)
<b>GENITAL SYSTEM</b>					
Coagulating Gland	(47)	(44)	(43)	(47)	(45)
Adenocarcinoma, Metastatic, Prostate					
Adventitia, Lymphoma Malignant					
Carcinoma, Metastatic, Prostate					
Histiocytic Sarcoma				1 (2%)	
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)	1 (2%)			
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)	
Epididymis	(49)	(49)	(48)	(49)	(47)
Carcinoma, Metastatic, Prostate					
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)	1 (2%)			
Mesothelioma Malignant			1 (2%)		1 (2%)
Penis	(0)	(0)	(0)	(0)	(0)
Preputial Gland	(49)	(48)	(48)	(47)	(47)

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**Lab:** NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Adventitia, Squamous Cell Carcinoma					
Carcinoma				1 (2%)	
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)	2 (4%)			
Sarcoma					
Squamous Cell Carcinoma	1 (2%)			5 (11%)	3 (6%)
Prostate	(3)	(6)	(8)	(6)	(4)
Prostate, Dorsal Lobe	(49)	(51)	(47)	(47)	(48)
Adenocarcinoma					1 (2%)
Carcinoma					
Carcinoma, Metastatic, Urinary Bladder	1 (2%)				
Histiocytic Sarcoma				1 (2%)	
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)	2 (4%)			
Mesothelioma Malignant			1 (2%)		
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)	
Prostate, Ventral Lobe	(48)	(48)	(46)	(48)	(47)
Adenocarcinoma					
Adenoma				1 (2%)	1 (2%)
Carcinoma	1 (2%)				
Carcinoma, Metastatic, Urinary Bladder	1 (2%)				
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)	2 (4%)			
Rete Testes	(49)	(47)	(48)	(46)	(41)
Seminal Vesicle	(47)	(43)	(43)	(47)	(45)
Adenocarcinoma, Metastatic, Prostate					
Adenoma				1 (2%)	
Carcinoma, Metastatic, Prostate					

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CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Histiocytic Sarcoma				1 (2%)	
Lymphoma Malignant	1 (2%)	1 (2%)			
Sarcoma				1 (2%)	
Sarcoma, Metastatic, Uncertain Primary Site				1 (2%)	
Testes	(50)	(50)	(50)	(48)	(49)
Capsule, Carcinoma, Metastatic, Prostate					
Interstit Cell, Adenoma		1 (2%)	1 (2%)		
Mesothelioma Benign					
Mesothelioma Malignant				1 (2%)	1 (2%)
Seminoma Benign	1 (2%)	1 (2%)			
<b>HEMATOPOIETIC SYSTEM</b>					
Bone Marrow	(49)	(48)	(48)	(48)	(46)
Carcinoma, Metastatic, Pancreas					1 (2%)
Histiocytic Sarcoma				1 (2%)	
Leukemia		1 (2%)			
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)	2 (4%)			
Lymph Node	(9)	(13)	(9)	(18)	(12)
Axillary, Lymphoma Malignant		1 (8%)			
Deep Cervical, Leukemia Granulocytic					
Deep Cervical, Lymphoma Malignant	1 (11%)				
Inguinal, Leukemia		1 (8%)			
Inguinal, Leukemia Granulocytic					1 (8%)
Inguinal, Lymphoma Malignant		1 (8%)			
Lumbar, Histiocytic Sarcoma				1 (6%)	
Lumbar, Leukemia Granulocytic					
Lumbar, Lymphoma Malignant		1 (8%)			

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CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Lumbar, Squamous Cell Carcinoma, Metastatic, Preputial Gland					1 (8%)
Mediastinal, Histiocytic Sarcoma				1 (6%)	
Mediastinal, Lymphoma Malignant					
Pancreatic, Lymphoma Malignant					
Popliteal, Lymphoma Malignant					
Renal, Histiocytic Sarcoma				1 (6%)	
Renal, Leukemia Granulocytic					
Renal, Lymphoma Malignant	1 (11%)	1 (8%)			
Thoracic, Leukemia Granulocytic					1 (8%)
Thoracic, Lymphoma Malignant	1 (11%)				
Lymph Node, Mandibular	(48)	(48)	(48)	(48)	(48)
Fibrosarcoma, Metastatic, Skin					
Fibrous Histiocytoma, Metastatic, Uncertain Primary Site		1 (2%)			
Histiocytic Sarcoma				1 (2%)	
Leukemia		1 (2%)			
Leukemia Granulocytic					1 (2%)
Leukemia Mononuclear					
Lymphoma Malignant	1 (2%)	2 (4%)			
Lymph Node, Mesenteric	(46)	(45)	(46)	(47)	(47)
Histiocytic Sarcoma				1 (2%)	
Leukemia Granulocytic					1 (2%)
Leukemia Mononuclear					
Lymphoma Malignant	1 (2%)	2 (4%)			
Spleen	(49)	(50)	(49)	(48)	(47)
Carcinoma, Metastatic, Pancreas					1 (2%)
Hemangiosarcoma					
Histiocytic Sarcoma				1 (2%)	

