

**Experiment Number:** 99920-92  
**Test Type:** MULTIGEN CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS  
ABRIDGED) (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:50:44  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

<b>C Number:</b>	MG96006
<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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**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
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CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
<b>Disposition Summary</b>						
Animals Initially In Study	51	50	50	50	50	50
<b>Early Deaths</b>						
Moribund Sacrifice	9	13	17	12	15	7
Natural Death	7	6	3	4	4	10
<b>Survivors</b>						
Moribund Sacrifice				2		
Natural Death	1					
Terminal Sacrifice	34	31	30	32	31	33
Animals Examined Microscopically	51	50	50	50	50	50

ALIMENTARY SYSTEM

Esophagus	(51)	(50)	(50)	(50)	(50)	(49)
Intestine Large, Cecum	(44)	(45)	(47)	(46)	(48)	(43)
Intestine Large, Colon	(45)	(47)	(48)	(47)	(49)	(43)
Adenoma						
Intestine Large, Rectum	(45)	(45)	(47)	(46)	(49)	(42)
Anus, Sarcoma						
Intestine Small, Duodenum	(44)	(45)	(48)	(47)	(49)	(42)
Adenocarcinoma	1 (2%)				2 (4%)	
Intestine Small, Ileum	(43)	(45)	(47)	(46)	(48)	(41)
Adenocarcinoma			1 (2%)			
Intestine Small, Jejunum	(43)	(45)	(46)	(46)	(48)	(41)
Adenocarcinoma						
Sarcoma		1 (2%)				
Liver	(49)	(49)	(50)	(49)	(50)	(48)
Cholangiocarcinoma			1 (2%)		1 (2%)	
Cholangioma						

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CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Hepatocellular Adenoma		3 (6%)	1 (2%)			
Hepatocellular Carcinoma				1 (2%)		1 (2%)
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach						
Mesentery	(1)	(1)	(2)	(1)	(1)	(2)
Carcinoma, Metastatic, Uncertain Primary Site						1 (50%)
Squamous Cell Carcinoma, Metastatic, Uncertain Primary Site						
Oral Mucosa	(3)	(2)	(4)	(9)	(5)	(1)
Sarcoma		1 (50%)				
Squamous Cell Carcinoma	3 (100%)		4 (100%)	7 (78%)	3 (60%)	
Pancreas	(46)	(48)	(48)	(48)	(49)	(47)
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach						
Salivary Glands	(48)	(50)	(49)	(50)	(50)	(48)
Stomach, Forestomach	(47)	(48)	(49)	(48)	(50)	(46)
Squamous Cell Carcinoma						
Squamous Cell Papilloma	1 (2%)					
Stomach, Glandular	(45)	(47)	(48)	(46)	(50)	(45)
Adenoma					1 (2%)	
Tongue	(0)	(0)	(0)	(0)	(0)	(0)
<b>CARDIOVASCULAR SYSTEM</b>						
Blood Vessel	(51)	(50)	(50)	(50)	(50)	(50)
Heart	(51)	(50)	(50)	(50)	(50)	(48)
Endocardium, Schwannoma Malignant	1 (2%)	2 (4%)				
Schwannoma Benign				1 (2%)		
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach						

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<b>ENDOCRINE SYSTEM</b>						
Adrenal Cortex	(47)	(50)	(50)	(50)	(49)	(45)
Adenoma	2 (4%)	1 (2%)	2 (4%)	1 (2%)		1 (2%)
Carcinoma			2 (4%)			
Adrenal Medulla	(46)	(48)	(49)	(49)	(49)	(45)
Bilateral, Pheochromocytoma Benign					1 (2%)	
Pheochromocytoma Benign	2 (4%)	2 (4%)	4 (8%)	1 (2%)	3 (6%)	1 (2%)
Pheochromocytoma Complex	1 (2%)	1 (2%)	1 (2%)			
Pheochromocytoma Malignant	1 (2%)	1 (2%)	2 (4%)			
Islets, Pancreatic	(46)	(48)	(49)	(49)	(49)	(47)
Adenoma				2 (4%)		2 (4%)
Parathyroid Gland	(49)	(46)	(46)	(46)	(50)	(44)
Adenoma	4 (8%)		1 (2%)	1 (2%)	3 (6%)	1 (2%)
Pituitary Gland	(48)	(50)	(50)	(50)	(50)	(47)
Pars Distalis, Adenoma	25 (52%)	24 (48%)	28 (56%)	16 (32%)	29 (58%)	28 (60%)
Pars Intermed, Adenoma						
Schwannoma Malignant	1 (2%)					
Thyroid Gland	(47)	(49)	(50)	(49)	(50)	(47)
C Cell, Adenoma	5 (11%)		1 (2%)		3 (6%)	1 (2%)
C Cell, Carcinoma		1 (2%)			2 (4%)	
Follicular Cel, Adenoma			1 (2%)			
Follicular Cel, Carcinoma				1 (2%)		
<b>GENERAL BODY SYSTEM</b>						
Tissue NOS	(1)	(0)	(1)	(0)	(1)	(0)
Lipoma			1 (100%)			
Sarcoma						
Schwannoma Malignant					1 (100%)	

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GENITAL SYSTEM						
Coagulating Gland	(46)	(49)	(49)	(49)	(49)	(47)
Carcinoma, Metastatic, Prostate, Dorsal/Lateral Lobe						1 (2%)
Carcinoma, Metastatic, Uncertain Primary Site						1 (2%)
Schwannoma Malignant						
Ductus Deferens	(0)	(0)	(0)	(0)	(0)	(1)
Epididymis	(51)	(50)	(50)	(50)	(50)	(49)
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach						
Penis	(0)	(1)	(0)	(0)	(1)	(1)
Squamous Cell Carcinoma, Metastatic, Preputial Gland					1 (100%)	
Preputial Gland	(51)	(50)	(50)	(50)	(50)	(50)
Adenoma					1 (2%)	
Carcinoma						
Squamous Cell Carcinoma	4 (8%)	5 (10%)	5 (10%)	2 (4%)	4 (8%)	3 (6%)
Prostate, Dorsal/Lateral Lobe	(36)	(37)	(45)	(41)	(38)	(42)
Carcinoma						1 (2%)
Carcinoma, Metastatic, Uncertain Primary Site						1 (2%)
Schwannoma Malignant						
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach						
Prostate, Dorsal/lateral Lobe	(13)	(13)	(5)	(9)	(12)	(7)
Prostate, Ventral Lobe	(49)	(50)	(50)	(50)	(50)	(49)
Carcinoma						1 (2%)
Schwannoma Malignant						
Rete Testes	(46)	(44)	(46)	(47)	(47)	(43)

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Seminal Vesicle	(43)	(46)	(47)	(47)	(49)	(43)
Adenoma	1 (2%)					
Carcinoma			1 (2%)	1 (2%)		
Carcinoma, Metastatic, Prostate, Dorsal/Lateral Lobe						1 (2%)
Carcinoma, Metastatic, Uncertain Primary Site						1 (2%)
Testes	(48)	(50)	(50)	(50)	(50)	(48)
Interstitial Cell, Adenoma						
Sarcoma					1 (2%)	
Seminoma Benign				1 (2%)		
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach						
<b>HEMATOPOIETIC SYSTEM</b>						
Bone Marrow	(46)	(48)	(48)	(48)	(50)	(46)
Lymph Node	(14)	(16)	(16)	(15)	(19)	(14)
Squamous Cell Carcinoma, Metastatic, Preputial Gland					1 (5%)	
Lymph Node, Mandibular	(49)	(50)	(50)	(48)	(50)	(47)
Lymph Node, Mesenteric	(45)	(46)	(49)	(47)	(50)	(44)
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach						
Spleen	(48)	(49)	(49)	(49)	(50)	(47)
Hemangiosarcoma						
Sarcoma						
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach						
Thymus	(45)	(44)	(46)	(44)	(46)	(40)
Sarcoma			1 (2%)	1 (2%)		