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CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Leukemia		1 (2%)			
Leukemia Granulocytic					1 (2%)
Leukemia Mononuclear				1 (2%)	
Lymphoma Malignant	1 (2%)	2 (4%)			
Sarcoma		1 (2%)	1 (2%)		
Thymus	(45)	(46)	(45)	(41)	(44)
Adventitia, Fibrous Histiocytoma, Metastatic, Uncertain Primary Site		1 (2%)			
Leukemia Granulocytic					1 (2%)
Leukemia Mononuclear					
Lymphoma Malignant	1 (2%)	2 (4%)			
<b>INTEGUMENTARY SYSTEM</b>					
Mammary Gland	(45)	(39)	(43)	(41)	(41)
Adenocarcinoma				1 (2%)	
Fibroadenoma					2 (5%)
Fibroma					2 (5%)
Lymphoma Malignant	1 (2%)				
Skin	(50)	(49)	(50)	(48)	(49)
Basal Cell Adenoma					1 (2%)
Fibroma	2 (4%)		1 (2%)		
Fibrosarcoma					
Keratoacanthoma		1 (2%)			1 (2%)
Leukemia Granulocytic					1 (2%)
Lipoma				1 (2%)	
Lymphoma Malignant					
Neurofibrosarcoma					1 (2%)
Sarcoma	1 (2%)				
Schwannoma Benign					

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CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Schwannoma Malignant		1 (2%)			
Sebaceous GI, Carcinoma					
Squamous Cell Carcinoma		1 (2%)		3 (6%)	
Squamous Cell Papilloma					1 (2%)
<b>MUSCULOSKELETAL SYSTEM</b>					
Bone	(0)	(0)	(0)	(0)	(1)
Chordoma					1 (100%)
Bone, Cranium	(0)	(2)	(0)	(0)	(0)
Osteoma					
Bone, Femur	(50)	(50)	(50)	(48)	(49)
Skeletal Muscle	(2)	(1)	(0)	(0)	(1)
Carcinoma, Metastatic, Pancreas					1 (100%)
Carcinoma, Metastatic, Prostate					
Fibrous Histiocytoma, Metastatic, Uncertain Primary Site		1 (100%)			
<b>NERVOUS SYSTEM</b>					
Brain, Brain Stem	(48)	(46)	(46)	(48)	(47)
Astrocytoma Malignant	1 (2%)				
Glioma Malignant	1 (2%)				
Lymphoma Malignant	1 (2%)	1 (2%)			
Reticulosis Malignant					1 (2%)
Brain, Cerebellum	(48)	(46)	(46)	(48)	(46)
Astrocytoma Malignant		1 (2%)			
Granular Cell Tumor Benign					
Granular Cell Tumor Malignant					
Lymphoma Malignant	1 (2%)	1 (2%)			
Meninges, Lymphoma Malignant					
Reticulosis Malignant					1 (2%)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically



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

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** Endocrine disruptor (Genistein)  
**CAS Number:** 446-72-0

**Date Report Requested:** 10/22/2014  
**Time Report Requested:** 14:21:10  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Brain, Cerebrum	(48)	(45)	(46)	(48)	(46)
Astrocytoma Malignant	1 (2%)	1 (2%)	1 (2%)		
Glioma Malignant	1 (2%)				
Granular Cell Tumor Benign					
Granular Cell Tumor Malignant					
Leukemia Mononuclear					
Lymphoma Malignant	1 (2%)	1 (2%)			
Meninges, Lymphoma Malignant					
Reticulosis Malignant					1 (2%)
<b>RESPIRATORY SYSTEM</b>					
Lung	(49)	(48)	(47)	(47)	(46)
Adenocarcinoma			1 (2%)		
Alveolar Epith, Adenoma					
Alveolar/Bronchiolar Carcinoma					
Carcinoma, Metastatic, Pancreas					1 (2%)
Carcinoma, Metastatic, Prostate					
Carcinoma, Metastatic, Uncertain Primary Site			1 (2%)		
Chondrosarcoma, Metastatic, Uncertain Primary Site					
Fibrosarcoma, Metastatic, Skin					
Fibrous Histiocytoma, Metastatic, Uncertain Primary Site		1 (2%)			
Histiocytic Sarcoma				1 (2%)	
Leukemia Granulocytic					1 (2%)
Leukemia Mononuclear				1 (2%)	
Lymphoma Malignant	1 (2%)	2 (4%)			
Squamous Cell Carcinoma, Metastatic, Preputial Gland					

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

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** Endocrine disruptor (Genistein)  
**CAS Number:** 446-72-0

**Date Report Requested:** 10/22/2014  
**Time Report Requested:** 14:21:11  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Nose	(48)	(46)	(45)	(49)	(45)
Adventitia, Squamous Cell Carcinoma					1 (2%)
Leukemia Granulocytic					1 (2%)
Lymphoma Malignant	1 (2%)	2 (4%)			
Squamous Cell Carcinoma			1 (2%)	1 (2%)	
Trachea	(48)	(45)	(44)	(48)	(44)
Adventitia, Fibrous Histiocytoma, Metastatic, Uncertain Primary Site		1 (2%)			
Lymphoma Malignant	1 (2%)	2 (4%)			
<b>SPECIAL SENSES SYSTEM</b>					
Ear	(1)	(0)	(0)	(0)	(0)
Neural Crest Tumor	1 (100%)				
Eye	(40)	(37)	(43)	(38)	(39)
Adventitia, Squamous Cell Carcinoma					1 (3%)
Lymphoma Malignant					
Retrobulbar, Carcinoma			1 (2%)		
Harderian Gland	(41)	(38)	(43)	(38)	(39)
Adenoma					1 (3%)
Adventitia, Squamous Cell Carcinoma					1 (3%)
Lymphoma Malignant					
Lacrimal Gland	(5)	(0)	(2)	(2)	(1)
Zymbal's Gland	(0)	(0)	(0)	(1)	(0)
Adenoma				1 (100%)	
Carcinoma					
Squamous Cell Carcinoma					
<b>URINARY SYSTEM</b>					
Kidney	(49)	(46)	(49)	(47)	(47)
Adenoma, Tubular					

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**Test Type:** MULTIGEN CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** Endocrine disruptor (Genistein)  
**CAS Number:** 446-72-0

**Date Report Requested:** 10/22/2014  
**Time Report Requested:** 14:21:11  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
Adventitia, Carcinoma, Metastatic, Pancreas					1 (2%)
Fibrosarcoma, Metastatic, Skin					
Histiocytic Sarcoma				1 (2%)	
Leukemia Granulocytic					1 (2%)
Leukemia Mononuclear				1 (2%)	
Lymphoma Malignant	1 (2%)	2 (4%)			
Transit Epithe, Papilloma					1 (2%)
Urethra	(2)	(0)	(2)	(2)	(1)
Urinary Bladder	(47)	(45)	(43)	(47)	(46)
Lymphoma Malignant	1 (2%)	1 (2%)			
Serosa, Carcinoma, Metastatic, Prostate					
Transit Epithe, Carcinoma	1 (2%)				
<b>SYSTEMIC LESIONS</b>					
Multiple Organ	*(50)	*(52)	*(50)	*(49)	*(49)
Histiocytic Sarcoma				1 (2%)	
Leukemia		1 (2%)			
Leukemia Granulocytic					1 (2%)
Leukemia Mononuclear				1 (2%)	
Lymphoma Malignant	1 (2%)	2 (4%)			
Mesothelioma Benign					
Mesothelioma Malignant				1 (2%)	1 (2%)

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**Test Type:** MULTIGEN CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** Endocrine disruptor (Genistein)  
**CAS Number:** 446-72-0

**Date Report Requested:** 10/22/2014  
**Time Report Requested:** 14:21:11  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat MALE	F1 0PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
<b>Tumor Summary for MALE</b>						
<b>Total Animals with Primary Neoplasms (b)</b>	36	32	30	38	33	30
<b>Total Primary Neoplasms</b>	48	44	38	58	42	40
<b>Total Animals with Benign Neoplasms</b>	27	26	26	31	27	16
<b>Total Benign Neoplasms</b>	34	30	29	43	31	21
<b>Total Animals with Malignant Neoplasms</b>	12	12	9	11	10	16
<b>Total Malignant Neoplasms</b>	13	14	9	15	11	19
<b>Total Animals with Metastatic Neoplasms</b>	2		2	1	2	1
<b>Total Metastatic Neoplasms</b>	3		3	14	3	2
<b>Total Animals with Malignant Neoplasms Uncertain Primary Site</b>			1			
<b>Total Animals with Neoplasms Uncertain - Benign or Malignant</b>						
<b>Total Uncertain Neoplasms</b>						

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

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

P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)  
 Test Compound: Endocrine disruptor (Genistein)  
 CAS Number: 446-72-0

Date Report Requested: 10/22/2014  
 Time Report Requested: 14:21:11  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat MALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TO CTL
<b>Tumor Summary for MALE</b>					
Total Animals with Primary Neoplasms (b)	33	33	26	36	30
Total Primary Neoplasms	47	44	34	46	47
Total Animals with Benign Neoplasms	28	24	21	24	21
Total Benign Neoplasms	33	30	26	31	29
Total Animals with Malignant Neoplasms	10	14	8	13	13
Total Malignant Neoplasms	13	14	8	15	18
Total Animals with Metastatic Neoplasms	1	1	1	1	2
Total Metastatic Neoplasms	2	9	1	3	8
Total Animals with Malignant Neoplasms Uncertain Primary Site		1	1	1	
Total Animals with Neoplasms Uncertain - Benign or Malignant	1				
Total Uncertain Neoplasms	1				

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

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

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\* Number of animals with any tissue examined microscopically

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

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
 Test Compound: Endocrine disruptor (Genistein)  
 CAS Number: 446-72-0

Date Report Requested: 10/22/2014  
 Time Report Requested: 14:21:11  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
<b>Disposition Summary</b>						
Animals Initially In Study	54	50	50	49	50	50
Early Deaths						
Moribund	24	14	18	20	12	14
Natural Death	3	7	6	6	6	3
Survivors						
Moribund	1		3	1		
Natural Death		1	1	1	1	1
Terminal Sacrifice	26	28	22	21	31	32
Animals Examined Microscopically	54	50	50	49	50	50
<b>ALIMENTARY SYSTEM</b>						
Esophagus	(54)	(50)	(49)	(49)	(50)	(50)
Intestine Large	(0)	(0)	(0)	(0)	(0)	(1)
Intestine Large, Cecum	(54)	(50)	(50)	(49)	(49)	(50)
Leukemia Granulocytic	1 (2%)					
Intestine Large, Colon	(54)	(50)	(50)	(49)	(50)	(49)
Leiomyosarcoma						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Intestine Large, Rectum	(30)	(32)	(30)	(24)	(33)	(36)
Intestine Small	(0)	(0)	(0)	(0)	(0)	(1)
Intestine Small, Duodenum	(53)	(50)	(48)	(48)	(50)	(50)
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear						
Intestine Small, Ileum	(53)	(49)	(47)	(45)	(49)	(48)
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear						