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Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach						
Thymoma Benign					1 (2%)	
<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(44)	(45)	(47)	(44)	(45)	(47)
Adenocarcinoma	1 (2%)					
Adenoma					1 (2%)	1 (2%)
Fibroadenoma	1 (2%)	3 (7%)	1 (2%)	2 (5%)		1 (2%)
Fibroma	1 (2%)	3 (7%)			1 (2%)	
Lipoma	1 (2%)					
Skin	(51)	(50)	(50)	(50)	(50)	(49)
Basal Cell Adenoma	1 (2%)	1 (2%)	1 (2%)			
Carcinoma						
Fibroma	2 (4%)		1 (2%)	2 (4%)		1 (2%)
Hemangioma			1 (2%)			
Keratoacanthoma	2 (4%)	3 (6%)	1 (2%)	2 (4%)	1 (2%)	2 (4%)
Lipoma					1 (2%)	
Osteosarcoma						
Prepuce, Keratoacanthoma						1 (2%)
Prepuce, Squamous Cell Carcinoma						
Sarcoma	4 (8%)		1 (2%)		1 (2%)	
Schwannoma Malignant				1 (2%)		
Sebaceous G, Adenoma					1 (2%)	
Squamous Cell Carcinoma		1 (2%)				1 (2%)
Squamous Cell Papilloma			1 (2%)		2 (4%)	1 (2%)
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone	(2)	(0)	(0)	(1)	(0)	(0)

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Cranium, Nerve, Squamous Cell Carcinoma, Deep Invasion						
Cranium, Osteosarcoma	1 (50%)					
Cranium, Schwannoma Malignant, Metastatic, Uncertain Primary Site	1 (50%)					
Cranium, Squamous Cell Carcinoma, Deep Invasion						
Bone, Femur	(51)	(50)	(50)	(50)	(50)	(50)
Skeletal Muscle	(1)	(1)	(1)	(2)	(2)	(0)
Diaphragm, Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach						
<b>NERVOUS SYSTEM</b>						
Brain	(0)	(0)	(0)	(0)	(0)	(0)
Cranial Nerve, Schwannoma Malignant						
Brain, Brain Stem	(49)	(50)	(50)	(50)	(50)	(48)
Astrocytoma Malignant	1 (2%)					
Reticulosis Malignant						
Brain, Cerebellum	(49)	(50)	(50)	(50)	(50)	(48)
Astrocytoma Malignant						
Granular Cell Tumor Malignant						
Brain, Cerebrum	(49)	(50)	(50)	(50)	(50)	(48)
Astrocytoma Malignant	1 (2%)					
Granular Cell Tumor Benign		1 (2%)				
Granular Cell Tumor Malignant		1 (2%)	1 (2%)			
Meninges, Granular Cell Tumor Benign						
Osteoma						
Reticulosis Malignant					1 (2%)	
Peripheral Nerve	(0)	(1)	(1)	(2)	(2)	(0)

**RESPIRATORY SYSTEM**

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Lung	(46)	(46)	(48)	(48)	(50)	(45)
Alveolar/Bronchiolar Adenoma	1 (2%)					
Alveolar/Bronchiolar Carcinoma					1 (2%)	
Carcinoma, Metastatic, Adrenal Cortex			1 (2%)			
Sarcoma, Metastatic, Thymus				1 (2%)		
Schwannoma Malignant, Metastatic, Skin						
Squamous Cell Carcinoma, Metastatic, Preputial Gland		1 (2%)				
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach						
Squamous Cell Carcinoma, Metastatic, Uncertain Primary Site						
Thymoma Malignant, Metastatic, Uncertain Primary Site						
Nose	(48)	(49)	(50)	(49)	(49)	(48)
Adenoma	1 (2%)					
Osteosarcoma		1 (2%)				
Schwannoma Malignant			1 (2%)			
Trachea	(49)	(50)	(50)	(50)	(50)	(46)
<b>SPECIAL SENSES SYSTEM</b>						
Ear	(0)	(0)	(0)	(0)	(0)	(0)
Neural Crest Tumor						
Squamous Cell Papilloma						
Eye	(46)	(46)	(47)	(46)	(49)	(45)
Iris, Melanoma Benign						
Retrolbulbar, Squamous Cell Carcinoma, Deep Invasion				1 (2%)		
Schwannoma Malignant			1 (2%)			
Harderian Gland	(48)	(47)	(48)	(48)	(50)	(46)

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Schwannoma Malignant			1 (2%)			
Squamous Cell Carcinoma, Deep Invasion					1 (2%)	
Lacrimal Gland	(0)	(0)	(0)	(2)	(0)	(1)
Zymbal's Gland	(1)	(0)	(0)	(2)	(1)	(0)
Adenoma					1 (100%)	
Carcinoma	1 (100%)			1 (50%)		
Squamous Cell Carcinoma				1 (50%)		
<b>URINARY SYSTEM</b>						
Kidney	(46)	(49)	(48)	(49)	(49)	(47)
Bilateral, Renal Tubule, Adenoma					1 (2%)	
Bilateral, Renal Tubule, Carcinoma		1 (2%)		1 (2%)		
Liposarcoma						
Mesenchymal Tumor Malignant				1 (2%)	1 (2%)	
Renal Tubule, Adenoma					2 (4%)	
Renal Tubule, Carcinoma					1 (2%)	
Sarcoma						
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach						
Transit Epithe, Papilloma	1 (2%)					
Urethra	(2)	(2)	(0)	(2)	(1)	(5)
Urinary Bladder	(45)	(48)	(49)	(49)	(49)	(45)
<b>SYSTEMIC LESIONS</b>						
Multiple Organ	*(51)	*(50)	*(50)	*(50)	*(50)	*(50)
Leukemia Granulocytic		2 (4%)				
Leukemia Mononuclear						
Lymphoma Malignant	1 (2%)			2 (4%)	1 (2%)	2 (4%)
Mesothelioma Benign			2 (4%)			

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<b>Disposition Summary</b>					
Animals Initially In Study	50	50	49	50	50
<b>Early Deaths</b>					
Moribund Sacrifice	14	5	3	4	3
Natural Death	3	4	3	4	2
<b>Survivors</b>					
Moribund Sacrifice		8	13	9	9
Natural Death		3	3	2	1
Terminal Sacrifice	33	30	27	31	35
Animals Examined Microscopically	50	50	49	50	50

**ALIMENTARY SYSTEM**

Esophagus	(50)	(50)	(48)	(50)	(50)
Intestine Large, Cecum	(46)	(45)	(43)	(47)	(47)
Intestine Large, Colon	(48)	(45)	(43)	(48)	(48)
Adenoma		2 (4%)		1 (2%)	
Intestine Large, Rectum	(48)	(45)	(44)	(48)	(48)
Anus, Sarcoma				1 (2%)	
Intestine Small, Duodenum	(47)	(44)	(43)	(47)	(47)
Adenocarcinoma		2 (5%)			
Intestine Small, Ileum	(45)	(44)	(38)	(47)	(47)
Adenocarcinoma					
Intestine Small, Jejunum	(48)	(44)	(41)	(45)	(46)
Adenocarcinoma	1 (2%)				
Sarcoma					
Liver	(49)	(49)	(47)	(50)	(49)
Cholangiocarcinoma	1 (2%)	2 (4%)			
Cholangioma		1 (2%)		1 (2%)	