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**Test Type:** MULTIGEN CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** Endocrine disruptor (Genistein)  
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**Date Report Requested:** 10/22/2014  
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**Lab:** NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Intestine Small, Jejunum	(54)	(49)	(47)	(45)	(49)	(48)
Adenoma		1 (2%)				
Leiomyosarcoma						
Leukemia Mononuclear						
Liver	(54)	(50)	(50)	(49)	(50)	(50)
Cholangiocarcinoma						
Cholangioma	1 (2%)					
Fibrous Histiocytoma, Metastatic, Skin		1 (2%)				
Hepatocellular Adenoma						
Histiocytic Sarcoma		1 (2%)			1 (2%)	
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant	1 (2%)					
Mesentery	(1)	(2)	(1)	(2)	(2)	(0)
Lipoma	1 (100%)					
Sarcoma		1 (50%)				
Oral Mucosa	(0)	(0)	(0)	(0)	(0)	(0)
Sarcoma						
Pancreas	(54)	(50)	(50)	(48)	(50)	(50)
Leukemia Granulocytic	1 (2%)					
Lymphoma Malignant	1 (2%)					
Salivary Glands	(54)	(50)	(50)	(49)	(50)	(50)
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Stomach	(0)	(0)	(0)	(0)	(0)	(0)
Stomach, Forestomach	(54)	(50)	(50)	(49)	(49)	(49)
Leukemia Granulocytic	1 (2%)					
Stomach, Glandular	(54)	(50)	(50)	(49)	(50)	(50)

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**Test Type:** MULTIGEN CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** Endocrine disruptor (Genistein)  
**CAS Number:** 446-72-0

**Date Report Requested:** 10/22/2014  
**Time Report Requested:** 14:21:11  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Leukemia Mononuclear Tongue	(0)	(0)	(0)	(0)	(1)	(0)
<b>CARDIOVASCULAR SYSTEM</b>						
Blood Vessel	(53)	(50)	(50)	(49)	(50)	(50)
Heart	(54)	(50)	(50)	(49)	(50)	(50)
Histiocytic Sarcoma					1 (2%)	
Leukemia Granulocytic	1 (2%)					
Schwannoma Nos					1 (2%)	
<b>ENDOCRINE SYSTEM</b>						
Adrenal Cortex	(54)	(50)	(50)	(49)	(50)	(50)
Adenoma	2 (4%)	1 (2%)	2 (4%)	1 (2%)		2 (4%)
Carcinoma					1 (2%)	
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant	1 (2%)					
Adrenal Medulla	(54)	(48)	(50)	(48)	(48)	(50)
Leukemia Mononuclear				1 (2%)		
Pheochromocytoma Benign		1 (2%)			2 (4%)	
Pheochromocytoma Complex			1 (2%)			
Islets, Pancreatic	(54)	(50)	(50)	(48)	(50)	(50)
Adenoma	1 (2%)	1 (2%)	2 (4%)		2 (4%)	1 (2%)
Carcinoma		1 (2%)		1 (2%)		1 (2%)
Parathyroid Gland	(46)	(46)	(46)	(44)	(47)	(42)
Leukemia Granulocytic	1 (2%)					
Pituitary Gland	(54)	(50)	(50)	(49)	(49)	(50)
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		

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**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
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**Lab:** NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Pars Distalis, Adenoma	38 (70%)	40 (80%)	33 (66%)	46 (94%)	32 (65%)	40 (80%)
Pars Distalis, Carcinoma			1 (2%)			
Thyroid Gland	(54)	(50)	(49)	(49)	(50)	(50)
C Cell, Adenoma	2 (4%)		2 (4%)	3 (6%)	1 (2%)	1 (2%)
C Cell, Carcinoma						
Follicular Cel, Adenoma						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
<b>GENERAL BODY SYSTEM</b>						
Tissue NOS	(0)	(0)	(0)	(0)	(0)	(0)
Liposarcoma						
<b>GENITAL SYSTEM</b>						
Clitoral Gland	(51)	(49)	(49)	(49)	(49)	(49)
Adenoma						
Carcinoma			1 (2%)			
Fibrous Histiocytoma, Metastatic, Skin						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Squamous Cell Papilloma	1 (2%)		1 (2%)		1 (2%)	1 (2%)
Ovary	(54)	(50)	(50)	(49)	(50)	(49)
Granulosa Cell Tumor Benign				1 (2%)	1 (2%)	
Granulosa Cell Tumor Malignant			2 (4%)		1 (2%)	
Histiocytic Sarcoma					1 (2%)	
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Sarcoma Stromal			1 (2%)			1 (2%)
Tubulostromal Carcinoma						

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

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
 Test Compound: Endocrine disruptor (Genistein)  
 CAS Number: 446-72-0

Date Report Requested: 10/22/2014  
 Time Report Requested: 14:21:11  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Yolk Sac Carcinoma						
Oviduct	(54)	(50)	(49)	(49)	(50)	(49)
Leukemia Mononuclear				1 (2%)		
Uterus	(54)	(50)	(50)	(49)	(50)	(49)
Adenocarcinoma			1 (2%)			
Adenoma				1 (2%)		
Leiomyoma						
Leiomyosarcoma						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Polyp Stromal	4 (7%)	1 (2%)	3 (6%)	1 (2%)	1 (2%)	2 (4%)
Sarcoma Stromal	1 (2%)		1 (2%)		1 (2%)	
Vagina	(54)	(50)	(50)	(48)	(49)	(48)
Granular Cell Tumor Benign	1 (2%)					1 (2%)
Leukemia Granulocytic	1 (2%)					
Sarcoma Stromal	1 (2%)		1 (2%)			
<b>HEMATOPOIETIC SYSTEM</b>						
Bone Marrow	(54)	(50)	(50)	(48)	(50)	(50)
Histiocytic Sarcoma					1 (2%)	
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear						
Lymph Node	(11)	(10)	(12)	(5)	(9)	(10)
Axillary, Leukemia Mononuclear						
Inguinal, Leukemia Mononuclear						
Inguinal, Sarcoma, Metastatic, Skin						
Lumbar, Fibrous Histiocytoma, Metastatic, Skin						
Lumbar, Leukemia Granulocytic	1 (9%)					

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**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
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**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Lumbar, Leukemia Mononuclear						
Lumbar, Lymphoma Malignant	1 (9%)					
Lumbar, Yolk Sac Carcinoma, Metastatic, Ovary						
Mediastinal, Leukemia Mononuclear						
Pancreatic, Fibrous Histiocytoma, Metastatic, Skin		1 (10%)				
Pancreatic, Leukemia Mononuclear						
Popliteal, Sarcoma, Metastatic, Skin						
Renal, Fibrous Histiocytoma, Metastatic, Skin		1 (10%)				
Renal, Lymphoma Malignant	1 (9%)					
Renal, Yolk Sac Carcinoma, Metastatic, Ovary						
Sarcoma, Metastatic, Skin						
Lymph Node, Mandibular	(53)	(50)	(50)	(49)	(50)	(50)
Histiocytic Sarcoma					1 (2%)	
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Lymph Node, Mesenteric	(54)	(50)	(50)	(48)	(50)	(50)
Leiomyosarcoma, Metastatic, Intestine Small, Jejunum						
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant	1 (2%)					
Spleen	(54)	(50)	(50)	(49)	(50)	(50)
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant	1 (2%)					
Thymus	(50)	(43)	(43)	(44)	(47)	(47)

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\* Number of animals with any tissue examined microscopically

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**Test Type:** MULTIGEN CHRONIC  
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**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** Endocrine disruptor (Genistein)  
**CAS Number:** 446-72-0

**Date Report Requested:** 10/22/2014  
**Time Report Requested:** 14:21:12  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant	1 (2%)					
Sarcoma						
Thymoma Malignant	1 (2%)					
<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(54)	(50)	(50)	(49)	(50)	(50)
Adenocarcinoma	7 (13%)	1 (2%)	6 (12%)	10 (20%)	3 (6%)	3 (6%)
Adenocarcinoma, Multiple	1 (2%)	2 (4%)	2 (4%)	3 (6%)		
Adenoma	2 (4%)	1 (2%)		5 (10%)		2 (4%)
Fibroadenoma	19 (35%)	17 (34%)	20 (40%)	8 (16%)	21 (42%)	14 (28%)
Fibroadenoma, Multiple	13 (24%)	10 (20%)	8 (16%)	4 (8%)	9 (18%)	17 (34%)
Fibroma		1 (2%)				
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Skin	(54)	(50)	(50)	(49)	(50)	(50)
Fibroma	1 (2%)				1 (2%)	1 (2%)
Fibrous Histiocytoma		1 (2%)				
Histiocytic Sarcoma		1 (2%)				
Keratoacanthoma		1 (2%)			1 (2%)	
Leukemia Mononuclear						
Lipoma	1 (2%)		1 (2%)			1 (2%)
Osteosarcoma						
Sarcoma	2 (4%)					
Squamous Cell Carcinoma	1 (2%)					
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone	(0)	(0)	(0)	(0)	(0)	(0)

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

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

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** Endocrine disruptor (Genistein)  
**CAS Number:** 446-72-0

**Date Report Requested:** 10/22/2014  
**Time Report Requested:** 14:21:12  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Bone, Femur	(54)	(50)	(50)	(49)	(50)	(50)
Bone, Joint	(0)	(0)	(0)	(0)	(0)	(0)
Bone, Mandible	(0)	(0)	(0)	(0)	(1)	(0)
Squamous Cell Carcinoma					1 (100%)	
Bone, Tibia	(0)	(0)	(0)	(0)	(0)	(0)
Skeletal Muscle	(0)	(1)	(1)	(0)	(1)	(1)
Granulosa Cell Tumor Malignant, Metastatic, Ovary					1 (100%)	
Hemangiosarcoma			1 (100%)			
Histiocytic Sarcoma		1 (100%)				
Lipoma						1 (100%)
Sarcoma			1 (100%)			
<b>NERVOUS SYSTEM</b>						
Brain, Brain Stem	(54)	(50)	(50)	(49)	(50)	(50)
Brain, Cerebellum	(53)	(50)	(50)	(49)	(49)	(50)
Astrocytoma Malignant		1 (2%)				
Granular Cell Tumor Benign				1 (2%)		
Leukemia Mononuclear						
Brain, Cerebrum	(54)	(50)	(50)	(49)	(50)	(50)
Astrocytoma Malignant						1 (2%)
Carcinoma, Metastatic, Pituitary Gland						
Glioma Malignant, Mixed						
Granular Cell Tumor Benign	1 (2%)			1 (2%)		
Granular Cell Tumor Malignant			1 (2%)			
Granular Cell Tumor Nos				1 (2%)		
Histiocytic Sarcoma					1 (2%)	
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		

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**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

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

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Meningioma Malignant			1 (2%)			
<b>RESPIRATORY SYSTEM</b>						
Lung	(54)	(50)	(50)	(49)	(50)	(50)
Alveolar/Bronchiolar Adenoma		1 (2%)	1 (2%)		1 (2%)	
Fibrous Histiocytoma, Metastatic, Skin						
Histiocytic Sarcoma		1 (2%)			1 (2%)	
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant	1 (2%)					
Squamous Cell Carcinoma, Metastatic, Nose				1 (2%)		
Squamous Cell Carcinoma, Metastatic, Skin						
Nose	(54)	(50)	(50)	(49)	(50)	(50)
Histiocytic Sarcoma					1 (2%)	
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Squamous Cell Carcinoma			1 (2%)	2 (4%)		
Trachea	(54)	(50)	(50)	(49)	(50)	(50)
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
<b>SPECIAL SENSES SYSTEM</b>						
Ear	(0)	(0)	(0)	(0)	(2)	(0)
Squamous Cell Papilloma					1 (50%)	
Eye	(32)	(32)	(31)	(26)	(33)	(37)
Leukemia Mononuclear				1 (4%)		
Harderian Gland	(30)	(34)	(30)	(25)	(33)	(36)
Leukemia Mononuclear				1 (4%)		