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Hepatocellular Adenoma	1 (2%)	1 (2%)			1 (2%)
Hepatocellular Carcinoma	1 (2%)				
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach			1 (2%)		
Mesentery	(0)	(4)	(0)	(6)	(3)
Carcinoma, Metastatic, Uncertain Primary Site					
Squamous Cell Carcinoma, Metastatic, Uncertain Primary Site				1 (17%)	
Oral Mucosa	(6)	(3)	(8)	(4)	(6)
Sarcoma					
Squamous Cell Carcinoma	4 (67%)	3 (100%)	4 (50%)	1 (25%)	5 (83%)
Pancreas	(50)	(47)	(48)	(49)	(49)
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach			1 (2%)		
Salivary Glands	(49)	(48)	(49)	(49)	(50)
Stomach, Forestomach	(49)	(46)	(48)	(49)	(49)
Squamous Cell Carcinoma			1 (2%)		
Squamous Cell Papilloma					
Stomach, Glandular	(49)	(45)	(46)	(47)	(47)
Adenoma					
Tongue	(1)	(0)	(0)	(0)	(0)
<b>CARDIOVASCULAR SYSTEM</b>					
Blood Vessel	(50)	(50)	(49)	(50)	(50)
Heart	(50)	(50)	(49)	(50)	(50)
Endocardium, Schwannoma Malignant			1 (2%)		
Schwannoma Benign					
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach			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: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:45  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL	F3 0PPB	F3/2PPB TO CTL	F3/10 PPB TO CTL	F3/50 PPB TO CTL
<b>ENDOCRINE SYSTEM</b>					
Adrenal Cortex	(50)	(49)	(49)	(49)	(50)
Adenoma	1 (2%)	1 (2%)	1 (2%)	1 (2%)	
Carcinoma					
Adrenal Medulla	(50)	(49)	(48)	(49)	(50)
Bilateral, Pheochromocytoma Benign				1 (2%)	
Pheochromocytoma Benign	1 (2%)	4 (8%)	4 (8%)	5 (10%)	1 (2%)
Pheochromocytoma Complex					
Pheochromocytoma Malignant		1 (2%)		2 (4%)	1 (2%)
Islets, Pancreatic	(50)	(48)	(48)	(50)	(50)
Adenoma		2 (4%)	1 (2%)	3 (6%)	1 (2%)
Parathyroid Gland	(50)	(47)	(44)	(50)	(46)
Adenoma		1 (2%)	1 (2%)		
Pituitary Gland	(49)	(49)	(48)	(49)	(50)
Pars Distalis, Adenoma	24 (49%)	24 (49%)	20 (42%)	18 (37%)	26 (52%)
Pars Intermed, Adenoma			1 (2%)	1 (2%)	
Schwannoma Malignant					
Thyroid Gland	(49)	(48)	(49)	(50)	(50)
C Cell, Adenoma	1 (2%)			1 (2%)	
C Cell, Carcinoma	1 (2%)	3 (6%)		3 (6%)	1 (2%)
Follicular Cel, Adenoma			1 (2%)		
Follicular Cel, Carcinoma					
<b>GENERAL BODY SYSTEM</b>					
Tissue NOS	(0)	(0)	(0)	(0)	(1)
Lipoma					
Sarcoma					1 (100%)
Schwannoma 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:** 99920-92  
**Test Type:** MULTIGEN CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:50:45  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat MALE	F1/50PPB TO CTL	F3 0PPB	F3/2PPB TO CTL	F3/10 PPB TO CTL	F3/50 PPB TO CTL
<b>GENITAL SYSTEM</b>					
Coagulating Gland	(48)	(47)	(49)	(48)	(50)
Carcinoma, Metastatic, Prostate, Dorsal/Lateral Lobe					
Carcinoma, Metastatic, Uncertain Primary Site					1 (2%)
Schwannoma Malignant					1 (2%)
Ductus Deferens	(0)	(0)	(0)	(0)	(1)
Epididymis	(50)	(49)	(49)	(50)	(50)
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach			1 (2%)		
Penis	(0)	(0)	(0)	(0)	(1)
Squamous Cell Carcinoma, Metastatic, Preputial Gland					
Preputial Gland	(50)	(49)	(49)	(50)	(49)
Adenoma					
Carcinoma			1 (2%)		1 (2%)
Squamous Cell Carcinoma	1 (2%)	2 (4%)	3 (6%)	4 (8%)	7 (14%)
Prostate, Dorsal/Lateral Lobe	(38)	(43)	(38)	(41)	(43)
Carcinoma					
Carcinoma, Metastatic, Uncertain Primary Site					
Schwannoma Malignant					1 (2%)
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach			1 (3%)		
Prostate, Dorsal/lateral Lobe	(12)	(7)	(10)	(9)	(7)
Prostate, Ventral Lobe	(50)	(49)	(48)	(50)	(50)
Carcinoma					
Schwannoma Malignant					1 (2%)
Rete Testes	(46)	(46)	(45)	(43)	(44)

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:** 99920-92  
**Test Type:** MULTIGEN CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:50:45  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat MALE	F1/50PPB TO CTL	F3 0PPB	F3/2PPB TO CTL	F3/10 PPB TO CTL	F3/50 PPB TO CTL
Seminal Vesicle	(48)	(44)	(44)	(47)	(47)
Adenoma					
Carcinoma					
Carcinoma, Metastatic, Prostate, Dorsal/Lateral Lobe					
Carcinoma, Metastatic, Uncertain Primary Site					
Testes	(50)	(50)	(49)	(50)	(50)
Interstitial Cell, Adenoma			1 (2%)		1 (2%)
Sarcoma					
Seminoma Benign					
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach			1 (2%)		
<b>HEMATOPOIETIC SYSTEM</b>					
Bone Marrow	(49)	(49)	(49)	(50)	(50)
Lymph Node	(19)	(14)	(16)	(13)	(16)
Squamous Cell Carcinoma, Metastatic, Preputial Gland					
Lymph Node, Mandibular	(50)	(46)	(48)	(50)	(49)
Lymph Node, Mesenteric	(48)	(44)	(46)	(49)	(48)
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach			1 (2%)		
Spleen	(50)	(49)	(48)	(49)	(50)
Hemangiosarcoma	1 (2%)				
Sarcoma					1 (2%)
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach			1 (2%)		
Thymus	(47)	(47)	(45)	(47)	(45)
Sarcoma					