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**Route:** DOSED FEED  
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**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
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**Lab:** NCTR

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
Squamous Cell Carcinoma, Metastatic, Nose				1 (4%)		
Lacrimal Gland	(0)	(1)	(1)	(1)	(1)	(0)
<b>URINARY SYSTEM</b>						
Kidney	(54)	(50)	(50)	(49)	(50)	(50)
Histiocytic Sarcoma		1 (2%)				
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Nephroblastoma				1 (2%)		
Renal Tubule, Adenoma						1 (2%)
Transitional Epithelial Carcinoma	1 (2%)					
Urinary Bladder	(54)	(49)	(49)	(49)	(49)	(48)
Leukemia Mononuclear				1 (2%)		
<b>SYSTEMIC LESIONS</b>						
Multiple Organ	*(54)	*(50)	*(50)	*(49)	*(50)	*(50)
Histiocytic Sarcoma		1 (2%)			1 (2%)	
Leukemia Granulocytic	1 (2%)					
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant	1 (2%)					

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 Route: DOSED FEED  
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 Lab: NCTR

CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
<b>Disposition Summary</b>					
Animals Initially In Study	50	53	50	50	50
Early Deaths					
Moribund	18	9	9	12	13
Natural Death	9	3	2	4	6
Survivors					
Moribund		6	5	4	4
Natural Death		2	4	1	2
Terminal Sacrifice	23	33	30	29	25
Animals Examined Microscopically	50	53	50	50	50
<b>ALIMENTARY SYSTEM</b>					
Esophagus	(50)	(53)	(50)	(50)	(48)
Intestine Large	(0)	(0)	(0)	(0)	(0)
Intestine Large, Cecum	(50)	(52)	(50)	(50)	(49)
Leukemia Granulocytic					
Intestine Large, Colon	(50)	(53)	(50)	(50)	(49)
Leiomyosarcoma	1 (2%)				
Leukemia Granulocytic					
Leukemia Mononuclear					
Intestine Large, Rectum	(26)	(42)	(40)	(40)	(37)
Intestine Small	(0)	(0)	(0)	(0)	(0)
Intestine Small, Duodenum	(50)	(52)	(50)	(50)	(49)
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	
Intestine Small, Ileum	(47)	(51)	(48)	(47)	(48)
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	

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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Intestine Small, Jejunum	(49)	(51)	(49)	(49)	(48)
Adenoma					
Leiomyosarcoma			1 (2%)		
Leukemia Mononuclear				1 (2%)	
Liver	(50)	(53)	(50)	(50)	(49)
Cholangiocarcinoma			1 (2%)		
Cholangioma					
Fibrous Histiocytoma, Metastatic, Skin		1 (2%)			
Hepatocellular Adenoma	1 (2%)			1 (2%)	
Histiocytic Sarcoma					
Leukemia Granulocytic					
Leukemia Mononuclear			1 (2%)	1 (2%)	
Lymphoma Malignant					
Mesentery	(2)	(0)	(1)	(1)	(0)
Lipoma					
Sarcoma					
Oral Mucosa	(0)	(1)	(0)	(1)	(1)
Sarcoma		1 (100%)			1 (100%)
Pancreas	(50)	(52)	(50)	(50)	(49)
Leukemia Granulocytic					
Lymphoma Malignant					
Salivary Glands	(50)	(53)	(49)	(50)	(49)
Leukemia Granulocytic					
Leukemia Mononuclear					
Stomach	(0)	(0)	(1)	(0)	(0)
Stomach, Forestomach	(50)	(52)	(49)	(49)	(49)
Leukemia Granulocytic					
Stomach, Glandular	(50)	(53)	(50)	(50)	(49)

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**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Leukemia Mononuclear				1 (2%)	
Tongue	(0)	(0)	(0)	(0)	(0)
<b>CARDIOVASCULAR SYSTEM</b>					
Blood Vessel	(50)	(53)	(50)	(50)	(49)
Heart	(50)	(53)	(50)	(50)	(49)
Histiocytic Sarcoma					
Leukemia Granulocytic					
Schwannoma Nos				1 (2%)	
<b>ENDOCRINE SYSTEM</b>					
Adrenal Cortex	(50)	(53)	(50)	(50)	(49)
Adenoma	2 (4%)		2 (4%)	1 (2%)	1 (2%)
Carcinoma					
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	
Lymphoma Malignant					
Adrenal Medulla	(48)	(53)	(46)	(50)	(48)
Leukemia Mononuclear				1 (2%)	
Pheochromocytoma Benign		2 (4%)	1 (2%)		2 (4%)
Pheochromocytoma Complex					
Islets, Pancreatic	(50)	(52)	(50)	(50)	(49)
Adenoma	1 (2%)	1 (2%)	2 (4%)	2 (4%)	1 (2%)
Carcinoma					
Parathyroid Gland	(43)	(53)	(41)	(47)	(46)
Leukemia Granulocytic					
Pituitary Gland	(50)	(53)	(50)	(50)	(50)
Leukemia Granulocytic					
Leukemia Mononuclear					

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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Pars Distalis, Adenoma	43 (86%)	41 (77%)	42 (84%)	42 (84%)	40 (80%)
Pars Distalis, Carcinoma	1 (2%)		1 (2%)		
Thyroid Gland	(50)	(53)	(50)	(50)	(49)
C Cell, Adenoma	1 (2%)		1 (2%)		3 (6%)
C Cell, Carcinoma	1 (2%)		1 (2%)		
Follicular Cel, Adenoma	1 (2%)				
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	
<b>GENERAL BODY SYSTEM</b>					
Tissue NOS	(1)	(0)	(0)	(0)	(0)
Liposarcoma	1 (100%)				
<b>GENITAL SYSTEM</b>					
Clitoral Gland	(49)	(49)	(47)	(49)	(48)
Adenoma		2 (4%)		1 (2%)	
Carcinoma				1 (2%)	
Fibrous Histiocytoma, Metastatic, Skin		1 (2%)			
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	
Squamous Cell Papilloma					
Ovary	(49)	(53)	(50)	(49)	(49)
Granulosa Cell Tumor Benign					
Granulosa Cell Tumor Malignant					
Histiocytic Sarcoma					
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	
Sarcoma Stromal					
Tubulostromal Carcinoma		1 (2%)			

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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Yolk Sac Carcinoma					1 (2%)
Oviduct	(47)	(53)	(49)	(49)	(49)
Leukemia Mononuclear				1 (2%)	
Uterus	(50)	(53)	(50)	(50)	(49)
Adenocarcinoma		1 (2%)		1 (2%)	
Adenoma				1 (2%)	
Leiomyoma			1 (2%)		
Leiomyosarcoma	1 (2%)				
Leukemia Granulocytic				1 (2%)	
Leukemia Mononuclear				1 (2%)	
Polyp Stromal	3 (6%)	5 (9%)		5 (10%)	2 (4%)
Sarcoma Stromal				2 (4%)	
Vagina	(50)	(52)	(49)	(49)	(48)
Granular Cell Tumor Benign					
Leukemia Granulocytic					
Sarcoma Stromal	1 (2%)				
<b>HEMATOPOIETIC SYSTEM</b>					
Bone Marrow	(50)	(53)	(50)	(50)	(49)
Histiocytic Sarcoma					
Leukemia Granulocytic					
Leukemia Mononuclear			1 (2%)	1 (2%)	
Lymph Node	(9)	(18)	(9)	(8)	(12)
Axillary, Leukemia Mononuclear			1 (11%)		
Inguinal, Leukemia Mononuclear				1 (13%)	
Inguinal, Sarcoma, Metastatic, Skin		1 (6%)			
Lumbar, Fibrous Histiocytoma, Metastatic, Skin		1 (6%)			
Lumbar, Leukemia Granulocytic					

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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Lumbar, Leukemia Mononuclear			1 (11%)		
Lumbar, Lymphoma Malignant					
Lumbar, Yolk Sac Carcinoma, Metastatic, Ovary					1 (8%)
Mediastinal, Leukemia Mononuclear				1 (13%)	
Pancreatic, Fibrous Histiocytoma, Metastatic, Skin					
Pancreatic, Leukemia Mononuclear				1 (13%)	
Popliteal, Sarcoma, Metastatic, Skin		1 (6%)			
Renal, Fibrous Histiocytoma, Metastatic, Skin					
Renal, Lymphoma Malignant					
Renal, Yolk Sac Carcinoma, Metastatic, Ovary					1 (8%)
Sarcoma, Metastatic, Skin		1 (6%)			
Lymph Node, Mandibular Histiocytic Sarcoma	(50)	(53)	(49)	(50)	(49)
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	
Lymph Node, Mesenteric	(50)	(53)	(50)	(50)	(49)
Leiomyosarcoma, Metastatic, Intestine Small, Jejunum			1 (2%)		
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	
Lymphoma Malignant					
Spleen	(50)	(53)	(50)	(50)	(49)
Leukemia Granulocytic					
Leukemia Mononuclear			1 (2%)	1 (2%)	
Lymphoma Malignant					
Thymus	(47)	(48)	(45)	(46)	(47)

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CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Leukemia Granulocytic					
Leukemia Mononuclear					
Lymphoma Malignant					
Sarcoma		1 (2%)			
Thymoma Malignant		1 (2%)			1 (2%)
<b>INTEGUMENTARY SYSTEM</b>					
Mammary Gland	(50)	(53)	(49)	(50)	(50)
Adenocarcinoma	7 (14%)	5 (9%)	6 (12%)	8 (16%)	10 (20%)
Adenocarcinoma, Multiple	2 (4%)	2 (4%)	2 (4%)	2 (4%)	2 (4%)
Adenoma	1 (2%)			1 (2%)	1 (2%)
Fibroadenoma	18 (36%)	9 (17%)	9 (18%)	13 (26%)	19 (38%)
Fibroadenoma, Multiple	7 (14%)	23 (43%)	11 (22%)	20 (40%)	9 (18%)
Fibroma					
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	
Skin	(50)	(53)	(50)	(50)	(50)
Fibroma	1 (2%)				
Fibrous Histiocytoma		1 (2%)			
Histiocytic Sarcoma					
Keratoacanthoma					1 (2%)
Leukemia Mononuclear				1 (2%)	
Lipoma					
Osteosarcoma	1 (2%)				
Sarcoma	1 (2%)	1 (2%)			1 (2%)
Squamous Cell Carcinoma		1 (2%)			1 (2%)
<b>MUSCULOSKELETAL SYSTEM</b>					
Bone	(0)	(0)	(0)	(1)	(0)