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\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-92  
**Test Type:** MULTIGEN CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:50:45  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat MALE	F1/50PPB TO CTL	F3 0PPB	F3/2PPB TO CTL	F3/10 PPB TO CTL	F3/50 PPB TO CTL
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach			1 (2%)		
Thymoma Benign					
<b>INTEGUMENTARY SYSTEM</b>					
Mammary Gland	(48)	(42)	(42)	(40)	(45)
Adenocarcinoma					2 (4%)
Adenoma	2 (4%)				1 (2%)
Fibroadenoma	1 (2%)		2 (5%)		1 (2%)
Fibroma	1 (2%)	1 (2%)	1 (2%)		
Lipoma					
Skin	(50)	(50)	(49)	(50)	(50)
Basal Cell Adenoma	2 (4%)	2 (4%)		1 (2%)	
Carcinoma					1 (2%)
Fibroma				1 (2%)	2 (4%)
Hemangioma					
Keratoacanthoma	1 (2%)		2 (4%)	3 (6%)	1 (2%)
Lipoma			2 (4%)		2 (4%)
Osteosarcoma	1 (2%)				
Prepuce, Keratoacanthoma					
Prepuce, Squamous Cell Carcinoma	1 (2%)				
Sarcoma		1 (2%)			1 (2%)
Schwannoma Malignant				1 (2%)	
Sebaceous G, Adenoma					
Squamous Cell Carcinoma	1 (2%)				
Squamous Cell Papilloma					
<b>MUSCULOSKELETAL SYSTEM</b>					
Bone	(1)	(0)	(1)	(1)	(0)

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: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:46  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL	F3 0PPB	F3/2PPB TO CTL	F3/10 PPB TO CTL	F3/50 PPB TO CTL
Cranium, Nerve, Squamous Cell Carcinoma, Deep Invasion	1 (100%)				
Cranium, Osteosarcoma					
Cranium, Schwannoma Malignant, Metastatic, Uncertain Primary Site					
Cranium, Squamous Cell Carcinoma, Deep Invasion			1 (100%)		
Bone, Femur	(50)	(49)	(49)	(50)	(50)
Skeletal Muscle	(1)	(3)	(4)	(3)	(0)
Diaphragm, Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach			1 (25%)		
<b>NERVOUS SYSTEM</b>					
Brain	(0)	(0)	(0)	(0)	(1)
Cranial Nerve, Schwannoma Malignant					1 (100%)
Brain, Brain Stem	(50)	(49)	(49)	(50)	(50)
Astrocytoma Malignant	1 (2%)				
Reticulosis Malignant					1 (2%)
Brain, Cerebellum	(50)	(49)	(49)	(50)	(50)
Astrocytoma Malignant	1 (2%)				
Granular Cell Tumor Malignant				1 (2%)	
Brain, Cerebrum	(50)	(49)	(49)	(50)	(50)
Astrocytoma Malignant	1 (2%)				
Granular Cell Tumor Benign	1 (2%)				
Granular Cell Tumor Malignant				1 (2%)	
Meninges, Granular Cell Tumor Benign					1 (2%)
Osteoma		1 (2%)			
Reticulosis Malignant					
Peripheral Nerve	(0)	(2)	(4)	(2)	(0)

**RESPIRATORY SYSTEM**

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: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:46  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL	F3 0PPB	F3/2PPB TO CTL	F3/10 PPB TO CTL	F3/50 PPB TO CTL
Lung	(50)	(47)	(48)	(48)	(50)
Alveolar/Bronchiolar Adenoma				1 (2%)	
Alveolar/Bronchiolar Carcinoma					
Carcinoma, Metastatic, Adrenal Cortex					
Sarcoma, Metastatic, Thymus					
Schwannoma Malignant, Metastatic, Skin				1 (2%)	
Squamous Cell Carcinoma, Metastatic, Preputial Gland					
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach			1 (2%)		
Squamous Cell Carcinoma, Metastatic, Uncertain Primary Site				1 (2%)	
Thymoma Malignant, Metastatic, Uncertain Primary Site					1 (2%)
Nose	(50)	(49)	(48)	(49)	(50)
Adenoma					
Osteosarcoma					1 (2%)
Schwannoma Malignant					
Trachea	(50)	(49)	(49)	(50)	(50)
<b>SPECIAL SENSES SYSTEM</b>					
Ear	(0)	(0)	(0)	(1)	(1)
Neural Crest Tumor					1 (100%)
Squamous Cell Papilloma				1 (100%)	
Eye	(48)	(46)	(47)	(48)	(50)
Iris, Melanoma Benign					1 (2%)
Retrolbulbar, Squamous Cell Carcinoma, Deep Invasion		1 (2%)			
Schwannoma Malignant					
Harderian Gland	(50)	(49)	(48)	(50)	(50)

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\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:46  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL	F3 0PPB	F3/2PPB TO CTL	F3/10 PPB TO CTL	F3/50 PPB TO CTL
Schwannoma Malignant					
Squamous Cell Carcinoma, Deep Invasion	1 (2%)				
Lacrimal Gland	(1)	(1)	(1)	(2)	(1)
Zymbal's Gland	(0)	(1)	(0)	(2)	(0)
Adenoma					
Carcinoma		1 (100%)		1 (50%)	
Squamous Cell Carcinoma				1 (50%)	
<b>URINARY SYSTEM</b>					
Kidney	(49)	(49)	(48)	(50)	(50)
Bilateral, Renal Tubule, Adenoma	2 (4%)				
Bilateral, Renal Tubule, Carcinoma					
Liposarcoma					1 (2%)
Mesenchymal Tumor Malignant					
Renal Tubule, Adenoma					
Renal Tubule, Carcinoma					
Sarcoma	1 (2%)		1 (2%)		
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach			1 (2%)		
Transit Epithe, Papilloma					
Urethra	(1)	(3)	(1)	(1)	(0)
Urinary Bladder	(49)	(49)	(48)	(49)	(50)
<b>SYSTEMIC LESIONS</b>					
Multiple Organ	*(50)	*(50)	*(49)	*(50)	*(50)
Leukemia Granulocytic					
Leukemia Mononuclear			1 (2%)	1 (2%)	
Lymphoma Malignant		2 (4%)	1 (2%)	1 (2%)	
Mesothelioma Benign					

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\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS  
 ABRIDGED) (a)**  
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:46  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat MALE	F1 0PPB	F1 2PPB	F1 10PPB	F1 50PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
<b>Tumor Summary for MALE</b>						
Total Animals with Primary Neoplasms (b)	42	36	43	35	41	33
Total Primary Neoplasms	73	59	70	50	74	50
Total Animals with Benign Neoplasms	36	29	34	23	37	29
Total Benign Neoplasms	51	41	45	29	53	41
Total Animals with Malignant Neoplasms	19	15	19	19	17	8
Total Malignant Neoplasms	22	18	23	21	21	9
Total Animals with Metastatic Neoplasms	1	1	1	1	2	2
Total Metastatic Neoplasms	1	1	1	1	2	6
Total Animals with Malignant Neoplasms Uncertain Primary Site	1					1
Total Animals with Neoplasms Uncertain - Benign or Malignant						
Total Uncertain Neoplasms						

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: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**  
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:46  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat MALE	F1/50PPB TO CTL	F3 0PPB	F3/2PPB TO CTL	F3/10 PPB TO CTL	F3/50 PPB TO CTL
<b>Tumor Summary for MALE</b>					
Total Animals with Primary Neoplasms (b)	35	41	34	31	37
Total Primary Neoplasms	57	58	51	57	68
Total Animals with Benign Neoplasms	29	33	30	25	31
Total Benign Neoplasms	38	40	37	39	39
Total Animals with Malignant Neoplasms	15	14	13	14	19
Total Malignant Neoplasms	19	18	14	18	28
Total Animals with Metastatic Neoplasms			1	2	2
Total Metastatic Neoplasms			12	3	2
Total Animals with Malignant Neoplasms Uncertain Primary Site				1	2
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

b - Primary tumors: all tumors except metastatic tumors

\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:46  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
<b>Disposition Summary</b>						
Animals Initially In Study	51	50	50	50	50	50
Early Deaths						
Moribund Sacrifice	24	22	27	17	26	27
Natural Death		5	3	8	7	1
Survivors						
Moribund Sacrifice	1		1		1	
Natural Death						
Terminal Sacrifice	26	23	19	25	16	22
Animals Examined Microscopically	51	50	50	50	50	50
<b>ALIMENTARY SYSTEM</b>						
Esophagus	(51)	(50)	(49)	(50)	(50)	(50)
Intestine Large, Cecum	(51)	(50)	(49)	(49)	(50)	(50)
Intestine Large, Colon	(51)	(50)	(49)	(49)	(50)	(50)
Carcinoma					1 (2%)	
Intestine Large, Rectum	(51)	(50)	(49)	(50)	(50)	(50)
Adenoma						
Granular Cell Tumor Malignant, Metastatic, Vagina				1 (2%)		
Leiomyosarcoma, Metastatic, Uterus		1 (2%)				
Intestine Small, Duodenum	(51)	(50)	(49)	(49)	(50)	(50)
Leiomyoma						
Intestine Small, Ileum	(51)	(50)	(48)	(49)	(48)	(50)
Intestine Small, Jejunum	(51)	(50)	(47)	(47)	(48)	(50)
Carcinoma						
Leiomyoma						1 (2%)
Liver	(51)	(50)	(49)	(50)	(50)	(50)
Adenocarcinoma, Metastatic, Uterus						

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\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-92  
**Test Type:** MULTIGEN CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:50:46  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Carcinoma, Metastatic, Intestine Small, Jejunum						
Cholangiocarcinoma	1 (2%)					
Cholangioma						
Hepatocellular Adenoma	1 (2%)	1 (2%)	1 (2%)	2 (4%)	1 (2%)	1 (2%)
Hepatocellular Adenoma, Multiple						
Hepatocellular Carcinoma						
Nephroblastoma, Metastatic, Kidney						
Mesentery	(2)	(2)	(0)	(1)	(2)	(1)
Adenocarcinoma, Metastatic, Uterus						
Leiomyosarcoma, Metastatic, Uterus		1 (50%)				
Nephroblastoma, Metastatic, Kidney						
Oral Mucosa	(3)	(1)	(4)	(4)	(5)	(7)
Fibrous Histiocytoma						
Squamous Cell Carcinoma	3 (100%)	1 (100%)	1 (25%)	2 (50%)	3 (60%)	2 (29%)
Pancreas	(51)	(50)	(49)	(49)	(50)	(50)
Acinar Cell, Adenocarcinoma				1 (2%)		
Acinar Cell, Adenoma		1 (2%)				
Adenocarcinoma, Metastatic, Uterus						
Salivary Glands	(51)	(49)	(49)	(50)	(50)	(50)
Stomach, Forestomach	(51)	(50)	(49)	(50)	(50)	(50)
Adenocarcinoma, Metastatic, Uterus						
Squamous Cell Carcinoma						
Squamous Cell Papilloma	1 (2%)		1 (2%)		1 (2%)	
Stomach, Glandular	(51)	(50)	(49)	(50)	(50)	(50)
Leiomyosarcoma						
Tongue	(0)	(0)	(0)	(0)	(0)	(0)
Tooth	(0)	(0)	(0)	(0)	(1)	(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: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:46  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
<b>CARDIOVASCULAR SYSTEM</b>						
Blood Vessel	(51)	(50)	(49)	(50)	(50)	(50)
Heart	(51)	(50)	(49)	(50)	(50)	(50)
Endocardium, Schwannoma Malignant		1 (2%)				
<b>ENDOCRINE SYSTEM</b>						
Adrenal Cortex	(51)	(50)	(49)	(50)	(50)	(50)
Adenoma	1 (2%)	2 (4%)	1 (2%)	1 (2%)	1 (2%)	2 (4%)
Adrenal Medulla	(48)	(50)	(49)	(50)	(49)	(48)
Pheochromocytoma Benign	2 (4%)					1 (2%)
Islets, Pancreatic	(51)	(50)	(49)	(49)	(50)	(50)
Adenoma	1 (2%)	1 (2%)		1 (2%)		
Carcinoma			1 (2%)	1 (2%)		
Parathyroid Gland	(48)	(47)	(46)	(43)	(46)	(44)
Adenoma		1 (2%)		1 (2%)		
Carcinoma, Metastatic, Thyroid Gland		1 (2%)				
Pituitary Gland	(51)	(50)	(50)	(50)	(50)	(50)
Pars Distalis, Adenoma	38 (75%)	35 (70%)	40 (80%)	37 (74%)	37 (74%)	36 (72%)
Pars Distalis, Carcinoma		1 (2%)		1 (2%)	1 (2%)	1 (2%)
Pars Nervosa, Schwannoma Malignant, Metastatic, Nose				1 (2%)		
Thyroid Gland	(51)	(50)	(49)	(50)	(50)	(50)
Bilateral, C Cell, Adenoma						
Bilateral, C Cell, Carcinoma		1 (2%)				
C Cell, Adenoma	2 (4%)	3 (6%)	1 (2%)	1 (2%)	1 (2%)	3 (6%)
C Cell, Carcinoma					1 (2%)	
Follicular Cel, Adenoma	1 (2%)				1 (2%)	
Follicular Cel, Carcinoma					2 (4%)	

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: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:46  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
<b>GENERAL BODY SYSTEM</b>						
Tissue NOS	(0)	(0)	(1)	(0)	(0)	(0)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung						
Sarcoma			1 (100%)			
Squamous Cell Carcinoma, Deep Invasion						
<b>GENITAL SYSTEM</b>						
Clitoral Gland	(50)	(49)	(48)	(50)	(50)	(49)
Adenoma				2 (4%)		
Carcinoma		1 (2%)		1 (2%)	1 (2%)	
Sarcoma					1 (2%)	
Squamous Cell Carcinoma		1 (2%)		1 (2%)		
Squamous Cell Papilloma	1 (2%)					
Ovary	(51)	(50)	(49)	(50)	(50)	(50)
Carcinoma, Metastatic, Kidney					1 (2%)	
Granulosa Cell Tumor Benign			1 (2%)		1 (2%)	
Granulosa Cell Tumor Malignant						
Sertoli Cell Tumor Benign	1 (2%)	1 (2%)	1 (2%)			
Oviduct	(51)	(50)	(49)	(50)	(50)	(50)
Uterus	(51)	(50)	(49)	(50)	(50)	(50)
Cervix, Squamous Cell Carcinoma				1 (2%)		
Endometrium, Adenocarcinoma		1 (2%)				
Endometrium, Adenoma	1 (2%)			2 (4%)	1 (2%)	2 (4%)
Fibrous Histiocytoma						1 (2%)
Leiomyoma		1 (2%)				
Leiomyosarcoma		1 (2%)				
Nephroblastoma, Metastatic, Kidney						
Polyp Stromal	2 (4%)	4 (8%)	5 (10%)	5 (10%)	5 (10%)	6 (12%)

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: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:46  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Sarcoma Stromal						1 (2%)
Vagina	(51)	(50)	(49)	(49)	(50)	(48)
Granular Cell Tumor Benign			1 (2%)			
Granular Cell Tumor Malignant				1 (2%)		
Nephroblastoma, Metastatic, Kidney						
Polyp		1 (2%)	1 (2%)		1 (2%)	
<b>HEMATOPOIETIC SYSTEM</b>						
Bone Marrow	(51)	(50)	(49)	(50)	(50)	(50)
Schwannoma Malignant, Metastatic, Skin						
Lymph Node	(16)	(14)	(6)	(10)	(15)	(12)
Carcinoma, Metastatic, Thyroid Gland					1 (7%)	
Deep Cervical, Carcinoma, Metastatic, Thyroid Gland					1 (7%)	
Lymph Node, Mandibular	(51)	(50)	(49)	(50)	(50)	(49)
Carcinoma, Metastatic, Zymbal'S Gland						
Lymph Node, Mesenteric	(51)	(50)	(47)	(50)	(50)	(50)
Nephroblastoma, Metastatic, Kidney						
Spleen	(51)	(50)	(49)	(50)	(50)	(50)
Sarcoma				1 (2%)		
Thymus	(51)	(44)	(45)	(48)	(44)	(46)
Thymoma Benign						
<b>INTEGUMENTARY SYSTEM</b>						
Mammary Gland	(51)	(49)	(49)	(50)	(49)	(50)
Adenocarcinoma	5 (10%)	9 (18%)	9 (18%)	6 (12%)	3 (6%)	8 (16%)
Adenocarcinoma, Multiple	3 (6%)	1 (2%)		3 (6%)		
Fibroadenoma	18 (35%)	14 (29%)	18 (37%)	22 (44%)	16 (33%)	15 (30%)
Fibroadenoma, Multiple	14 (27%)	14 (29%)	15 (31%)	5 (10%)	10 (20%)	13 (26%)
Skin	(51)	(50)	(49)	(50)	(50)	(50)

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: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:46  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Basal Cell Adenoma						
Basal Cell Carcinoma						1 (2%)
Ear, Basal Cell Adenoma						
Fibroma						
Fibrous Histiocytoma						1 (2%)
Keratoacanthoma			1 (2%)			1 (2%)
Lipoma						
Sarcoma		1 (2%)				
Schwannoma Malignant						
Sebaceous GI, Carcinoma	1 (2%)					
Squamous Cell Papilloma	1 (2%)					
Subcut Tiss, Granular Cell Tumor Benign						
Subcut Tiss, Leiomyosarcoma, Metastatic, Uterus		1 (2%)				
Subcut Tiss, Lipoma						
<b>MUSCULOSKELETAL SYSTEM</b>						
Bone	(0)	(0)	(0)	(0)	(0)	(0)
Bone, Femur	(51)	(50)	(49)	(50)	(50)	(50)
Skeletal Muscle	(1)	(0)	(1)	(1)	(0)	(4)
Diaphragm, Adenocarcinoma, Metastatic, Uterus						
Diaphragm, Granulosa Cell Tumor Malignant, Metastatic, Ovary						
Diaphragm, Nephroblastoma, Metastatic, Kidney						
<b>NERVOUS SYSTEM</b>						
Brain, Brain Stem	(51)	(50)	(49)	(50)	(50)	(50)
Carcinoma, Metastatic, Pituitary Gland		1 (2%)		1 (2%)	1 (2%)	1 (2%)
Brain, Cerebellum	(51)	(50)	(49)	(50)	(50)	(50)

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: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:46  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
Astrocytoma Malignant						
Brain, Cerebrum	(51)	(50)	(49)	(50)	(50)	(50)
Astrocytoma Nos					1 (2%)	
Granular Cell Tumor Benign	1 (2%)					
Oligodendroglioma Nos			1 (2%)			
Peripheral Nerve	(1)	(0)	(0)	(0)	(0)	(2)
Spinal Cord	(0)	(0)	(0)	(0)	(0)	(0)
<b>RESPIRATORY SYSTEM</b>						
Lung	(51)	(50)	(49)	(50)	(50)	(50)
Adenocarcinoma, Metastatic, Mammary Gland						
Alveolar/Bronchiolar Adenoma		1 (2%)				1 (2%)
Alveolar/Bronchiolar Carcinoma						
Carcinoma, Metastatic, Thyroid Gland						
Carcinoma, Metastatic, Zymbal'S Gland						
Nephroblastoma, Metastatic, Kidney						1 (2%)
Nose	(51)	(50)	(49)	(50)	(50)	(50)
Schwannoma Malignant				1 (2%)		
Trachea	(51)	(50)	(49)	(50)	(50)	(50)
<b>SPECIAL SENSES SYSTEM</b>						
Ear	(0)	(1)	(0)	(0)	(0)	(0)
Neural Crest Tumor		1 (100%)				
Eye	(51)	(49)	(48)	(49)	(50)	(50)
Squamous Cell Carcinoma, Deep Invasion					1 (2%)	
Harderian Gland	(51)	(49)	(49)	(50)	(50)	(50)
Squamous Cell Carcinoma, Deep Invasion						
Zymbal's Gland	(0)	(0)	(0)	(0)	(0)	(0)
Carcinoma						

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\* Number of animals with any tissue examined microscopically

**Experiment Number:** 99920-92  
**Test Type:** MULTIGEN CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**  
**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:50:46  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
<b>URINARY SYSTEM</b>						
Kidney	(51)	(50)	(49)	(50)	(50)	(50)
Bilateral, Renal Tubule, Carcinoma		2 (4%)		1 (2%)	1 (2%)	
Lipoma						
Liposarcoma						
Nephroblastoma						1 (2%)
Renal Tubule, Adenoma				1 (2%)		
Urinary Bladder	(51)	(49)	(49)	(48)	(48)	(50)
Transit Epithe, Papilloma						
<b>SYSTEMIC LESIONS</b>						
Multiple Organ	*(51)	*(50)	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma						
Leukemia Mononuclear				1 (2%)		
Lymphoma Malignant				1 (2%)	2 (4%)	1 (2%)
Mesothelioma Malignant						1 (2%)

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\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

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CD Rat FEMALE	F1/50PPB TO CTL	F3 0PPB	F3 /2PPB TO CTL	F3/10PPB TO CTL	F3/50PPB TO CTL
<b>Disposition Summary</b>					
Animals Initially In Study	50	52	50	50	50
<b>Early Deaths</b>					
Moribund Sacrifice	22	7	6	4	9
Natural Death	6	1	1	2	2
<b>Survivors</b>					
Moribund Sacrifice		17	13	20	14
Natural Death			1	3	1
Terminal Sacrifice	22	27	29	21	24
Animals Examined Microscopically	50	52	50	50	50
<b>ALIMENTARY SYSTEM</b>					
Esophagus	(50)	(52)	(49)	(50)	(50)
Intestine Large, Cecum	(50)	(51)	(49)	(49)	(50)
Intestine Large, Colon	(50)	(52)	(50)	(50)	(50)
Carcinoma					
Intestine Large, Rectum	(50)	(51)	(49)	(50)	(50)
Adenoma		1 (2%)			
Granular Cell Tumor Malignant, Metastatic, Vagina					
Leiomyosarcoma, Metastatic, Uterus					
Intestine Small, Duodenum	(50)	(52)	(49)	(50)	(50)
Leiomyoma	1 (2%)				
Intestine Small, Ileum	(49)	(52)	(49)	(49)	(50)
Intestine Small, Jejunum	(50)	(51)	(49)	(48)	(50)
Carcinoma			1 (2%)	1 (2%)	
Leiomyoma			1 (2%)		
Liver	(50)	(52)	(50)	(50)	(50)
Adenocarcinoma, Metastatic, Uterus		1 (2%)			

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\* Number of animals with any tissue examined microscopically

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**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

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Date Report Requested: 10/23/2014  
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 Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL	F3 0PPB	F3 /2PPB TO CTL	F3/10PPB TO CTL	F3/50PPB TO CTL
Carcinoma, Metastatic, Intestine Small, Jejunum			1 (2%)		
Cholangiocarcinoma		1 (2%)	1 (2%)		
Cholangioma	1 (2%)				1 (2%)
Hepatocellular Adenoma	2 (4%)	2 (4%)			
Hepatocellular Adenoma, Multiple	1 (2%)				
Hepatocellular Carcinoma			1 (2%)		
Nephroblastoma, Metastatic, Kidney		1 (2%)			
Mesentery	(0)	(3)	(3)	(4)	(4)
Adenocarcinoma, Metastatic, Uterus		1 (33%)			
Leiomyosarcoma, Metastatic, Uterus					
Nephroblastoma, Metastatic, Kidney		1 (33%)			
Oral Mucosa	(4)	(2)	(4)	(7)	(2)
Fibrous Histiocytoma				1 (14%)	
Squamous Cell Carcinoma	1 (25%)	2 (100%)	1 (25%)	2 (29%)	1 (50%)
Pancreas	(50)	(52)	(49)	(50)	(50)
Acinar Cell, Adenocarcinoma					
Acinar Cell, Adenoma					
Adenocarcinoma, Metastatic, Uterus		1 (2%)			
Salivary Glands	(50)	(52)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(52)	(49)	(50)	(50)
Adenocarcinoma, Metastatic, Uterus		1 (2%)			
Squamous Cell Carcinoma					1 (2%)
Squamous Cell Papilloma		1 (2%)		2 (4%)	
Stomach, Glandular	(50)	(52)	(49)	(50)	(50)
Leiomyosarcoma		1 (2%)			
Tongue	(0)	(0)	(1)	(0)	(0)
Tooth	(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

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**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

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**Lab:** NCTR

CD Rat FEMALE	F1/50PPB TO CTL	F3 0PPB	F3 /2PPB TO CTL	F3/10PPB TO CTL	F3/50PPB TO CTL
<b>CARDIOVASCULAR SYSTEM</b>					
Blood Vessel	(50)	(52)	(50)	(50)	(50)
Heart	(50)	(52)	(50)	(50)	(50)
Endocardium, Schwannoma Malignant					
<b>ENDOCRINE SYSTEM</b>					
Adrenal Cortex	(50)	(52)	(50)	(50)	(50)
Adenoma	3 (6%)	2 (4%)	2 (4%)	1 (2%)	
Adrenal Medulla	(49)	(52)	(50)	(50)	(50)
Pheochromocytoma Benign	2 (4%)				1 (2%)
Islets, Pancreatic	(50)	(52)	(49)	(50)	(50)
Adenoma	1 (2%)	1 (2%)			1 (2%)
Carcinoma					
Parathyroid Gland	(46)	(48)	(45)	(47)	(44)
Adenoma	1 (2%)				
Carcinoma, Metastatic, Thyroid Gland					
Pituitary Gland	(49)	(52)	(50)	(50)	(50)
Pars Distalis, Adenoma	34 (69%)	32 (62%)	30 (60%)	36 (72%)	32 (64%)
Pars Distalis, Carcinoma	1 (2%)				
Pars Nervosa, Schwannoma Malignant, Metastatic, Nose					
Thyroid Gland	(50)	(52)	(49)	(50)	(50)
Bilateral, C Cell, Adenoma					1 (2%)
Bilateral, C Cell, Carcinoma					
C Cell, Adenoma		1 (2%)	1 (2%)	1 (2%)	1 (2%)
C Cell, Carcinoma	1 (2%)	1 (2%)		1 (2%)	
Follicular Cel, Adenoma					
Follicular Cel, Carcinoma					

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: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
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**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
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Date Report Requested: 10/23/2014  
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 Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL	F3 0PPB	F3 /2PPB TO CTL	F3/10PPB TO CTL	F3/50PPB TO CTL
<b>GENERAL BODY SYSTEM</b>					
Tissue NOS	(0)	(0)	(0)	(1)	(1)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung					1 (100%)
Sarcoma					
Squamous Cell Carcinoma, Deep Invasion				1 (100%)	
<b>GENITAL SYSTEM</b>					
Clitoral Gland	(49)	(50)	(50)	(49)	(48)
Adenoma			1 (2%)	1 (2%)	2 (4%)
Carcinoma					
Sarcoma					
Squamous Cell Carcinoma					
Squamous Cell Papilloma					
Ovary	(50)	(51)	(50)	(50)	(50)
Carcinoma, Metastatic, Kidney					
Granulosa Cell Tumor Benign	2 (4%)		1 (2%)	1 (2%)	2 (4%)
Granulosa Cell Tumor Malignant			1 (2%)		
Sertoli Cell Tumor Benign			2 (4%)	1 (2%)	
Oviduct	(50)	(51)	(49)	(50)	(50)
Uterus	(50)	(52)	(50)	(50)	(50)
Cervix, Squamous Cell Carcinoma					
Endometrium, Adenocarcinoma		4 (8%)	1 (2%)		
Endometrium, Adenoma	1 (2%)	1 (2%)	1 (2%)	2 (4%)	
Fibrous Histiocytoma					
Leiomyoma					1 (2%)
Leiomyosarcoma					
Nephroblastoma, Metastatic, Kidney		1 (2%)			
Polyp Stromal	7 (14%)	1 (2%)	7 (14%)	2 (4%)	5 (10%)

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: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

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

CD Rat FEMALE	F1/50PPB TO CTL	F3 0PPB	F3 /2PPB TO CTL	F3/10PPB TO CTL	F3/50PPB TO CTL
Sarcoma Stromal					
Vagina	(50)	(51)	(50)	(50)	(50)
Granular Cell Tumor Benign					
Granular Cell Tumor Malignant					
Nephroblastoma, Metastatic, Kidney		1 (2%)			
Polyp					
<b>HEMATOPOIETIC SYSTEM</b>					
Bone Marrow	(50)	(52)	(50)	(50)	(50)
Schwannoma Malignant, Metastatic, Skin		1 (2%)			
Lymph Node	(13)	(10)	(17)	(10)	(5)
Carcinoma, Metastatic, Thyroid Gland					
Deep Cervical, Carcinoma, Metastatic, Thyroid Gland					
Lymph Node, Mandibular	(50)	(51)	(50)	(50)	(50)
Carcinoma, Metastatic, Zymbal'S Gland				1 (2%)	
Lymph Node, Mesenteric	(50)	(51)	(49)	(50)	(49)
Nephroblastoma, Metastatic, Kidney		1 (2%)			
Spleen	(50)	(52)	(50)	(50)	(50)
Sarcoma					
Thymus	(48)	(50)	(45)	(46)	(49)
Thymoma Benign	1 (2%)				
<b>INTEGUMENTARY SYSTEM</b>					
Mammary Gland	(50)	(52)	(50)	(50)	(50)
Adenocarcinoma	11 (22%)	6 (12%)	4 (8%)	6 (12%)	10 (20%)
Adenocarcinoma, Multiple			2 (4%)	3 (6%)	
Fibroadenoma	21 (42%)	17 (33%)	13 (26%)	21 (42%)	13 (26%)
Fibroadenoma, Multiple	13 (26%)	19 (37%)	21 (42%)	19 (38%)	24 (48%)
Skin	(50)	(52)	(50)	(50)	(50)

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:** 99920-92  
**Test Type:** MULTIGEN CHRONIC  
**Route:** DOSED FEED  
**Species/Strain:** Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014  
**Time Report Requested:** 12:50:47  
**First Dose M/F:** NA / NA  
**Lab:** NCTR

CD Rat FEMALE	F1/50PPB TO CTL	F3 0PPB	F3 /2PPB TO CTL	F3/10PPB TO CTL	F3/50PPB TO CTL
Basal Cell Adenoma					1 (2%)
Basal Cell Carcinoma					
Ear, Basal Cell Adenoma			1 (2%)		
Fibroma			2 (4%)		1 (2%)
Fibrous Histiocytoma	1 (2%)			1 (2%)	
Keratoacanthoma					
Lipoma		1 (2%)			
Sarcoma	1 (2%)	1 (2%)		1 (2%)	1 (2%)
Schwannoma Malignant		1 (2%)			
Sebaceous GI, Carcinoma					
Squamous Cell Papilloma					
Subcut Tiss, Granular Cell Tumor Benign	1 (2%)				
Subcut Tiss, Leiomyosarcoma, Metastatic, Uterus					
Subcut Tiss, Lipoma	1 (2%)				
<b>MUSCULOSKELETAL SYSTEM</b>					
Bone	(0)	(0)	(1)	(0)	(0)
Bone, Femur	(50)	(52)	(50)	(50)	(50)
Skeletal Muscle	(1)	(3)	(4)	(0)	(1)
Diaphragm, Adenocarcinoma, Metastatic, Uterus		1 (33%)			
Diaphragm, Granulosa Cell Tumor Malignant, Metastatic, Ovary			1 (25%)		
Diaphragm, Nephroblastoma, Metastatic, Kidney		1 (33%)			
<b>NERVOUS SYSTEM</b>					
Brain, Brain Stem	(50)	(52)	(50)	(50)	(50)
Carcinoma, Metastatic, Pituitary Gland	1 (2%)				
Brain, Cerebellum	(50)	(51)	(50)	(50)	(50)

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: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014  
 Time Report Requested: 12:50:47  
 First Dose M/F: NA / NA  
 Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL	F3 0PPB	F3 /2PPB TO CTL	F3/10PPB TO CTL	F3/50PPB TO CTL
Astrocytoma Malignant					1 (2%)
Brain, Cerebrum	(50)	(52)	(50)	(50)	(50)
Astrocytoma Nos					
Granular Cell Tumor Benign					
Oligodendroglioma Nos					
Peripheral Nerve	(0)	(0)	(1)	(0)	(1)
Spinal Cord	(0)	(0)	(1)	(0)	(1)
<b>RESPIRATORY SYSTEM</b>					
Lung	(50)	(52)	(50)	(50)	(50)
Adenocarcinoma, Metastatic, Mammary Gland				1 (2%)	1 (2%)
Alveolar/Bronchiolar Adenoma		1 (2%)			1 (2%)
Alveolar/Bronchiolar Carcinoma					1 (2%)
Carcinoma, Metastatic, Thyroid Gland		1 (2%)		1 (2%)	
Carcinoma, Metastatic, Zymbal'S Gland				1 (2%)	
Nephroblastoma, Metastatic, Kidney					
Nose	(50)	(52)	(50)	(50)	(50)
Schwannoma Malignant					
Trachea	(50)	(52)	(49)	(50)	(50)
<b>SPECIAL SENSES SYSTEM</b>					
Ear	(0)	(0)	(0)	(2)	(0)
Neural Crest Tumor				2 (100%)	
Eye	(47)	(52)	(50)	(49)	(50)
Squamous Cell Carcinoma, Deep Invasion					
Harderian Gland	(50)	(52)	(50)	(50)	(50)
Squamous Cell Carcinoma, Deep Invasion				1 (2%)	
Zymbal's Gland	(1)	(0)	(0)	(1)	(0)
Carcinoma	1 (100%)			1 (100%)	

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**Experiment Number:** 99920-92  
**Test Type:** MULTIGEN CHRONIC  
**Route:** DOSED FEED  
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**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
**CAS Number:** 57-63-6

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

CD Rat FEMALE	F1/50PPB TO CTL	F3 0PPB	F3 /2PPB TO CTL	F3/10PPB TO CTL	F3/50PPB TO CTL
<b>URINARY SYSTEM</b>					
Kidney	(50)	(52)	(50)	(50)	(50)
Bilateral, Renal Tubule, Carcinoma					
Lipoma		1 (2%)			
Liposarcoma					1 (2%)
Nephroblastoma		1 (2%)			1 (2%)
Renal Tubule, Adenoma				1 (2%)	1 (2%)
Urinary Bladder	(49)	(52)	(49)	(49)	(50)
Transit Epithe, Papilloma					1 (2%)
<b>SYSTEMIC LESIONS</b>					
Multiple Organ	*(50)	*(52)	*(50)	*(50)	*(50)
Histiocytic Sarcoma				1 (2%)	
Leukemia Mononuclear		1 (2%)			
Lymphoma Malignant				1 (2%)	1 (2%)
Mesothelioma Malignant			1 (2%)	1 (2%)	

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\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS ABRIDGED) (a)**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)  
 CAS Number: 57-63-6

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

CD Rat FEMALE	F1 0PPB	F1 2PPB	F1 10 PPB	F1 50 PPB	F1/2PPB TO CTL	F1/10PPB TO CTL
<b>Tumor Summary for FEMALE</b>						
Total Animals with Primary Neoplasms (b)	48	47	48	50	46	49
Total Primary Neoplasms	99	102	100	103	94	100
Total Animals with Benign Neoplasms	48	44	48	47	45	45
Total Benign Neoplasms	86	80	87	80	76	82
Total Animals with Malignant Neoplasms	11	18	11	16	13	17
Total Malignant Neoplasms	13	21	12	23	17	18
Total Animals with Metastatic Neoplasms		3		2	4	2
Total Metastatic Neoplasms		5		3	4	2
Total Animals with Malignant Neoplasms Uncertain Primary Site						
Total Animals with Neoplasms Uncertain - Benign or Malignant		1	1		1	
Total Uncertain Neoplasms		1	1		1	

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\* Number of animals with any tissue examined microscopically

Experiment Number: 99920-92  
 Test Type: MULTIGEN CHRONIC  
 Route: DOSED FEED  
 Species/Strain: Rat/CD

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 Lab: NCTR

CD Rat FEMALE	F1/50PPB TO CTL	F3 0PPB	F3 /2PPB TO CTL	F3/10PPB TO CTL	F3/50PPB TO CTL
<b>Tumor Summary for FEMALE</b>					
Total Animals with Primary Neoplasms (b)	49	50	48	48	48
Total Primary Neoplasms	110	100	96	112	107
Total Animals with Benign Neoplasms	47	46	47	46	44
Total Benign Neoplasms	93	81	83	88	89
Total Animals with Malignant Neoplasms	16	15	12	16	16
Total Malignant Neoplasms	17	19	13	22	18
Total Animals with Metastatic Neoplasms	1	5	3	3	2
Total Metastatic Neoplasms	1	14	4	4	2
Total Animals with Malignant Neoplasms Uncertain Primary Site					
Total Animals with Neoplasms Uncertain - Benign or Malignant				2	
Total Uncertain Neoplasms				2	

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

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\* Number of animals with any tissue examined microscopically