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**Lab:** NCTR

CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Bone, Femur	(50)	(53)	(50)	(50)	(49)
Bone, Joint	(0)	(1)	(0)	(0)	(0)
Bone, Mandible	(0)	(0)	(0)	(0)	(0)
Squamous Cell Carcinoma					
Bone, Tibia	(1)	(0)	(0)	(0)	(0)
Skeletal Muscle	(0)	(1)	(0)	(0)	(0)
Granulosa Cell Tumor Malignant, Metastatic, Ovary					
Hemangiosarcoma					
Histiocytic Sarcoma					
Lipoma					
Sarcoma					
<b>NERVOUS SYSTEM</b>					
Brain, Brain Stem	(50)	(53)	(50)	(50)	(49)
Brain, Cerebellum	(50)	(53)	(50)	(50)	(49)
Astrocytoma Malignant					
Granular Cell Tumor Benign		1 (2%)			
Leukemia Mononuclear				1 (2%)	
Brain, Cerebrum	(50)	(53)	(50)	(50)	(49)
Astrocytoma Malignant					
Carcinoma, Metastatic, Pituitary Gland					1 (2%)
Glioma Malignant, Mixed		1 (2%)			
Granular Cell Tumor Benign					1 (2%)
Granular Cell Tumor Malignant					
Granular Cell Tumor Nos					
Histiocytic Sarcoma					
Leukemia Granulocytic					
Leukemia Mononuclear					

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

CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Meningioma Malignant					
RESPIRATORY SYSTEM					
Lung	(50)	(53)	(50)	(50)	(49)
Alveolar/Bronchiolar Adenoma					
Fibrous Histiocytoma, Metastatic, Skin		1 (2%)			
Histiocytic Sarcoma					
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	
Lymphoma Malignant					
Squamous Cell Carcinoma, Metastatic, Nose					
Squamous Cell Carcinoma, Metastatic, Skin					1 (2%)
Nose	(50)	(53)	(50)	(50)	(49)
Histiocytic Sarcoma					
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	
Squamous Cell Carcinoma	1 (2%)	1 (2%)	1 (2%)		3 (6%)
Trachea	(50)	(53)	(50)	(50)	(49)
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	
SPECIAL SENSES SYSTEM					
Ear	(0)	(0)	(0)	(0)	(0)
Squamous Cell Papilloma					
Eye	(28)	(43)	(41)	(40)	(38)
Leukemia Mononuclear					
Harderian Gland	(26)	(43)	(40)	(40)	(38)
Leukemia Mononuclear					

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically



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

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
**Test Compound:** Endocrine disruptor (Genistein)  
**CAS Number:** 446-72-0

**Date Report Requested:** 10/22/2014  
**Time Report Requested:** 14:21:13  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
Squamous Cell Carcinoma, Metastatic, Nose					
Lacrimal Gland	(2)	(0)	(1)	(0)	(0)
<b>URINARY SYSTEM</b>					
Kidney	(50)	(53)	(50)	(50)	(49)
Histiocytic Sarcoma					
Leukemia Granulocytic					
Leukemia Mononuclear				1 (2%)	
Nephroblastoma					
Renal Tubule, Adenoma		1 (2%)		1 (2%)	
Transitional Epithelial Carcinoma					
Urinary Bladder	(49)	(53)	(47)	(48)	(47)
Leukemia Mononuclear				1 (2%)	
<b>SYSTEMIC LESIONS</b>					
Multiple Organ	*(50)	*(53)	*(50)	*(50)	*(50)
Histiocytic Sarcoma					
Leukemia Granulocytic					
Leukemia Mononuclear			1 (2%)	1 (2%)	
Lymphoma Malignant					

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

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

CD Rat FEMALE	F1 0 PPM	F1 5PPM	F1 100PPM	F1 500PPM	F1 5PPM/CTL	F1 100PPM/CTL
<b>Tumor Summary for FEMALE</b>						
Total Animals with Primary Neoplasms (b)	53	47	45	49	45	49
Total Primary Neoplasms	105	84	95	91	83	91
Total Animals with Benign Neoplasms	49	45	44	46	44	49
Total Benign Neoplasms	88	76	73	72	74	85
Total Animals with Malignant Neoplasms	16	7	19	18	8	6
Total Malignant Neoplasms	17	8	22	18	8	6
Total Animals with Metastatic Neoplasms		1		1	1	
Total Metastatic Neoplasms		3		2	1	
Total Animals with Malignant Neoplasms Uncertain Primary Site						
Total Animals with Neoplasms Uncertain - Benign or Malignant				1	1	
Total Uncertain Neoplasms				1	1	

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

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\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99930-92  
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**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P02: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (a)**  
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**Lab:** NCTR

CD Rat FEMALE	F1 500PPM/CTL	F3 0 PPM	F3 5PPM TO CTL	F3 100PPM TO CTL	F3 500PPM TOCTL
<b>Tumor Summary for FEMALE</b>					
Total Animals with Primary Neoplasms (b)	50	52	48	48	49
Total Primary Neoplasms	97	102	83	104	100
Total Animals with Benign Neoplasms	50	49	48	46	48
Total Benign Neoplasms	79	85	69	88	80
Total Animals with Malignant Neoplasms	15	16	12	14	17
Total Malignant Neoplasms	18	16	14	15	20
Total Animals with Metastatic Neoplasms		2	1		3
Total Metastatic Neoplasms		7	1		4
Total Animals with Malignant Neoplasms Uncertain Primary Site					
Total Animals with Neoplasms Uncertain - Benign or Malignant		1		1	
Total Uncertain Neoplasms		1		1	

**\*\* END OF REPORT \*\***

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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically