

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:18:58
First Dose M/F: NA / NA
Lab: NCTR

C Number: MG96006
Lock Date: 12/02/2008
Cage Range: All
Date Range: All
Reasons For Removal: All
Removal Date Range: All
Treatment Groups: All
Study Gender: Both
PWG Approval Date NONE

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| CD Rat MALE | F1 0PPB | F1 2PPB | F1 10PPB | F1 50PPB | F1/2PPB TO CTL | F1/10PPB TO CTL |
|----------------------------------|---------|---------|----------|----------|----------------|-----------------|
| Disposition Summary | | | | | | |
| Animals Initially In Study | 51 | 50 | 50 | 50 | 50 | 50 |
| Early Deaths | | | | | | |
| Moribund Sacrifice | 9 | 13 | 17 | 12 | 15 | 7 |
| Natural Death | 7 | 6 | 3 | 4 | 4 | 10 |
| Survivors | | | | | | |
| 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) |
| Dilatation | 1 [4.0] | | | | | |
| Hyperkeratosis | | | 3 [2.0] | 3 [1.3] | 2 [2.0] | |
| Inflammation, Suppurative | 1 [2.0] | | | | | |
| Intestine Large, Cecum | (44) | (45) | (47) | (46) | (48) | (43) |
| Dilatation | | | | 1 [3.0] | 1 [4.0] | |
| Hyperplasia, Lymphoid | | | 1 [1.0] | | | 1 [2.0] |
| Inflammation, Chronic Active | | | 1 [2.0] | | | 1 [2.0] |
| Inflammation, Suppurative | | | | | | 1 [4.0] |
| Intestine Large, Colon | (45) | (47) | (48) | (47) | (49) | (43) |
| Dilatation | | | | | 1 [4.0] | |
| Hyperplasia, Lymphoid | 1 [3.0] | | | | | |
| Polyarteritis | | | | | | |
| Intestine Large, Rectum | (45) | (45) | (47) | (46) | (49) | (42) |
| Dilatation | | | | | 1 [4.0] | |
| Intestine Small, Duodenum | (44) | (45) | (48) | (47) | (49) | (42) |
| Intestine Small, Ileum | (43) | (45) | (47) | (46) | (48) | (41) |

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| CD Rat MALE | F1 0PPB | F1 2PPB | F1 10PPB | F1 50PPB | F1/2PPB TO CTL | F1/10PPB TO CTL |
|---|----------|---------|----------|----------|----------------|-----------------|
| Dilatation | | | | | 1 [4.0] | |
| Intestine Small, Jejunum | (43) | (45) | (46) | (46) | (48) | (41) |
| Dilatation | | | | | 1 [2.0] | |
| Inflammation, Chronic Active | | | | | | 1 [2.0] |
| Liver | (49) | (49) | (50) | (49) | (50) | (48) |
| Angiectasis | 3 [2.3] | 5 [1.8] | 1 [2.0] | 4 [1.8] | | |
| Basophilic Focus | 1 | 3 | 3 | 17 | 3 | 11 |
| Bile Duct, Hyperplasia | 2 [1.5] | 9 [1.0] | 7 [1.1] | | 3 [1.0] | 7 [1.4] |
| Biliar Tract, Fibrosis | 4 [1.3] | 2 [1.0] | 1 [1.0] | 1 [1.0] | 6 [1.0] | 2 [1.0] |
| Capsule, Fibrosis | | | | | 1 [1.0] | |
| Clear Cell Focus | 1 | | | 1 | | |
| Cyst | | | | | | |
| Cyst Multilocular | | | 1 | | | |
| Degeneration, Cystic | 4 [1.0] | 3 [1.0] | 5 [1.2] | 8 [1.1] | 9 [1.1] | 10 [1.3] |
| Eosinophilic Focus | 3 | 5 | 8 | 15 | 11 | 5 |
| Focal Cellular Change | | | 1 | | | |
| Hematopoietic Cell Proliferation | 2 [1.5] | 1 [2.0] | 1 [1.0] | 3 [1.3] | | 5 [1.0] |
| Hepatodiaphragmatic Nodule | 6 | 1 | 4 | 6 | 2 | 2 |
| Infiltration Cellular, Lymphocyte | | 3 [1.3] | | 1 [1.0] | 1 [1.0] | 1 [1.0] |
| Inflammation, Chronic | | | 1 [1.0] | | | |
| Inflammation, Chronic Active | 13 [1.1] | 5 [1.2] | 8 [1.1] | 9 [1.1] | 9 [1.1] | 7 [1.1] |
| Inflammation, Suppurative | | | | | | 1 [4.0] |
| Left Lat Lobe, Developmental Malformation | 1 | | | | | |
| Mixed Cell Focus | | | 1 | 1 | 1 | |
| Necrosis | | 1 [2.0] | 2 [2.0] | 2 [1.0] | 2 [1.5] | 3 [2.0] |
| Oval Cell, Hyperplasia | | 1 [2.0] | | | | |
| Tension Lipidosis | | | 3 [3.0] | 3 [2.0] | | 1 [4.0] |
| Vacuolization Cytoplasmic | 12 [1.4] | 4 [2.0] | 10 [1.4] | 13 [1.2] | 8 [1.4] | 16 [1.4] |
| Mesentery | (1) | (1) | (2) | (1) | (1) | (2) |

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| CD Rat MALE | F1 | 0PPB | F1 | 2PPB | F1 | 10PPB | F1 | 50PPB | F1/2PPB TO CTL | F1/10PPB TO CTL |
|--|------|-------|------|-------|------|-------|------|-------|----------------|-----------------|
| Fat, Necrosis | | | 1 | [4.0] | 2 | [3.5] | 1 | [4.0] | 1 | [4.0] |
| Oral Mucosa | (3) | | (2) | | (4) | | (9) | | (5) | (1) |
| Gingival, Inflammation, Chronic Active | | | | | | | | | | 1 |
| Keratin Cyst | | | 1 | | | | 2 | | 1 | |
| Pancreas | (46) | | (48) | | (48) | | (48) | | (49) | (47) |
| Acinar Cell, Degeneration | 40 | [2.3] | 42 | [2.1] | 40 | [2.0] | 39 | [2.3] | 46 | [2.0] |
| Basophilic Focus | | | | | | | 1 | | | |
| Polyarteritis | | | | | | | | | | |
| Salivary Glands | (48) | | (50) | | (49) | | (50) | | (50) | (48) |
| Acinus, Degeneration | | | | | | | 1 | [3.0] | 1 | [2.0] |
| Duct, Dilatation | | | | | | | 1 | [4.0] | | |
| Inflammation, Chronic Active | | | | | | | 1 | [1.0] | | |
| Inflammation, Suppurative | | | | | 1 | [2.0] | | | | |
| Stomach, Forestomach | (47) | | (48) | | (49) | | (48) | | (50) | (46) |
| Edema | 1 | [4.0] | 1 | [3.0] | | | | | 1 | [2.0] |
| Epithelium, Hyperplasia | 2 | [2.5] | | | | | | | 4 | [2.3] |
| Hyperplasia, Basal Cell | | | | | | | | | 1 | [4.0] |
| Inflammation, Suppurative | | | | | | | | | 1 | [3.0] |
| Keratin Cyst | 1 | | | | 1 | | | | | |
| Necrosis | | | 1 | [2.0] | | | | | | |
| Ulcer | | | | | | | | | 1 | [2.0] |
| Stomach, Glandular | (45) | | (47) | | (48) | | (46) | | (50) | (45) |
| Cyst | | | 1 | | | | | | | |
| Edema | | | | | | | 1 | [3.0] | 1 | [2.0] |
| Epithelium, Hyperplasia | | | | | | | 1 | [2.0] | | |
| Tongue | (0) | | (0) | | (0) | | (0) | | (0) | (0) |
| Inflammation, Chronic Active | | | | | | | | | | |
| CARDIOVASCULAR SYSTEM | | | | | | | | | | |
| Blood Vessel | (51) | | (50) | | (50) | | (50) | | (50) | (50) |

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| CD Rat MALE | F1 0PPB | F1 2PPB | F1 10PPB | F1 50PPB | F1/2PPB TO CTL | F1/10PPB TO CTL |
|-----------------------------------|----------|----------|----------|----------|----------------|-----------------|
| Heart | (51) | (50) | (50) | (50) | (50) | (48) |
| Atrium, Dilatation | | 3 [3.3] | | | 2 [2.5] | 1 [2.0] |
| Atrium, Thrombosis | | | | | 1 [4.0] | |
| Cardiomyopathy | 42 [1.6] | 34 [1.5] | 40 [1.4] | 37 [1.5] | 40 [1.7] | 41 [1.6] |
| Endocardium, Hyperplasia | | | 1 [3.0] | | | 1 [3.0] |
| Inflammation, Suppurative | | | | 1 [3.0] | 1 [2.0] | |
| Metaplasia, Osseous | 1 [2.0] | | | | 1 [2.0] | |
| Ventricle, Dilatation | | | | | 1 [4.0] | 1 [4.0] |
| ENDOCRINE SYSTEM | | | | | | |
| Adrenal Cortex | (47) | (50) | (50) | (50) | (49) | (45) |
| Accessory Adrenal Cortical Nodule | 3 | 1 | 2 | 1 | 2 | 2 |
| Angiectasis | 1 [1.0] | 2 [2.0] | 3 [2.0] | 3 [1.7] | 4 [1.8] | 4 [2.0] |
| Atrophy | | | | 1 [4.0] | 1 [3.0] | |
| Cyst | | | | 1 [4.0] | | |
| Degeneration, Cystic | 4 [1.5] | | 4 [1.8] | 4 [2.5] | 6 [1.3] | 4 [1.8] |
| Hyperplasia | 8 [1.4] | 6 [2.2] | 7 [1.7] | 6 [1.5] | 1 [1.0] | 4 [1.5] |
| Hypertrophy | 3 [1.7] | 3 [1.3] | 1 [1.0] | 3 [1.7] | 4 [2.0] | 2 [1.0] |
| Metaplasia, Osseous | | 1 [4.0] | | | | |
| Pigmentation | | | | 1 [4.0] | | |
| Vacuolization Cytoplasmic | 11 [1.2] | 9 [2.0] | 10 [1.6] | 11 [1.3] | 11 [1.4] | 15 [1.3] |
| Adrenal Medulla | (46) | (48) | (49) | (49) | (49) | (45) |
| Angiectasis | | 1 [4.0] | | | | |
| Atrophy | | | | | 1 [3.0] | |
| Bilateral, Hyperplasia | 1 [1.0] | | | | | |
| Cyst | | | | | | 1 |
| Hyperplasia | 7 [1.3] | 4 [1.3] | 5 [1.6] | 13 [1.8] | 12 [1.1] | 16 [2.0] |
| Islets, Pancreatic | (46) | (48) | (49) | (49) | (49) | (47) |
| Hyperplasia | 12 [1.3] | 13 [1.2] | 5 [1.0] | 7 [1.0] | 10 [1.0] | 10 [1.3] |
| Parathyroid Gland | (49) | (46) | (46) | (46) | (50) | (44) |

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| CD Rat MALE | F1 0PPB | F1 2PPB | F1 10PPB | F1 50PPB | F1/2PPB TO CTL | F1/10PPB TO CTL |
|------------------------------------|----------|---------|----------|----------|----------------|-----------------|
| Bilateral, Hyperplasia | | | | | | |
| Hyperplasia | 7 [2.3] | 5 [1.8] | 6 [1.3] | 9 [1.9] | 8 [2.1] | 7 [1.9] |
| Pituitary Gland | (48) | (50) | (50) | (50) | (50) | (47) |
| Pars Distalis, Cyst | 3 | 1 | 5 | 6 | 6 | 1 |
| Pars Distalis, Hyperplasia | 11 [1.5] | 6 [2.3] | 12 [1.8] | 17 [2.1] | 8 [2.0] | 9 [1.9] |
| Pars Intermed, Cyst | | 1 | | 1 | 1 | 1 |
| Pars Intermed, Hyperplasia | | 1 [2.0] | 1 [2.0] | | | |
| Thyroid Gland | (47) | (49) | (50) | (49) | (50) | (47) |
| C Cell, Hyperplasia | 6 [1.2] | 4 [1.0] | 6 [1.2] | 10 [1.5] | 2 [1.0] | 7 [1.3] |
| Cyst, Squamous | 5 | | 16 | 8 | 11 | 11 |
| Follicular Cel, Hyperplasia | | | 1 [2.0] | | | |
| Infiltration Cellular, Lymphocyte | | | | | 1 [1.0] | |
| GENERAL BODY SYSTEM | | | | | | |
| Tissue NOS | (1) | (0) | (1) | (0) | (1) | (0) |
| Degeneration, Cystic | 1 [4.0] | | | | | |
| Infiltration Cellular, Plasma Cell | 1 [4.0] | | | | | |
| GENITAL SYSTEM | | | | | | |
| Coagulating Gland | (46) | (49) | (49) | (49) | (49) | (47) |
| Atrophy | | 2 [2.5] | 2 [3.5] | 1 [3.0] | 1 [2.0] | |
| Degeneration, Cystic | | | | 1 [3.0] | | |
| Developmental Malformation | 9 | 10 | 11 | 14 | 14 | 8 |
| Hemorrhage | | | | | 1 [4.0] | |
| Inflammation, Chronic Active | | | | | | 1 [3.0] |
| Inflammation, Suppurative | | | | 2 [3.0] | | 2 [3.5] |
| Lumen, Dilatation | | 2 [2.5] | | 1 [1.0] | | |
| Ductus Deferens | (0) | (0) | (0) | (0) | (0) | (1) |
| Inflammation, Suppurative | | | | | | 1 [4.0] |
| Epididymis | (51) | (50) | (50) | (50) | (50) | (49) |

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| CD Rat MALE | F1 0PPB | F1 2PPB | F1 10PPB | F1 50PPB | F1/2PPB TO CTL | F1/10PPB TO CTL |
|--|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|
| Atrophy | 3 [2.7] | 5 [2.6] | 5 [2.2] | 2 [2.5] | 4 [2.3] | 4 [2.0] |
| Granuloma Sperm | | 1 [4.0] | | | | |
| Hyperplasia | | | | | 1 [4.0] | |
| Hypospermia | 3 [4.0] | 5 [4.0] | 6 [4.0] | 3 [4.0] | 4 [3.5] | 4 [4.0] |
| Infiltration Cellular, Lymphocyte Polyarteritis | | | | | 1 [1.0] | 1 [1.0] |
| Penis Dilatation | (0) | (1) | (0) | (0) | (1) | (1) 1 [3.0] |
| Preputial Gland Abscess | (51) 1 [4.0] | (50) 1 [4.0] | (50) 1 [4.0] | (50) 2 [4.0] | (50) | (50) 1 [4.0] |
| Atrophy | | 2 [2.0] | 5 [1.8] | 4 [2.5] | 6 [1.7] | 3 [2.7] |
| Cyst | | | | | 1 | |
| Duct, Dilatation | 14 [2.5] | 9 [2.0] | 15 [2.5] | 14 [2.4] | 12 [2.8] | 16 [2.4] |
| Hyperplasia, Basal Cell | | | 1 [3.0] | | | |
| Infiltration Cellular, Lymphocyte | 10 [1.8] | 17 [1.6] | 10 [1.7] | 10 [1.3] | 9 [1.2] | 9 [1.2] |
| Inflammation, Chronic Active | 2 [1.5] | | 2 [2.0] | 2 [1.5] | 2 [1.5] | |
| Inflammation, Suppurative | 20 [2.7] | 21 [2.4] | 23 [2.7] | 25 [2.6] | 25 [2.6] | 28 [2.4] |
| Keratin Cyst Polyarteritis | | | 1 | | | |
| Prostate, Dorsal/Lateral Lobe Atrophy | (36) 1 [2.0] | (37) 1 [2.0] | (45) 1 [3.0] | (41) | (38) | (42) |
| Cyst | 1 | 1 | | | 1 | |
| Degeneration Hemorrhage | | | | | 1 [4.0] | |
| Infiltration Cellular, Lymphocyte | | | 1 [1.0] | | | 2 [1.5] |
| Inflammation, Chronic Active | 2 [1.0] | 2 [1.5] | 4 [1.3] | 2 [2.0] | 4 [1.5] | 2 [2.5] |
| Inflammation, Suppurative | 34 [1.6] | 33 [1.7] | 39 [1.6] | 38 [1.7] | 34 [1.6] | 37 [2.1] |
| Prostate, Dorsal/lateral Lobe | (13) | (13) | (5) | (9) | (12) | (7) |
| Prostate, Ventral Lobe | (49) | (50) | (50) | (50) | (50) | (49) |

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|-----------------------------------|------|-------|------|-------|------|-------|-------|-------|----------------|-----------------|------|-------|
| Atrophy | | | 1 | [2.0] | 1 | [3.0] | | | | | | |
| Degeneration | | | 1 | [2.0] | | | | | | | | |
| Hemorrhage | | | | | | | | | 1 | [4.0] | | |
| Hyperplasia | 7 | [1.9] | 4 | [1.0] | 3 | [1.3] | 3 | [1.3] | 7 | [2.3] | 5 | [2.0] |
| Infiltration Cellular, Lymphocyte | 2 | [1.0] | 1 | [2.0] | 4 | [1.3] | 3 | [1.3] | 2 | [1.0] | 4 | [1.0] |
| Inflammation, Chronic Active | 1 | [1.0] | 2 | [2.0] | 2 | [2.5] | 3 | [1.7] | 6 | [2.2] | 4 | [2.3] |
| Inflammation, Suppurative | 3 | [1.3] | 3 | [2.3] | 6 | [1.2] | 3 | [1.7] | 3 | [2.7] | 5 | [2.0] |
| Rete Testes | (46) | | (44) | | (46) | | (47) | | (47) | | (43) | |
| Dilatation | 2 | [1.5] | | | 2 | [1.5] | 3 | [1.7] | 2 | [2.0] | 2 | [1.5] |
| Fibrosis | 1 | [1.0] | | | 2 | [2.5] | 1 | [2.0] | 1 | [3.0] | 2 | [1.5] |
| Seminal Vesicle | (43) | | (46) | | (47) | | (47) | | (49) | | (43) | |
| Atrophy | 4 | [1.8] | 4 | [2.0] | 4 | [2.3] | 4 | [2.3] | 1 | [3.0] | 1 | [1.0] |
| Dilatation | | | | | | | | | 1 | [3.0] | | |
| Epithelium, Hyperplasia | | | 1 | [4.0] | | | | | | | | |
| Hemorrhage | | | | | | | | | 1 | [4.0] | | |
| Inflammation, Suppurative | | | 1 | [1.0] | | | 1 | [4.0] | | | 1 | [4.0] |
| Lumen, Dilatation | 2 | [4.0] | 5 | [2.8] | 2 | [2.5] | 4 | [3.0] | 5 | [3.2] | 5 | [3.4] |
| Testes | (48) | | (50) | | (50) | | (50) | | (50) | | (48) | |
| Granuloma Sperm | | | | | | | | | 1 | [2.0] | | |
| Interstit Cell, Hyperplasia | | | | | | 1 | [4.0] | | | | | |
| Malformation | | | 1 | | | | | | | | | |
| Polyarteritis | | | | | | | | | | | | |
| Seminif Tub, Degeneration | 19 | [1.8] | 19 | [1.7] | 19 | [2.4] | 20 | [1.8] | 23 | [2.0] | 29 | [2.1] |
| HEMATOPOIETIC SYSTEM | | | | | | | | | | | | |
| Bone Marrow | (46) | | (48) | | (48) | | (48) | | (50) | | (46) | |
| Erythroid Cell, Hyperplasia | | | 1 | [2.0] | 1 | [1.0] | 2 | [2.0] | | | | |
| Hypocellularity | 1 | [3.0] | | | 2 | [3.0] | 1 | [2.0] | 1 | [2.0] | 1 | [2.0] |
| Myeloid Cell, Hyperplasia | 6 | [1.7] | 7 | [2.4] | 8 | [2.4] | 7 | [2.3] | 6 | [2.2] | 7 | [2.1] |
| Lymph Node | (14) | | (16) | | (16) | | (15) | | (19) | | (14) | |

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Route: DOSED FEED

Species/Strain: Rat/CD

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:18:59

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 | | |
|---|------|-------|------|-------|------|-------|-------|-------|----------------|-----------------|------|-------|
| Axillary, Hyperplasia, Lymphoid | 1 | [4.0] | 1 | [2.0] | 1 | [2.0] | 1 | [3.0] | 1 | [2.0] | | |
| Axillary, Infiltration Cellular, Plasma Cell | | | | | 1 | [4.0] | 2 | [3.0] | 2 | [4.0] | 1 | [4.0] |
| Degeneration, Cystic | 1 | [4.0] | 2 | [3.5] | | | | | | | | |
| Hemal, Degeneration, Cystic | | | | | | | | | | | 1 | [4.0] |
| Hemal, Inflammation, Chronic Active | | | | | | | | | | | 1 | [3.0] |
| Hemal, Necrosis | | | | | | | | | | | 1 | [2.0] |
| Inguinal, Degeneration, Cystic | 1 | [3.0] | | | | | | | | | | |
| Inguinal, Hyperplasia, Lymphoid | 1 | [3.0] | | | | | 1 | [3.0] | 1 | [2.0] | 1 | [3.0] |
| Inguinal, Infiltration Cellular, Plasma Cell | 1 | [3.0] | | | | | 2 | [4.0] | 1 | [4.0] | 1 | [4.0] |
| Lumbar, Degeneration, Cystic | 8 | [3.5] | 11 | [3.3] | 8 | [2.8] | 9 | [3.0] | 9 | [2.3] | 8 | [3.1] |
| Lumbar, Hyperplasia, Lymphoid | 3 | [3.7] | 2 | [2.5] | 2 | [3.5] | 1 | [2.0] | 3 | [2.3] | 6 | [2.7] |
| Lumbar, Infiltration Cellular, Plasma Cell | 7 | [3.6] | 5 | [2.6] | 7 | [3.4] | 5 | [3.4] | 9 | [2.9] | 10 | [3.4] |
| Mediastinal, Degeneration, Cystic | | | | | | | | | | | | |
| Mediastinal, Infiltration Cellular, Histiocyte | | | | | | | | | | | | |
| Mediastinal, Infiltration Cellular, Plasma Cell | 1 | [3.0] | 1 | [2.0] | 1 | [2.0] | | | | | 1 | [2.0] |
| Pancreatic, Degeneration, Cystic | | | | | | 1 | [3.0] | | | | | |
| Pancreatic, Hyperplasia, Lymphoid | | | | | | | | | | | | |
| Popliteal, Degeneration, Cystic | | | 1 | [2.0] | | | | | | | | |
| Popliteal, Infiltration Cellular, Plasma Cell | | | 1 | [4.0] | | | 1 | [4.0] | | | | |
| Renal, Degeneration, Cystic | 1 | [3.0] | 3 | [2.7] | 3 | [4.0] | 3 | [2.7] | 1 | [3.0] | 3 | [3.3] |
| Renal, Hyperplasia, Lymphoid | | | | | | | 1 | [2.0] | 1 | [3.0] | 1 | [2.0] |
| Renal, Infiltration Cellular, Plasma Cell | | | 1 | [3.0] | | | 2 | [3.5] | 2 | [2.5] | 3 | [3.3] |
| Thoracic, Degeneration, Cystic | | | | | | 1 | [4.0] | | | | | |
| Thoracic, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | |
| Lymph Node, Mandibular | (49) | | (50) | | (50) | | (48) | | (50) | | (47) | |
| Degeneration, Cystic | 10 | [1.9] | 11 | [2.5] | 6 | [1.8] | 11 | [2.2] | 6 | [3.0] | 4 | [2.5] |
| Hyperplasia, Lymphoid | 27 | [2.1] | 26 | [2.2] | 25 | [1.9] | 29 | [2.1] | 24 | [2.0] | 26 | [2.0] |
| Infiltration Cellular, Plasma Cell | 38 | [2.4] | 33 | [2.4] | 37 | [2.4] | 32 | [2.4] | 39 | [2.2] | 32 | [2.6] |
| Lymph Node, Mesenteric | (45) | | (46) | | (49) | | (47) | | (50) | | (44) | |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:18:59
 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 |
|---------------------------------------|----------|----------|----------|----------|----------------|-----------------|
| Degeneration, Cystic | 1 [3.0] | 3 [1.7] | 1 [1.0] | | 1 [2.0] | 1 [4.0] |
| Hyperplasia, Lymphoid | 3 [2.0] | 1 [1.0] | 1 [2.0] | 3 [2.0] | 1 [2.0] | 5 [2.0] |
| Infiltration Cellular, Mast Cell | | | | | | 1 [3.0] |
| Infiltration Cellular, Plasma Cell | | | 1 [2.0] | | | 1 [2.0] |
| Inflammation, Granulomatous | 9 [1.7] | 15 [1.7] | 14 [1.6] | 9 [1.6] | 14 [1.7] | 10 [1.8] |
| Spleen | (48) | (49) | (49) | (49) | (50) | (47) |
| Capsule, Cyst | | | 1 | | | |
| Depletion Lymphoid | 1 [2.0] | 1 [4.0] | 1 [3.0] | 1 [4.0] | 2 [3.0] | |
| Hematopoietic Cell Proliferation | 29 [1.8] | 14 [2.4] | 23 [2.0] | 24 [1.5] | 16 [2.2] | 19 [1.8] |
| Hyperplasia, Lymphoid | 5 [1.8] | 1 [1.0] | 2 [2.5] | | 5 [1.8] | |
| Hyperplasia, Stromal | | | 1 [4.0] | 2 [4.0] | | 1 [4.0] |
| Infiltration Cellular, Polymorphnuclr | 1 [3.0] | 1 [4.0] | | | 1 [4.0] | 1 [2.0] |
| Inflammation, Chronic Active | | 1 [4.0] | | | | |
| Necrosis | | 2 [3.0] | | 1 [4.0] | | 1 [2.0] |
| Pigmentation | 20 [2.2] | 21 [2.0] | 22 [2.0] | 30 [2.1] | 18 [1.9] | 18 [2.1] |
| Red Pulp, Hyperplasia | | | 1 [4.0] | | | |
| Thymus | (45) | (44) | (46) | (44) | (46) | (40) |
| Atrophy | 43 [3.9] | 40 [3.9] | 44 [3.9] | 41 [4.0] | 42 [3.9] | 39 [3.9] |
| Cyst | 1 | | 1 | | | |
| Cyst, Squamous | | | | | 1 | |
| Degeneration, Cystic | | | | | 1 [3.0] | |
| Epithel Cell, Hyperplasia | 2 [1.5] | 2 [1.5] | 2 [2.0] | 4 [1.3] | 2 [2.0] | 2 [1.5] |
| INTEGUMENTARY SYSTEM | | | | | | |
| Mammary Gland | (44) | (45) | (47) | (44) | (45) | (47) |
| Acinus, Degeneration | 29 [2.1] | 19 [2.4] | 24 [2.7] | 11 [2.9] | 24 [2.7] | 17 [2.4] |
| Alveolus, Hyperplasia | 1 [1.0] | 4 [1.8] | 6 [1.8] | 18 [2.2] | 2 [2.0] | 6 [2.0] |
| Atypical Focus | | 1 | | | | 1 |
| Duct, Dilatation | | | 1 [1.0] | | | |
| Duct, Ectasia | | | 1 [4.0] | | | |

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 Route: DOSED FEED
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**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:18:59
 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 | | | |
|--------------------------------------|------|-------|------|-------|------|-------|------|-------|----------------|-----------------|-------|-------|-------|
| Duct, Hyperplasia | | | | | 2 | [1.0] | | 3 | [1.0] | 1 | [2.0] | | |
| Duct, Inflammation, Chronic Active | | | | | 1 | [3.0] | | | | | | | |
| Ectasia | 1 | [2.0] | 3 | [2.7] | 7 | [2.0] | 4 | [2.3] | 3 | [1.3] | 12 | [1.8] | |
| Fibrosis | | | | | | | | | | | | | |
| Lactation | 3 | [1.7] | 9 | [1.9] | 10 | [2.0] | 4 | [2.8] | 5 | [2.0] | 14 | [2.4] | |
| Skin | (51) | | (50) | | (50) | | (50) | | (50) | | (49) | | |
| Abscess | | | | | 1 | [4.0] | | | | | 1 | [4.0] | |
| Cyst Epithelial Inclusion | 2 | | 1 | | 2 | | 4 | | 2 | | 2 | | |
| Dermis, Fibrosis | | | | | | | | | 1 | [3.0] | | | |
| Dermis, Inflammation, Chronic Active | | | | | | | | | 1 | [2.0] | 2 | [2.0] | |
| Dermis, Necrosis | | | | | | | | | 1 | [3.0] | | | |
| Epidermis, Hyperplasia | 1 | [2.0] | | | | | | 1 | [2.0] | | 1 | [2.0] | |
| Epidermis, Inflammation, Suppurative | 1 | [2.0] | | | | | | 1 | [4.0] | | | | |
| Epidermis, Necrosis | | | 1 | [2.0] | | | | | | | | | |
| Fibrosis | 1 | [3.0] | | | 1 | [2.0] | | | | | | | |
| Foreign Body | | | | | 1 | | | | | | | | |
| Hair Follicle, Hemorrhage | | | | | | | | | | | 1 | [2.0] | |
| Hyperkeratosis | 1 | [2.0] | 1 | [3.0] | | | | 1 | [2.0] | 2 | [2.0] | 1 | [2.0] |
| Inflammation, Chronic Active | 24 | [4.0] | 14 | [3.8] | 21 | [3.9] | 16 | [4.0] | 28 | [4.0] | 28 | [3.9] | |
| Inflammation, Pyogranulomat | | | | | | | | | 1 | [4.0] | | | |
| Inflammation, Suppurative | | | | | | | 2 | [3.0] | 1 | [4.0] | 1 | [4.0] | |
| Keratin Cyst | | | | | | | | | | | | | |
| Ulcer | | | | | | | | 1 | [2.0] | | | | |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | | | | |
| Bone | (2) | | (0) | | (0) | | (1) | | (0) | | (0) | | |
| Bone, Femur | (51) | | (50) | | (50) | | (50) | | (50) | | (50) | | |
| Skeletal Muscle | (1) | | (1) | | (1) | | (2) | | (2) | | (0) | | |
| NERVOUS SYSTEM | | | | | | | | | | | | | |

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 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:18:59
 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 |
|--|----------|----------|----------|----------|----------------|-----------------|
| Brain, Brain Stem | (49) | (50) | (50) | (50) | (50) | (48) |
| Compression | 5 [2.2] | 7 [2.0] | 9 [2.7] | 4 [2.3] | 7 [2.6] | 10 [2.5] |
| Gliosis | | | | | | 1 [1.0] |
| Hemorrhage | | | 1 [1.0] | | 1 [2.0] | 3 [1.3] |
| Brain, Cerebellum | (49) | (50) | (50) | (50) | (50) | (48) |
| Angiectasis | | | 1 [3.0] | | | |
| Gliosis | | | | | | |
| Hemorrhage | | | | | | |
| Hydrocephalus | | | | | 2 [2.0] | |
| Brain, Cerebrum | (49) | (50) | (50) | (50) | (50) | (48) |
| Hydrocephalus | 1 [1.0] | 3 [1.0] | 1 [2.0] | 1 [2.0] | 3 [2.0] | 4 [1.5] |
| Infiltration Cellular | | | | 1 [1.0] | | |
| Meninges, Hyperplasia | | | | | | |
| Peripheral Nerve | (0) | (1) | (1) | (2) | (2) | (0) |
| RESPIRATORY SYSTEM | | | | | | |
| Lung | (46) | (46) | (48) | (48) | (50) | (45) |
| Alveolar Epith, Hyperplasia | 7 [1.3] | 2 [2.5] | 4 [2.0] | 3 [1.7] | 6 [1.5] | 9 [1.7] |
| Artery, Mineralization | | | | 2 [1.0] | 2 [1.0] | 3 [1.0] |
| Congestion | | 1 [4.0] | | | | |
| Hemorrhage | | | | | | |
| Infiltration Cellular, Histiocyte | 18 [1.5] | 18 [1.4] | 13 [1.6] | 11 [1.5] | 23 [1.4] | 17 [1.6] |
| Infiltration Cellular, Lymphocyte | | | | 1 [2.0] | | |
| Inflammation, Chronic | | | | | 2 [1.0] | |
| Inflammation, Chronic Active | | 1 [1.0] | 2 [2.0] | 1 [1.0] | 2 [2.0] | 1 [2.0] |
| Mediastinum, Hemorrhage | 1 [4.0] | | | | | |
| Mediastinum, Inflammation, Suppurative | 1 [4.0] | | | | | |
| Mediastinum, Necrosis | 1 [4.0] | | | | | |
| Metaplasia, Osseous | 1 [1.0] | 1 [1.0] | 3 [1.0] | 1 [1.0] | | 2 [1.0] |
| Thrombosis | | | | | | 1 [4.0] |

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 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 |
|--|---------|---------|----------|----------|----------------|-----------------|
| Nose | (48) | (49) | (50) | (49) | (49) | (48) |
| Exudate | | 1 [2.0] | | | 1 [2.0] | |
| Foreign Body | | | | 1 | | |
| Inflammation, Chronic Active | 3 [2.0] | | 1 [2.0] | | 3 [2.0] | 3 [1.7] |
| Inflammation, Suppurative | 4 [1.5] | 6 [1.8] | 7 [2.4] | 7 [2.4] | 6 [2.0] | 2 [1.5] |
| Metaplasia, Squamous Mucosa, Hyperkeratosis | 2 [3.0] | 1 [3.0] | | | 2 [3.0] | 1 [4.0] |
| Mucosa, Hyperplasia | | | | | 1 [4.0] | 1 [4.0] |
| Mucosa, Keratin Cyst | | | 2 | 1 | 1 | 1 |
| Polyp, Inflammatory | | 1 [4.0] | | | | |
| Vomeronas Org, Dilatation | | 3 [3.3] | 3 [3.0] | | 1 [3.0] | |
| Trachea | (49) | (50) | (50) | (50) | (50) | (46) |
| Epithelium, Hyperplasia | | | | 1 [2.0] | | |
| Infiltration Cellular, Lymphocyte | | | | 1 [2.0] | | |
| SPECIAL SENSES SYSTEM | | | | | | |
| Eye | (46) | (46) | (47) | (46) | (49) | (45) |
| Bilateral, Cataract | 2 | | | | | |
| Bilateral, Retina, Degeneration | | | | 1 [4.0] | | |
| Cataract | 1 | | | 1 | | |
| Cornea, Inflammation, Chronic Active | | | | 1 [2.0] | | |
| Hemorrhage | 1 [4.0] | | | | | |
| Inflammation, Chronic Active | | | | 1 [4.0] | | |
| Inflammation, Suppurative | 1 [4.0] | | | 2 [4.0] | 1 [4.0] | |
| Retina, Degeneration | | | | | | 1 [3.0] |
| Harderian Gland | (48) | (47) | (48) | (48) | (50) | (46) |
| Acinus, Degeneration | | | 4 [1.3] | 1 [1.0] | 2 [1.0] | |
| Degeneration | | | 1 [3.0] | | | |
| Infiltration Cellular, Lymphocyte | 3 [1.0] | | 1 [2.0] | 5 [1.0] | 3 [1.3] | 1 [2.0] |
| Polyarteritis | | | | | | |

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| CD Rat MALE | F1 0PPB | F1 2PPB | F1 10PPB | F1 50PPB | F1/2PPB TO CTL | F1/10PPB TO CTL |
|---------------------------------------|----------|----------|----------|----------|----------------|-----------------|
| Lacrimal Gland | (0) | (0) | (0) | (2) | (0) | (1) |
| Ectopic Harderian | | | | 1 [3.0] | | 1 |
| Zymbal's Gland | (1) | (0) | (0) | (2) | (1) | (0) |
| Inflammation, Suppurative | | | | | 1 [4.0] | |
| URINARY SYSTEM | | | | | | |
| Kidney | (46) | (49) | (48) | (49) | (49) | (47) |
| Capsule, Inflammation, Chronic Active | | | 1 [4.0] | | | |
| Cyst | 20 | 18 | 21 | 19 | 25 | 24 |
| Hydronephrosis | | | 1 [1.0] | | 2 [2.5] | 2 [4.0] |
| Inflammation, Suppurative | | | | | 1 [3.0] | 1 [3.0] |
| Medulla, Cyst | 1 | | 1 | | 1 | |
| Mineralization | | | 1 [1.0] | 4 [1.5] | 1 [3.0] | |
| Nephropathy | 42 [1.8] | 41 [1.5] | 46 [1.7] | 40 [1.8] | 47 [1.8] | 44 [2.0] |
| Pelvis, Hemorrhage | | | | | 1 [3.0] | |
| Pelvis, Inflammation, Suppurative | | 2 [2.0] | 2 [1.5] | 1 [3.0] | 2 [3.5] | |
| Polycystic Kidney | | | 1 [4.0] | | 1 [4.0] | |
| Renal Tubule, Hyperplasia | | | 1 [1.0] | 1 [1.0] | 1 [2.0] | |
| Transit Epithe, Hyperplasia | 3 [2.7] | 2 [2.0] | 5 [2.4] | | 1 [1.0] | |
| Urethra | (2) | (2) | (0) | (2) | (1) | (5) |
| Hemorrhage | | | | | 1 [3.0] | |
| Urinary Bladder | (45) | (48) | (49) | (49) | (49) | (45) |
| Dilatation | 1 [4.0] | | | | 2 [4.0] | 3 [3.7] |
| Hemorrhage | | | | 2 [2.5] | 1 [3.0] | 1 [4.0] |
| Inflammation, Chronic Active | | | | | 1 [2.0] | |
| Inflammation, Suppurative | | | | 2 [2.5] | 1 [3.0] | 1 [3.0] |
| Transit Epithe, Hyperplasia | | | | 1 [2.0] | 2 [1.5] | |

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

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

| CD Rat MALE | F1/50PPB TO CTL |
|---|-----------------|
| Disposition Summary | |
| Animals Initially In Study | 50 |
| Early Deaths | |
| Moribund Sacrifice | 14 |
| Natural Death | 3 |
| Survivors | |
| Moribund Sacrifice | |
| Natural Death | |
| Terminal Sacrifice | 33 |
| Animals Examined Microscopically | 50 |

ALIMENTARY SYSTEM

| | |
|------------------------------|---------|
| Esophagus | (50) |
| Dilatation | |
| Hyperkeratosis | |
| Inflammation, Suppurative | |
| Intestine Large, Cecum | (46) |
| Dilatation | |
| Hyperplasia, Lymphoid | |
| Inflammation, Chronic Active | |
| Inflammation, Suppurative | |
| Intestine Large, Colon | (48) |
| Dilatation | |
| Hyperplasia, Lymphoid | |
| Polyarteritis | 1 [2.0] |
| Intestine Large, Rectum | (48) |
| Dilatation | |
| Intestine Small, Duodenum | (47) |
| Intestine Small, Ileum | (45) |

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| CD Rat MALE | F1/50PPB TO CTL |
|---|------------------------|
| Dilatation | |
| Intestine Small, Jejunum | (48) |
| Dilatation | |
| Inflammation, Chronic Active | |
| Liver | (49) |
| Angiectasis | 1 [1.0] |
| Basophilic Focus | 6 |
| Bile Duct, Hyperplasia | 4 [1.0] |
| Biliar Tract, Fibrosis | |
| Capsule, Fibrosis | |
| Clear Cell Focus | |
| Cyst | 2 |
| Cyst Multilocular | |
| Degeneration, Cystic | 10 [1.4] |
| Eosinophilic Focus | 10 |
| Focal Cellular Change | |
| Hematopoietic Cell Proliferation | 2 [1.0] |
| Hepatodiaphragmatic Nodule | 3 |
| Infiltration Cellular, Lymphocyte | 2 [1.0] |
| Inflammation, Chronic | |
| Inflammation, Chronic Active | 12 [1.1] |
| Inflammation, Suppurative | |
| Left Lat Lobe, Developmental Malformation | |
| Mixed Cell Focus | |
| Necrosis | 1 [1.0] |
| Oval Cell, Hyperplasia | |
| Tension Lipidosis | 2 [2.0] |
| Vacuolization Cytoplasmic | 12 [1.6] |
| Mesentery | (0) |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:00
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat MALE | F1/50PPB TO CTL |
|--|-----------------|
| Fat, Necrosis | |
| Oral Mucosa | (6) |
| Gingival, Inflammation, Chronic Active | |
| Keratin Cyst | 1 |
| Pancreas | (50) |
| Acinar Cell, Degeneration | 46 [2.1] |
| Basophilic Focus | |
| Polyarteritis | 1 [1.0] |
| Salivary Glands | (49) |
| Acinus, Degeneration | |
| Duct, Dilatation | |
| Inflammation, Chronic Active | |
| Inflammation, Suppurative | |
| Stomach, Forestomach | (49) |
| Edema | |
| Epithelium, Hyperplasia | 2 [2.5] |
| Hyperplasia, Basal Cell | |
| Inflammation, Suppurative | |
| Keratin Cyst | |
| Necrosis | |
| Ulcer | |
| Stomach, Glandular | (49) |
| Cyst | |
| Edema | |
| Epithelium, Hyperplasia | |
| Tongue | (1) |
| Inflammation, Chronic Active | 1 [2.0] |

CARDIOVASCULAR SYSTEM

| | |
|--------------|------|
| Blood Vessel | (50) |
|--------------|------|

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:00
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat MALE | F1/50PPB TO CTL |
|-----------------------------------|-----------------|
| Heart | (50) |
| Atrium, Dilatation | 2 [3.5] |
| Atrium, Thrombosis | |
| Cardiomyopathy | 41 [1.6] |
| Endocardium, Hyperplasia | |
| Inflammation, Suppurative | |
| Metaplasia, Osseous | 1 [2.0] |
| Ventricle, Dilatation | 1 [3.0] |
| ENDOCRINE SYSTEM | |
| Adrenal Cortex | (50) |
| Accessory Adrenal Cortical Nodule | |
| Angiectasis | 2 [2.0] |
| Atrophy | 1 [4.0] |
| Cyst | |
| Degeneration, Cystic | 6 [1.7] |
| Hyperplasia | 14 [1.6] |
| Hypertrophy | 6 [1.8] |
| Metaplasia, Osseous | |
| Pigmentation | |
| Vacuolization Cytoplasmic | 15 [1.3] |
| Adrenal Medulla | (50) |
| Angiectasis | |
| Atrophy | |
| Bilateral, Hyperplasia | |
| Cyst | |
| Hyperplasia | 7 [1.4] |
| Islets, Pancreatic | (50) |
| Hyperplasia | 7 [1.0] |
| Parathyroid Gland | (50) |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:00
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat MALE | F1/50PPB TO CTL |
|------------------------------------|------------------------|
| Bilateral, Hyperplasia | 1 [2.0] |
| Hyperplasia | 6 [1.8] |
| Pituitary Gland | (49) |
| Pars Distalis, Cyst | 1 |
| Pars Distalis, Hyperplasia | 10 [2.0] |
| Pars Intermed, Cyst | 1 |
| Pars Intermed, Hyperplasia | |
| Thyroid Gland | (49) |
| C Cell, Hyperplasia | 7 [1.6] |
| Cyst, Squamous | 8 |
| Follicular Cel, Hyperplasia | |
| Infiltration Cellular, Lymphocyte | |
| GENERAL BODY SYSTEM | |
| Tissue NOS | (0) |
| Degeneration, Cystic | |
| Infiltration Cellular, Plasma Cell | |
| GENITAL SYSTEM | |
| Coagulating Gland | (48) |
| Atrophy | 2 [2.0] |
| Degeneration, Cystic | |
| Developmental Malformation | 8 |
| Hemorrhage | |
| Inflammation, Chronic Active | |
| Inflammation, Suppurative | 1 [1.0] |
| Lumen, Dilatation | 3 [2.7] |
| Ductus Deferens | (0) |
| Inflammation, Suppurative | |
| Epididymis | (50) |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:00
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat MALE | F1/50PPB TO CTL |
|-----------------------------------|------------------------|
| Atrophy | 8 [2.1] |
| Granuloma Sperm | |
| Hyperplasia | |
| Hypospermia | 8 [3.8] |
| Infiltration Cellular, Lymphocyte | |
| Polyarteritis | 1 [2.0] |
| Penis | (0) |
| Dilatation | |
| Preputial Gland | (50) |
| Abscess | 1 [4.0] |
| Atrophy | 6 [2.8] |
| Cyst | |
| Duct, Dilatation | 12 [2.2] |
| Hyperplasia, Basal Cell | |
| Infiltration Cellular, Lymphocyte | 8 [1.6] |
| Inflammation, Chronic Active | 3 [2.3] |
| Inflammation, Suppurative | 23 [2.4] |
| Keratin Cyst | 2 |
| Polyarteritis | 1 [2.0] |
| Prostate, Dorsal/Lateral Lobe | (38) |
| Atrophy | 1 [3.0] |
| Cyst | |
| Degeneration | 1 [2.0] |
| Hemorrhage | |
| Infiltration Cellular, Lymphocyte | |
| Inflammation, Chronic Active | 3 [2.3] |
| Inflammation, Suppurative | 35 [1.7] |
| Prostate, Dorsal/lateral Lobe | (12) |
| Prostate, Ventral Lobe | (50) |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:00
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat MALE | F1/50PPB TO CTL |
|-----------------------------------|-----------------|
| Atrophy | |
| Degeneration | |
| Hemorrhage | |
| Hyperplasia | 3 [1.3] |
| Infiltration Cellular, Lymphocyte | 2 [1.0] |
| Inflammation, Chronic Active | 4 [2.5] |
| Inflammation, Suppurative | 3 [2.0] |
| Rete Testes | (46) |
| Dilatation | 5 [1.2] |
| Fibrosis | |
| Seminal Vesicle | (48) |
| Atrophy | 5 [2.4] |
| Dilatation | |
| Epithelium, Hyperplasia | 1 [4.0] |
| Hemorrhage | |
| Inflammation, Suppurative | 2 [3.0] |
| Lumen, Dilatation | |
| Testes | (50) |
| Granuloma Sperm | |
| Interstit Cell, Hyperplasia | |
| Malformation | |
| Polyarteritis | 1 [2.0] |
| Seminif Tub, Degeneration | 23 [2.0] |
| <hr/> | |
| HEMATOPOIETIC SYSTEM | |
| Bone Marrow | (49) |
| Erythroid Cell, Hyperplasia | 1 [4.0] |
| Hypocellularity | |
| Myeloid Cell, Hyperplasia | 7 [2.3] |
| Lymph Node | (19) |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:19:00

First Dose M/F: NA / NA

Lab: NCTR

| CD Rat MALE | F1/50PPB TO CTL |
|---|-----------------|
| Axillary, Hyperplasia, Lymphoid | 2 [4.0] |
| Axillary, Infiltration Cellular, Plasma Cell | 2 [3.0] |
| Degeneration, Cystic | |
| Hemal, Degeneration, Cystic | |
| Hemal, Inflammation, Chronic Active | |
| Hemal, Necrosis | |
| Inguinal, Degeneration, Cystic | 1 [4.0] |
| Inguinal, Hyperplasia, Lymphoid | 1 [3.0] |
| Inguinal, Infiltration Cellular, Plasma Cell | |
| Lumbar, Degeneration, Cystic | 17 [3.1] |
| Lumbar, Hyperplasia, Lymphoid | 4 [2.8] |
| Lumbar, Infiltration Cellular, Plasma Cell | 9 [3.0] |
| Mediastinal, Degeneration, Cystic | 1 [1.0] |
| Mediastinal, Infiltration Cellular, Histiocyte | 1 [3.0] |
| Mediastinal, Infiltration Cellular, Plasma Cell | |
| Pancreatic, Degeneration, Cystic | |
| Pancreatic, Hyperplasia, Lymphoid | 1 [2.0] |
| Popliteal, Degeneration, Cystic | |
| Popliteal, Infiltration Cellular, Plasma Cell | 1 [4.0] |
| Renal, Degeneration, Cystic | 4 [3.8] |
| Renal, Hyperplasia, Lymphoid | |
| Renal, Infiltration Cellular, Plasma Cell | 2 [3.0] |
| Thoracic, Degeneration, Cystic | |
| Thoracic, Infiltration Cellular, Plasma Cell | 1 [3.0] |
| Lymph Node, Mandibular | (50) |
| Degeneration, Cystic | 15 [1.9] |
| Hyperplasia, Lymphoid | 29 [2.2] |
| Infiltration Cellular, Plasma Cell | 33 [2.2] |
| Lymph Node, Mesenteric | (48) |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:00
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat MALE | F1/50PPB TO CTL |
|---------------------------------------|------------------------|
| Degeneration, Cystic | 2 [3.0] |
| Hyperplasia, Lymphoid | 8 [2.0] |
| Infiltration Cellular, Mast Cell | |
| Infiltration Cellular, Plasma Cell | |
| Inflammation, Granulomatous | 7 [2.0] |
| Spleen | (50) |
| Capsule, Cyst | |
| Depletion Lymphoid | 2 [3.0] |
| Hematopoietic Cell Proliferation | 21 [1.8] |
| Hyperplasia, Lymphoid | 2 [2.0] |
| Hyperplasia, Stromal | |
| Infiltration Cellular, Polymorphnuclr | 1 [2.0] |
| Inflammation, Chronic Active | |
| Necrosis | |
| Pigmentation | 16 [1.9] |
| Red Pulp, Hyperplasia | |
| Thymus | (47) |
| Atrophy | 47 [3.9] |
| Cyst | |
| Cyst, Squamous | |
| Degeneration, Cystic | |
| Epithel Cell, Hyperplasia | 1 [2.0] |

INTEGUMENTARY SYSTEM

| | |
|-----------------------|----------|
| Mammary Gland | (48) |
| Acinus, Degeneration | 11 [2.1] |
| Alveolus, Hyperplasia | 14 [1.9] |
| Atypical Focus | 1 |
| Duct, Dilatation | 1 [4.0] |
| Duct, Ectasia | |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:00
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat MALE | F1/50PPB TO CTL |
|--------------------------------------|------------------------|
| Duct, Hyperplasia | 3 [2.0] |
| Duct, Inflammation, Chronic Active | |
| Ectasia | 4 [1.8] |
| Fibrosis | 1 [4.0] |
| Lactation | 9 [2.0] |
| Skin | (50) |
| Abscess | 1 [4.0] |
| Cyst Epithelial Inclusion | 4 |
| Dermis, Fibrosis | |
| Dermis, Inflammation, Chronic Active | |
| Dermis, Necrosis | |
| Epidermis, Hyperplasia | |
| Epidermis, Inflammation, Suppurative | |
| Epidermis, Necrosis | |
| Fibrosis | |
| Foreign Body | |
| Hair Follicle, Hemorrhage | |
| Hyperkeratosis | |
| Inflammation, Chronic Active | 29 [4.0] |
| Inflammation, Pyogranulomat | |
| Inflammation, Suppurative | 1 [4.0] |
| Keratin Cyst | 1 |
| Ulcer | |

MUSCULOSKELETAL SYSTEM

| | |
|-----------------|------|
| Bone | (1) |
| Bone, Femur | (50) |
| Skeletal Muscle | (1) |

NERVOUS SYSTEM

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:00
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat MALE | F1/50PPB TO CTL |
|-----------------------|------------------------|
| Brain, Brain Stem | (50) |
| Compression | 7 [3.1] |
| Gliosis | |
| Hemorrhage | |
| Brain, Cerebellum | (50) |
| Angiectasis | |
| Gliosis | 1 [1.0] |
| Hemorrhage | 1 [1.0] |
| Hydrocephalus | |
| Brain, Cerebrum | (50) |
| Hydrocephalus | 4 [1.8] |
| Infiltration Cellular | |
| Meninges, Hyperplasia | 1 [2.0] |
| Peripheral Nerve | (0) |

RESPIRATORY SYSTEM

| | |
|--|----------|
| Lung | (50) |
| Alveolar Epith, Hyperplasia | 3 [1.3] |
| Artery, Mineralization | 2 [1.0] |
| Congestion | |
| Hemorrhage | 1 [2.0] |
| Infiltration Cellular, Histiocyte | 11 [1.4] |
| Infiltration Cellular, Lymphocyte | |
| Inflammation, Chronic | |
| Inflammation, Chronic Active | 1 [1.0] |
| Mediastinum, Hemorrhage | |
| Mediastinum, Inflammation, Suppurative | |
| Mediastinum, Necrosis | |
| Metaplasia, Osseous | 1 [1.0] |
| Thrombosis | |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:00
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat MALE | F1/50PPB TO CTL |
|--------------------------------------|------------------------|
| Nose | (50) |
| Exudate | |
| Foreign Body | |
| Inflammation, Chronic Active | |
| Inflammation, Suppurative | 5 [2.6] |
| Metaplasia, Squamous | |
| Mucosa, Hyperkeratosis | |
| Mucosa, Hyperplasia | |
| Mucosa, Keratin Cyst | |
| Polyp, Inflammatory | |
| Vomeronas Org, Dilatation | |
| Trachea | (50) |
| Epithelium, Hyperplasia | |
| Infiltration Cellular, Lymphocyte | |
| <hr/> | |
| SPECIAL SENSES SYSTEM | |
| Eye | (48) |
| Bilateral, Cataract | |
| Bilateral, Retina, Degeneration | |
| Cataract | 2 |
| Cornea, Inflammation, Chronic Active | |
| Hemorrhage | |
| Inflammation, Chronic Active | 1 [3.0] |
| Inflammation, Suppurative | |
| Retina, Degeneration | 1 [4.0] |
| Harderian Gland | (50) |
| Acinus, Degeneration | 5 [1.8] |
| Degeneration | |
| Infiltration Cellular, Lymphocyte | 8 [1.4] |
| Polyarteritis | 1 [1.0] |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:00
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat MALE | F1/50PPB TO CTL |
|---------------------------|------------------------|
| Lacrimal Gland | (1) |
| Ectopic Harderian | |
| Zymbal's Gland | (0) |
| Inflammation, Suppurative | |

URINARY SYSTEM

| | |
|---------------------------------------|----------|
| Kidney | (49) |
| Capsule, Inflammation, Chronic Active | |
| Cyst | 23 |
| Hydronephrosis | |
| Inflammation, Suppurative | |
| Medulla, Cyst | |
| Mineralization | 4 [1.3] |
| Nephropathy | 46 [2.0] |
| Pelvis, Hemorrhage | |
| Pelvis, Inflammation, Suppurative | 1 [2.0] |
| Polycystic Kidney | |
| Renal Tubule, Hyperplasia | 1 [1.0] |
| Transit Epithe, Hyperplasia | 2 [2.0] |
| Urethra | (1) |
| Hemorrhage | |
| Urinary Bladder | (49) |
| Dilatation | |
| Hemorrhage | |
| Inflammation, Chronic Active | |
| Inflammation, Suppurative | |
| Transit Epithe, Hyperplasia | |

END OF MALE DATA

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:19:00
 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 |
|-----------------------------------|---------|---------|-----------|-----------|----------------|-----------------|
| Disposition Summary | | | | | | |
| 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 | |
| Terminal Sacrifice | 26 | 23 | 19 | 25 | 16 | 22 |
| Animals Examined Microscopically | 51 | 50 | 50 | 50 | 50 | 50 |
| ALIMENTARY SYSTEM | | | | | | |
| Esophagus | (51) | (50) | (49) | (50) | (50) | (50) |
| Hemorrhage | | | | 1 [2.0] | | |
| Inflammation | | 2 [3.0] | 1 [4.0] | 1 [4.0] | 1 [4.0] | 2 [4.0] |
| Necrosis | | | | | 1 [4.0] | |
| Intestine Large, Cecum | (51) | (50) | (49) | (49) | (50) | (50) |
| Dilatation | | | | | 1 [2.0] | |
| Erosion | | | | | 1 [3.0] | |
| Inflammation, Chronic | | 1 [2.0] | | | 1 [2.0] | |
| Intestine Large, Colon | (51) | (50) | (49) | (49) | (50) | (50) |
| Developmental Malformation | | | 1 | | | |
| Inflammation | | 1 [1.0] | | | | |
| Lymphoid Tiss, Inflammation | | 1 [3.0] | | | | |
| Mineralization | | | 1 [2.0] | | | |
| Muscularis, Inflammation, Chronic | | | 1 [2.0] | | | |
| Intestine Large, Rectum | (51) | (50) | (49) | (50) | (50) | (50) |
| Inflammation, Chronic | | 1 [1.0] | | | | |
| Intestine Small, Duodenum | (51) | (50) | (49) | (49) | (50) | (50) |
| Autolysis | | | | 1 [3.0] | | |

a - Number of animals examined microscopically at site and number of animals with lesion
 b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:19:01
 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 |
|---|----------|------|----------|---------|----------|---------|----------|--------|----------------|-----------------|
| Dilatation | | | | | | 1 [3.0] | | | | |
| Intestine Small, Ileum | (51) | | (50) | | (48) | | (49) | | (48) | (50) |
| Autolysis | | | | | | | 1 [3.0] | | | |
| Intestine Small, Jejunum | (51) | | (50) | | (47) | | (47) | | (48) | (50) |
| Autolysis | | | | | | | 1 [3.0] | | | |
| Inflammation, Chronic | | | | 1 [4.0] | | | | | | |
| Liver | (51) | | (50) | | (49) | | (50) | | (50) | (50) |
| Angiectasis | 2 [1.5] | | 1 [1.0] | | 1 [2.0] | | 1 [2.0] | | 2 [1.5] | 4 [2.0] |
| Basophilic Focus | 1 | | 1 | | 1 | | 1 | | 1 | 1 |
| Bile Duct, Hyperplasia | 13 [1.4] | | 15 [1.3] | | 10 [1.3] | | 10 [1.2] | | 7 [1.7] | 16 [1.4] |
| Capsule, Hemorrhage, Focal | 2 [2.0] | | | | | | | | 1 [2.0] | |
| Caudate Lobe, Developmental Malformation | | | | | | | | | | |
| Centrilobular, Necrosis | | | | | | 1 [3.0] | | | | |
| Cyst | | | | 1 | | | | | 2 | 2 |
| Cyst Multilocular | 3 | | | | | 1 | | | 2 | 1 |
| Degeneration, Cystic | 1 [2.0] | | | | | | 2 [1.5] | | 3 [2.3] | 5 [1.6] |
| Eosinophilic Focus | 1 | | 1 | | 1 | | 5 | | 2 | 5 |
| Eosinophilic Focus, Multiple | | | | | | | | | | |
| Hematopoietic Cell Proliferation | 2 [1.0] | | 4 [1.0] | | 3 [1.7] | | 1 [2.0] | | 2 [1.5] | 1 [1.0] |
| Hepatodiaphragmatic Nodule | 1 | | | | | | 1 | | 2 | |
| Infiltration Cellular, Lymphocyte | 3 [1.0] | | 2 [1.0] | | 1 [1.0] | | 1 [1.0] | | | 1 [1.0] |
| Inflammation, Chronic Active | 6 [1.0] | | 1 [1.0] | | 6 [1.2] | | 5 [1.0] | | 3 [2.0] | 6 [1.0] |
| Left Lat Lobe, Developmental Malformation | | | | | | | | | | |
| Median Lobe, Developmental Malformation | | | | | | | | | 1 | |
| Mixed Cell Focus | | | | | | | | | | |
| Necrosis | | | | | | | | | 2 [2.5] | |
| Oval Cell, Hyperplasia | | | | | | | | | 1 [3.0] | |
| Periportal, Inflammation, Chronic | 3 [1.0] | | 7 [1.3] | | 5 [1.0] | | 5 [1.0] | | 3 [1.7] | 5 [1.0] |

a - Number of animals examined microscopically at site and number of animals with lesion
 b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:19:01
 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 |
|--|----|----------|----|----------|----|----------|----|----------|----------------|-----------------|
| Right Lat Lobe, Developmental Malformation | | | | 1 | | | | | | |
| Tension Lipidosis | | | | | | 1 [2.0] | | 1 | | |
| Vacuolization Cytoplasmic | | 12 [2.2] | | 8 [1.8] | | 4 [2.0] | | 2 [2.0] | 9 [2.0] | 11 [2.2] |
| Mesentery | | (2) | | (2) | | (0) | | (1) | (2) | (1) |
| Cyst | | | | | | | | | 1 | |
| Fat, Necrosis | | 2 [2.0] | | 1 [3.0] | | | | 1 [2.0] | 2 [3.0] | |
| Oral Mucosa | | (3) | | (1) | | (4) | | (4) | (5) | (7) |
| Gingival, Inflammation | | | | | | | | 1 [3.0] | | |
| Keratin Cyst | | | | | | 3 | | 2 | 2 | 4 |
| Pancreas | | (51) | | (50) | | (49) | | (49) | (50) | (50) |
| Acinar Cell, Degeneration | | 20 [2.0] | | 24 [1.8] | | 20 [2.0] | | 24 [1.8] | 19 [1.6] | 26 [1.9] |
| Acinar Cell, Hyperplasia | | | | | | | | 1 [1.0] | | 1 [2.0] |
| Artery, Inflammation, Chronic | | | | | | | | | | 1 [2.0] |
| Artery, Mineralization | | | | | | 1 [2.0] | | | | |
| Inflammation, Chronic | | | | 7 [1.1] | | | | 1 [2.0] | 1 [4.0] | |
| Lipomatosis | | 1 [2.0] | | 1 [2.0] | | 1 [2.0] | | 2 [3.0] | 1 [2.0] | 3 [2.0] |
| Salivary Glands | | (51) | | (49) | | (49) | | (50) | (50) | (50) |
| Artery, Mineralization | | | | | | 1 [2.0] | | | | |
| Inflammation, Chronic | | 1 [3.0] | | 2 [3.0] | | | | | 2 [3.0] | 1 [1.0] |
| Stomach, Forestomach | | (51) | | (50) | | (49) | | (50) | (50) | (50) |
| Edema | | 1 [2.0] | | | | 1 [2.0] | | 2 [3.0] | 3 [2.3] | |
| Hyperplasia | | 2 [2.5] | | 2 [2.0] | | | | 1 [2.0] | 4 [2.3] | |
| Inflammation | | 1 [2.0] | | 4 [2.3] | | 1 [2.0] | | | 2 [2.5] | |
| Keratin Cyst | | | | | | | | | 1 | |
| Ulcer | | | | | | | | 1 [3.0] | | 1 [3.0] |
| Stomach, Glandular | | (51) | | (50) | | (49) | | (50) | (50) | (50) |
| Glands, Dilatation | | | | | | 1 [3.0] | | | | |
| Infiltration Cellular, Lymphocyte | | | | 1 [2.0] | | | | | 1 [2.0] | |
| Inflammation | | | | | | | | 1 [1.0] | 1 [2.0] | |

a - Number of animals examined microscopically at site and number of animals with lesion
 b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:19:01
 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 |
|--|----------------------------|-----------------|-----------------|-----------------|----------------------------|-----------------|
| Mineralization Tooth Dysplasia | (0) | (0) | 1 [3.0] (0) | (0) | (1) 1 [3.0] | (0) |
| CARDIOVASCULAR SYSTEM | | | | | | |
| Blood Vessel Mineralization | (51) | (50) | (49) 1 [3.0] | (50) | (50) 1 [1.0] | (50) |
| Heart Artery, Mineralization | (51) | (50) | (49) 1 [2.0] | (50) | (50) | (50) |
| Cardiomyopathy Endocardium, Hyperplasia Myocardium, Necrosis | 23 [1.5] | 18 [1.4] | 10 [1.3] | 12 [1.3] | 22 [1.3] | 16 [1.1] |
| ENDOCRINE SYSTEM | | | | | | |
| Adrenal Cortex Angiectasis Atrophy Cyst Degeneration, Cystic Hematopoietic Cell Proliferation Hyperplasia Hypertrophy Metaplasia, Osseous Vacuolization Cytoplasmic | (51) 2 [2.0] 2 [2.5] | (50) 1 [2.0] | (49) 2 [2.5] | (50) 1 [4.0] | (50) 1 [1.0] 1 [2.0] | (50) 3 [2.0] |
| Adrenal Medulla Hyperplasia | 46 [2.8] | 43 [2.6] | 43 [2.5] | 45 [2.5] | 43 [2.7] | 44 [2.6] |
| Islets, Pancreatic Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [2.0] | 1 [1.0] |
| Parathyroid Gland Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | 1 [2.0] |
| Hyperplasia | 5 [1.6] | 11 [2.1] | 7 [1.9] | 7 [2.3] | 2 [2.0] | 2 [2.5] |
| Hyperplasia | 1 [3.0] | | | | | |
| Hyperplasia | 1 [1.0] | | 1 [2.0] | | | |
| Hyperplasia | (48) | (50) | (49) | (50) | (49) | (48) |
| Hyperplasia | 1 [3.0] | 3 [2.0] | 1 [1.0] | 1 [2.0] | 1 [1.0] | |

Experiment Number: 99920-94
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:19:01
 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 |
|-----------------------------------|----------|----------|-----------|-----------|----------------|-----------------|
| Pituitary Gland | (51) | (50) | (50) | (50) | (50) | (50) |
| Angiectasis | 2 [2.0] | | | | | 2 [2.0] |
| Cyst | | | 1 | | | |
| Pars Distalis, Cyst | 2 | 2 | 1 | 1 | 1 | 1 |
| Pars Distalis, Hyperplasia | 4 [2.5] | 3 [1.7] | 3 [2.0] | 2 [2.0] | 2 [2.0] | 4 [2.0] |
| Pars Intermed, Cyst | 1 | 3 | | | 1 | |
| Pigmentation | | | | | | 1 [3.0] |
| Thyroid Gland | (51) | (50) | (49) | (50) | (50) | (50) |
| C Cell, Hyperplasia | 7 [1.4] | 4 [1.5] | 3 [2.0] | 4 [2.0] | | 3 [2.0] |
| Follicle, Cyst | | | | | | 1 [2.0] |
| Follicular Cel, Hyperplasia | | | | 1 [1.0] | 1 [3.0] | 2 [1.5] |
| Infiltration Cellular, Lymphocyte | 1 [1.0] | | | | 1 [1.0] | |
| Inflammation, Chronic | 1 [1.0] | 1 [3.0] | | 2 [1.0] | | 1 [1.0] |
| Ultimobranchial Cyst | 2 [3.0] | 4 [3.0] | 1 [3.0] | 5 [2.2] | 1 [2.0] | 2 [2.5] |
| GENERAL BODY SYSTEM | | | | | | |
| Tissue NOS | (0) | (0) | (1) | (0) | (0) | (0) |
| GENITAL SYSTEM | | | | | | |
| Clitoral Gland | (50) | (49) | (48) | (50) | (50) | (49) |
| Atrophy | | 6 [2.3] | 4 [2.5] | 2 [1.5] | 3 [2.3] | 1 [2.0] |
| Duct, Dilatation | 11 [2.1] | 12 [2.4] | 10 [2.3] | 9 [2.6] | 17 [2.3] | 9 [2.4] |
| Duct, Hyperplasia, Squamous | 2 [3.0] | 1 [3.0] | 2 [2.0] | | 1 [1.0] | 1 [2.0] |
| Hyperplasia | | 2 [1.5] | 2 [2.0] | | | 1 [2.0] |
| Infiltration Cellular, Lymphocyte | | | | | 1 [2.0] | |
| Inflammation | 34 [2.1] | 33 [2.2] | 32 [2.1] | 28 [2.3] | 32 [2.0] | 29 [2.2] |
| Keratin Cyst | | | | | | |
| Ovary | (51) | (50) | (49) | (50) | (50) | (50) |
| Angiectasis | | 1 [1.0] | | | | |
| Atrophy | 49 [2.7] | 47 [3.1] | 46 [3.2] | 46 [3.3] | 46 [3.2] | 45 [2.9] |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:19:01
 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 |
|----------------------------------|----|----------|----|----------|----|----------|----|----------|----------------|-----------------|
| Corpus Luteum, Cyst | | 1 | | 2 | | 1 | | 2 | | 1 |
| Cyst | | 15 | | 9 | | 17 | | 22 | | 12 |
| Granulosa Cell, Hyperplasia | | | | | | | | 1 [3.0] | | |
| Hyperplasia, Sertoliform | | 23 [1.5] | | 17 [1.5] | | 13 [1.2] | | 23 [1.7] | | 20 [1.6] |
| Interstit Cell, Hyperplasia | | | | 1 [3.0] | | 2 [2.5] | | | | 2 [2.5] |
| Oviduct | | (51) | | (50) | | (49) | | (50) | | (50) |
| Pigmentation | | | | | | | | | | 1 [2.0] |
| Uterus | | (51) | | (50) | | (49) | | (50) | | (50) |
| Atrophy | | 4 [2.3] | | 1 [2.0] | | 2 [2.0] | | | | 1 [2.0] |
| Cervix, Hyperplasia | | | | | | | | | | |
| Cervix, Muscularis, Hypertrophy | | | | | | | | | | 1 [2.0] |
| Dilatation | | 1 [3.0] | | | | | | | | |
| Endometrium, Hyperplasia | | 2 [1.5] | | 7 [1.7] | | 3 [2.3] | | 12 [2.5] | | 2 [1.5] |
| Endometrium, Hyperplasia, Cystic | | 15 [1.9] | | 14 [2.1] | | 20 [1.9] | | 17 [2.0] | | 23 [1.9] |
| Hemorrhage | | | | 1 [2.0] | | | | | | |
| Hyperplasia, Atypical, Focal | | 6 [1.0] | | 14 [1.4] | | 16 [1.4] | | 20 [1.6] | | 10 [1.3] |
| Hypoplasia | | | | 1 [3.0] | | | | | | 1 [3.0] |
| Inflammation | | 2 [1.5] | | 1 [1.0] | | | | 1 [1.0] | | 3 [1.3] |
| Metaplasia, Squamous | | 2 [1.0] | | 6 [2.0] | | 8 [1.4] | | 13 [1.6] | | 6 [1.5] |
| Pigmentation, Focal | | 1 [2.0] | | | | | | | | |
| Vagina | | (51) | | (50) | | (49) | | (49) | | (50) |
| Hemorrhage | | | | | | | | | | 1 [2.0] |
| Inflammation | | 12 [1.7] | | 22 [1.8] | | 18 [1.6] | | 17 [1.8] | | 17 [2.0] |
| Mucocyte, Hyperplasia | | 43 [2.5] | | 33 [2.2] | | 35 [2.4] | | 33 [2.4] | | 33 [2.4] |
| HEMATOPOIETIC SYSTEM | | | | | | | | | | |
| Bone Marrow | | (51) | | (50) | | (49) | | (50) | | (50) |
| Hyperplasia | | 1 [2.0] | | 1 [2.0] | | | | | | 1 [2.0] |
| Myeloid Cell, Hyperplasia | | | | 1 [2.0] | | | | | | 2 [2.0] |
| Lymph Node | | (16) | | (14) | | (6) | | (10) | | (15) |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:19:01
 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 |
|---|----|-------|----|----------|----|---------|----|---------|----------------|-----------------|
| Axillary, Degeneration, Cystic | 1 | [2.0] | | | | | | | | |
| Axillary, Hyperplasia, Lymphoid | | | | | | | | | | 1 [3.0] |
| Axillary, Infiltration Cellular, Plasma Cell | 2 | [3.0] | | | | | | | | 1 [4.0] |
| Deep Cervical, Hyperplasia, Lymphoid | | | | | | | | 1 [2.0] | | |
| Deep Cervical, Infiltration Cellular, Plasma Cell | 1 | [4.0] | | | | | | 1 [2.0] | | |
| Degeneration, Cystic | | | | | | | | | 1 [2.0] | |
| Hyperplasia, Lymphoid | 1 | [4.0] | | | | | | | | |
| Infiltration Cellular, Plasma Cell | 1 | [3.0] | | | | | | | 3 [3.3] | |
| Inguinal, Degeneration, Cystic | | | | | | | | | | |
| Inguinal, Hyperplasia, Lymphoid | 1 | [4.0] | | | | | | | | 1 [3.0] |
| Inguinal, Infiltration Cellular, Plasma Cell | 1 | [3.0] | | 1 [4.0] | | | | | 1 [4.0] | 1 [3.0] |
| Lumbar, Degeneration, Cystic | 12 | [3.0] | | 11 [2.9] | | 3 [2.7] | | 5 [2.4] | 7 [3.0] | 9 [3.3] |
| Lumbar, Hemorrhage | | | | | | | | | 1 [3.0] | |
| Lumbar, Hyperplasia, Lymphoid | 5 | [2.4] | | 10 [2.4] | | 3 [2.7] | | 3 [2.0] | 4 [2.8] | 7 [2.3] |
| Lumbar, Infiltration Cellular, Plasma Cell | 10 | [2.7] | | 12 [2.9] | | 5 [2.8] | | 5 [3.0] | 7 [2.7] | 10 [2.6] |
| Mediastinal, Hemorrhage | | | | | | 1 [2.0] | | 1 [3.0] | | 1 [3.0] |
| Mediastinal, Hyperplasia, Lymphoid | 1 | [2.0] | | | | | | | | 1 [2.0] |
| Mediastinal, Infiltration Cellular, Plasma Cell | | | | | | | | | | |
| Mediastinal, Pigmentation | 1 | [2.0] | | | | | | 1 [3.0] | | |
| Mediastinal, Sinus, Dilatation | | | | | | | | | | 1 [3.0] |
| Pancreatic, Hemorrhage | | | | | | | | 1 [2.0] | | |
| Pancreatic, Hyperplasia, Lymphoid | | | | | | | | | 1 [2.0] | |
| Pancreatic, Pigmentation | 1 | [2.0] | | | | | | 1 [2.0] | | |
| Popliteal, Degeneration, Cystic | 1 | [2.0] | | | | 1 [3.0] | | 1 [3.0] | | |
| Popliteal, Hyperplasia, Lymphoid | 2 | [2.0] | | | | 2 [2.0] | | | | |
| Popliteal, Infiltration Cellular, Plasma Cell | 2 | [3.0] | | 1 [4.0] | | 2 [3.5] | | 1 [4.0] | | |
| Renal, Degeneration, Cystic | 1 | [2.0] | | 1 [4.0] | | | | | | |
| Renal, Hyperplasia, Lymphoid | | | | 1 [2.0] | | | | | 1 [3.0] | |
| Renal, Infiltration Cellular, Plasma Cell | 1 | [4.0] | | 1 [2.0] | | | | | | |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:19:01
 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 |
|--|----------|----------|-----------|-----------|----------------|-----------------|
| Thoracic, Infiltration Cellular, Plasma Cell | 1 [2.0] | | | | | |
| Lymph Node, Mandibular | (51) | (50) | (49) | (50) | (50) | (49) |
| Degeneration, Cystic | 16 [2.1] | 9 [2.2] | 8 [2.0] | 8 [2.4] | 8 [1.9] | 6 [2.0] |
| Hemorrhage | 1 [2.0] | | | | | |
| Hyperplasia, Lymphoid | 4 [2.0] | 14 [2.1] | 11 [2.0] | 5 [2.2] | 10 [2.1] | 11 [2.1] |
| Infiltration Cellular, Plasma Cell | 43 [2.3] | 40 [2.6] | 43 [2.3] | 39 [2.3] | 40 [2.3] | 41 [2.3] |
| Inflammation, Suppurative | | | | 1 [2.0] | 1 [2.0] | |
| Lymph Node, Mesenteric | (51) | (50) | (47) | (50) | (50) | (50) |
| Degeneration, Cystic | 1 [2.0] | | 1 [2.0] | 1 [2.0] | 1 [2.0] | |
| Depletion Lymphoid | 1 [2.0] | 1 [2.0] | | 1 [3.0] | 1 [3.0] | |
| Hemorrhage | | 1 [2.0] | | 2 [2.0] | 1 [2.0] | 1 [2.0] |
| Hyperplasia, Lymphoid | 5 [2.0] | 3 [2.3] | 1 [2.0] | 2 [2.0] | 3 [2.0] | 4 [2.0] |
| Infiltration Cellular, Plasma Cell | 5 [2.0] | 3 [2.3] | 1 [3.0] | 1 [2.0] | 1 [2.0] | 1 [2.0] |
| Pigmentation | 2 [2.0] | 1 [2.0] | | | | |
| Sinus, Dilatation | | | | 1 [4.0] | | |
| Spleen | (51) | (50) | (49) | (50) | (50) | (50) |
| Hematopoietic Cell Proliferation | 15 [1.9] | 22 [1.9] | 10 [2.1] | 6 [2.0] | 13 [1.8] | 17 [1.8] |
| Hyperplasia, Lymphoid | | | | | | 1 [2.0] |
| Hyperplasia, Stromal | | 1 [4.0] | | | | |
| Lymphocyte, Atrophy | | 1 [2.0] | | | | |
| Pigmentation | 33 [1.9] | 31 [2.0] | 34 [2.1] | 43 [2.2] | 28 [1.8] | 25 [1.9] |
| Red Pulp, Atrophy | 1 [2.0] | | | | | |
| Thymus | (51) | (44) | (45) | (48) | (44) | (46) |
| Cyst | 17 | 18 | 21 | 17 | 13 | 22 |
| Hemorrhage | | | | 1 [3.0] | 1 [3.0] | |
| Hyperplasia, Lymphoid | | | | | 1 [2.0] | |
| Inflammation, Chronic | | 1 [3.0] | | | 1 [2.0] | |
| INTEGUMENTARY SYSTEM | | | | | | |
| Mammary Gland | (51) | (49) | (49) | (50) | (49) | (50) |

a - Number of animals examined microscopically at site and number of animals with lesion
 b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:19:02
 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 |
|-------------------------------|----------|----------|-----------|-----------|----------------|-----------------|
| Alveolus, Hyperplasia | 42 [2.1] | 38 [2.4] | 42 [2.2] | 40 [2.2] | 36 [2.3] | 43 [2.3] |
| Atypical Focus | 19 [1.5] | 23 [1.8] | 21 [1.3] | 23 [1.6] | 13 [2.0] | 19 [1.7] |
| Duct, Dilatation | 3 [2.0] | 5 [2.8] | | 4 [2.8] | | 1 [2.0] |
| Duct, Inflammation | | | | | | |
| Fibrosis | | | | | | |
| Galactocele | 2 | 2 | 4 | 6 | 3 | 4 |
| Lactation | 26 [2.0] | 32 [2.1] | 31 [1.9] | 30 [2.0] | 29 [1.9] | 29 [1.8] |
| Lobules, Hyperplasia | | | 1 [2.0] | | | |
| Skin | (51) | (50) | (49) | (50) | (50) | (50) |
| Abscess | 1 [3.0] | | | | | |
| Cyst Epithelial Inclusion | | | | | 1 | |
| Hyperkeratosis | | | | | 1 [2.0] | |
| Inflammation | 23 [3.6] | 16 [3.4] | 9 [3.9] | 7 [3.1] | 23 [3.6] | 22 [3.6] |
| MUSCULOSKELETAL SYSTEM | | | | | | |
| Bone, Femur | (51) | (50) | (49) | (50) | (50) | (50) |
| Fibrous Osteodystrophy | | | 1 [3.0] | | | |
| Osteopetrosis | | | | | | 1 [2.0] |
| Skeletal Muscle | (1) | (0) | (1) | (1) | (0) | (4) |
| Head, Hyalinization, Focal | | | 1 [2.0] | | | |
| NERVOUS SYSTEM | | | | | | |
| Brain, Brain Stem | (51) | (50) | (49) | (50) | (50) | (50) |
| Compression | 26 [2.4] | 26 [2.7] | 23 [2.6] | 26 [2.5] | 23 [2.7] | 18 [2.8] |
| Hemorrhage | | 1 [2.0] | 1 [2.0] | 1 [1.0] | 2 [1.5] | 1 [2.0] |
| Hydrocephalus | | | 1 [2.0] | | | |
| Brain, Cerebellum | (51) | (50) | (49) | (50) | (50) | (50) |
| Hemorrhage | | | | | 1 [1.0] | |
| Hydrocephalus | 2 [1.5] | | | 2 [1.5] | 3 [1.7] | |
| Brain, Cerebrum | (51) | (50) | (49) | (50) | (50) | (50) |

a - Number of animals examined microscopically at site and number of animals with lesion
 b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:19:02
 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 |
|--------------------------------------|----------|----------|-----------|-----------|----------------|-----------------|
| Hemorrhage | | | | | 1 [2.0] | |
| Hydrocephalus | 2 [2.0] | 2 [2.0] | 6 [1.8] | 5 [1.8] | 3 [2.0] | 2 [2.0] |
| Peripheral Nerve | (1) | (0) | (0) | (0) | (0) | (2) |
| RESPIRATORY SYSTEM | | | | | | |
| Lung | (51) | (50) | (49) | (50) | (50) | (50) |
| Alveolar Epith, Hyperplasia | 1 [2.0] | 1 [1.0] | 2 [1.5] | 1 [2.0] | 1 [1.0] | 1 [1.0] |
| Artery, Mineralization | | 1 [1.0] | | 3 [1.7] | 3 [1.3] | 1 [2.0] |
| Autolysis | | | | | 1 [2.0] | |
| Edema | | 1 [1.0] | | | | |
| Hemorrhage | 1 [3.0] | | | 2 [2.0] | 1 [1.0] | |
| Infiltration Cellular, Histiocyte | 11 [1.5] | 10 [1.9] | 10 [1.6] | 16 [1.8] | 7 [1.9] | 4 [1.5] |
| Infiltration Cellular, Lymphocyte | | | 1 [1.0] | 1 [1.0] | | |
| Inflammation | 3 [1.3] | 1 [2.0] | 4 [1.8] | 3 [2.0] | 3 [1.3] | 2 [2.0] |
| Peribronchial, Inflammation, Chronic | | 1 [3.0] | 1 [1.0] | | 1 [3.0] | |
| Perivascular, Inflammation | | 1 [2.0] | 3 [1.0] | 1 [1.0] | 1 [2.0] | |
| Nose | (51) | (50) | (49) | (50) | (50) | (50) |
| Fibrous Osteodystrophy | | | 1 [3.0] | | | |
| Foreign Body | | 1 | | 1 | | 1 |
| Goblet Cell, Hyperplasia | 1 [3.0] | 2 [1.5] | 2 [2.0] | | 1 [2.0] | 1 [3.0] |
| Hemorrhage | | 1 [4.0] | | | | |
| Inflammation | 4 [1.8] | 5 [2.0] | 5 [1.8] | 2 [2.5] | 9 [2.1] | 4 [1.8] |
| Nasolacrim Dct, Inflammation | 29 [1.8] | 29 [1.8] | 31 [1.7] | 30 [1.7] | 25 [1.8] | 29 [1.8] |
| Olfactory Epi, Hyaline Droplet | 4 [1.8] | 5 [1.2] | 1 [1.0] | 6 [1.7] | | 3 [1.3] |
| Osteopetrosis | | | | | | 1 [2.0] |
| Respirat Epith, Hyaline Droplet | | | | | 1 [2.0] | |
| Respirat Epith, Hyperplasia | 1 [2.0] | | | | 1 [1.0] | |
| Trachea | (51) | (50) | (49) | (50) | (50) | (50) |
| Inflammation | 2 [1.5] | | 3 [1.0] | 3 [1.0] | 1 [1.0] | 1 [1.0] |

a - Number of animals examined microscopically at site and number of animals with lesion
 b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
 Test Type: SPECIAL STUDY
 Route: DOSED FEED
 Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
 Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
 CAS Number: 57-63-6

Date Report Requested: 10/23/2014
 Time Report Requested: 13:19:02
 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 |
|-----------------------------------|----------|----------|-----------|-----------|----------------|-----------------|
| SPECIAL SENSES SYSTEM | | | | | | |
| Ear | (0) | (1) | (0) | (0) | (0) | (0) |
| Eye | (51) | (49) | (48) | (49) | (50) | (50) |
| Bilateral, Cataract | | | | 1 | 2 | |
| Bilateral, Retina, Degeneration | 2 [2.0] | 5 [2.0] | 1 [2.0] | 4 [2.0] | 1 [2.0] | 6 [2.3] |
| Cataract | | 1 | 1 | 1 | 2 | 2 |
| Cornea, Inflammation | 1 [2.0] | | | | | |
| Retina, Autolysis | | | | | 2 [4.0] | |
| Retina, Degeneration | 3 [2.0] | 1 [2.0] | 5 [1.8] | | 2 [1.5] | 3 [2.3] |
| Harderian Gland | (51) | (49) | (49) | (50) | (50) | (50) |
| Atrophy, Focal | 2 [1.5] | | | | | |
| Epithelium, Degeneration | | | | | 1 [1.0] | |
| Hyperplasia | 3 [1.3] | 2 [2.0] | 4 [1.5] | 5 [1.0] | 2 [1.5] | 1 [1.0] |
| Infiltration Cellular, Lymphocyte | 3 [1.7] | 2 [1.5] | 2 [1.0] | 1 [1.0] | 2 [1.5] | 1 [2.0] |
| Inflammation | 7 [1.1] | 10 [1.3] | 10 [1.1] | 4 [1.5] | 7 [1.1] | 9 [1.2] |
| Zymbal's Gland | (0) | (0) | (0) | (0) | (0) | (0) |
| URINARY SYSTEM | | | | | | |
| Kidney | (51) | (50) | (49) | (50) | (50) | (50) |
| Bilateral, Hydronephrosis | | | | | | 1 [3.0] |
| Cyst | 15 | 16 | 8 | 7 | 11 | 16 |
| Degeneration, Mucoïd | | | 1 [1.0] | 1 [2.0] | 1 [2.0] | 1 [1.0] |
| Epithelium, Pelvis, Hyperplasia | 1 [1.0] | | | | | 1 [2.0] |
| Hemorrhage | 1 [3.0] | | | 1 [2.0] | | |
| Hydronephrosis | | | 1 [3.0] | 1 [2.0] | | 1 [3.0] |
| Infiltration Cellular, Lymphocyte | | | | 1 [1.0] | | |
| Inflammation | 1 [2.0] | 1 [3.0] | | | 1 [3.0] | |
| Mineralization | 31 [1.8] | 33 [2.0] | 27 [1.7] | 34 [1.7] | 30 [2.1] | 36 [1.7] |
| Nephropathy | 27 [1.2] | 21 [1.4] | 18 [1.3] | 17 [1.1] | 19 [1.3] | 19 [1.1] |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**
Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)
CAS Number: 57-63-6

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:02
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 |
|---|---------|---------|-----------|-----------|----------------|-----------------|
| Polycystic Kidney | | | 1 [4.0] | 1 [2.0] | | |
| Renal Tubule, Accumulation, Hyaline Droplet | | | | | | 1 [2.0] |
| Renal Tubule, Hyperplasia, Focal | | | | | | |
| Urinary Bladder Dilatation | (51) | (49) | (49) | (48) | (48) | (50) |
| Hemorrhage | | | | 1 [3.0] | | |
| Infiltration Cellular, Lymphocyte | 2 [1.5] | | | 1 [3.0] | | |
| Inflammation | | | | | | 1 [2.0] |

a - Number of animals examined microscopically at site and number of animals with lesion
 b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:02
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat FEMALE | F1/50PPB TO CTL |
|---|-----------------|
| Disposition Summary | |
| Animals Initially In Study | 50 |
| Early Deaths | |
| Moribund Sacrifice | 22 |
| Natural Death | 6 |
| Survivors | |
| Moribund Sacrifice | |
| Terminal Sacrifice | 22 |
| Animals Examined Microscopically | 50 |
| <hr/> | |
| ALIMENTARY SYSTEM | |
| Esophagus | (50) |
| Hemorrhage | |
| Inflammation | |
| Necrosis | |
| Intestine Large, Cecum | (50) |
| Dilatation | |
| Erosion | |
| Inflammation, Chronic | |
| Intestine Large, Colon | (50) |
| Developmental Malformation | |
| Inflammation | |
| Lymphoid Tiss, Inflammation | |
| Mineralization | |
| Muscularis, Inflammation, Chronic | |
| Intestine Large, Rectum | (50) |
| Inflammation, Chronic | |
| Intestine Small, Duodenum | (50) |
| Autolysis | |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:02
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat FEMALE | F1/50PPB TO CTL |
|---|-----------------|
| Dilatation | |
| Intestine Small, Ileum | (49) |
| Autolysis | |
| Intestine Small, Jejunum | (50) |
| Autolysis | |
| Inflammation, Chronic | |
| Liver | (50) |
| Angiectasis | 3 [2.0] |
| Basophilic Focus | 6 |
| Bile Duct, Hyperplasia | 8 [1.4] |
| Capsule, Hemorrhage, Focal | |
| Caudate Lobe, Developmental Malformation | 1 |
| Centrilobular, Necrosis | |
| Cyst | |
| Cyst Multilocular | 1 |
| Degeneration, Cystic | 1 [2.0] |
| Eosinophilic Focus | 3 |
| Eosinophilic Focus, Multiple | 1 |
| Hematopoietic Cell Proliferation | 3 [1.0] |
| Hepatodiaphragmatic Nodule | 1 |
| Infiltration Cellular, Lymphocyte | 2 [1.0] |
| Inflammation, Chronic Active | 4 [1.0] |
| Left Lat Lobe, Developmental Malformation | 1 |
| Median Lobe, Developmental Malformation | |
| Mixed Cell Focus | 1 |
| Necrosis | |
| Oval Cell, Hyperplasia | |
| Periportal, Inflammation, Chronic | 2 [1.0] |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:02
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat FEMALE | F1/50PPB TO CTL |
|--|-----------------|
| Right Lat Lobe, Developmental Malformation | |
| Tension Lipidosis | |
| Vacuolization Cytoplasmic | 13 [2.0] |
| Mesentery | (0) |
| Cyst | |
| Fat, Necrosis | |
| Oral Mucosa | (4) |
| Gingival, Inflammation | |
| Keratin Cyst | 3 |
| Pancreas | (50) |
| Acinar Cell, Degeneration | 23 [1.9] |
| Acinar Cell, Hyperplasia | |
| Artery, Inflammation, Chronic | |
| Artery, Mineralization | |
| Inflammation, Chronic | 2 [1.0] |
| Lipomatosis | 1 [2.0] |
| Salivary Glands | (50) |
| Artery, Mineralization | |
| Inflammation, Chronic | 1 [3.0] |
| Stomach, Forestomach | (50) |
| Edema | 1 [2.0] |
| Hyperplasia | |
| Inflammation | 1 [3.0] |
| Keratin Cyst | 1 |
| Ulcer | |
| Stomach, Glandular | (50) |
| Glands, Dilatation | |
| Infiltration Cellular, Lymphocyte | |
| Inflammation | |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:02
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat FEMALE | F1/50PPB TO CTL |
|----------------------------------|-----------------|
| Mineralization | |
| Tooth | (0) |
| Dysplasia | |
| CARDIOVASCULAR SYSTEM | |
| Blood Vessel | (50) |
| Mineralization | |
| Heart | (50) |
| Artery, Mineralization | |
| Cardiomyopathy | 26 [1.3] |
| Endocardium, Hyperplasia | 1 [2.0] |
| Myocardium, Necrosis | |
| ENDOCRINE SYSTEM | |
| Adrenal Cortex | (50) |
| Angiectasis | 1 [1.0] |
| Atrophy | 1 [2.0] |
| Cyst | |
| Degeneration, Cystic | 42 [2.2] |
| Hematopoietic Cell Proliferation | |
| Hyperplasia | 1 [2.0] |
| Hypertrophy | 5 [1.8] |
| Metaplasia, Osseous | |
| Vacuolization Cytoplasmic | |
| Adrenal Medulla | (49) |
| Hyperplasia | 2 [1.5] |
| Islets, Pancreatic | (50) |
| Hyperplasia | |
| Parathyroid Gland | (46) |
| Hyperplasia | |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:02
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat FEMALE | F1/50PPB TO CTL |
|-----------------------------------|-----------------|
| Pituitary Gland | (49) |
| Angiectasis | 1 [1.0] |
| Cyst | |
| Pars Distalis, Cyst | 2 |
| Pars Distalis, Hyperplasia | 1 [2.0] |
| Pars Intermed, Cyst | 1 |
| Pigmentation | |
| Thyroid Gland | (50) |
| C Cell, Hyperplasia | 4 [3.0] |
| Follicle, Cyst | |
| Follicular Cel, Hyperplasia | |
| Infiltration Cellular, Lymphocyte | |
| Inflammation, Chronic | 1 [2.0] |
| Ultimobranchial Cyst | 2 [3.0] |
| <hr/> | |
| GENERAL BODY SYSTEM | |
| Tissue NOS | (0) |
| <hr/> | |
| GENITAL SYSTEM | |
| Clitoral Gland | (49) |
| Atrophy | 2 [2.5] |
| Duct, Dilatation | 9 [2.3] |
| Duct, Hyperplasia, Squamous | 5 [2.4] |
| Hyperplasia | 3 [2.0] |
| Infiltration Cellular, Lymphocyte | |
| Inflammation | 34 [2.1] |
| Keratin Cyst | 2 |
| Ovary | (50) |
| Angiectasis | |
| Atrophy | 42 [2.9] |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
 AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:02
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat FEMALE | F1/50PPB TO CTL |
|----------------------------------|-----------------|
| Corpus Luteum, Cyst | 2 |
| Cyst | 17 |
| Granulosa Cell, Hyperplasia | |
| Hyperplasia, Sertoliform | 28 [1.7] |
| Interstit Cell, Hyperplasia | |
| Oviduct | (50) |
| Pigmentation | |
| Uterus | (50) |
| Atrophy | |
| Cervix, Hyperplasia | |
| Cervix, Muscularis, Hypertrophy | 1 |
| Dilatation | |
| Endometrium, Hyperplasia | 4 [1.8] |
| Endometrium, Hyperplasia, Cystic | 22 [2.2] |
| Hemorrhage | |
| Hyperplasia, Atypical, Focal | 9 [1.7] |
| Hypoplasia | |
| Inflammation | 3 [2.7] |
| Metaplasia, Squamous | 1 [1.0] |
| Pigmentation, Focal | |
| Vagina | (50) |
| Hemorrhage | 1 [2.0] |
| Inflammation | 18 [1.6] |
| Mucocyte, Hyperplasia | 39 [2.3] |
| HEMATOPOIETIC SYSTEM | |
| Bone Marrow | (50) |
| Hyperplasia | 1 [2.0] |
| Myeloid Cell, Hyperplasia | 1 [3.0] |
| Lymph Node | (13) |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:19:02

First Dose M/F: NA / NA

Lab: NCTR

| CD Rat FEMALE | F1/50PPB TO CTL |
|---|-----------------|
| Axillary, Degeneration, Cystic | |
| Axillary, Hyperplasia, Lymphoid | |
| Axillary, Infiltration Cellular, Plasma Cell | |
| Deep Cervical, Hyperplasia, Lymphoid | |
| Deep Cervical, Infiltration Cellular, Plasma Cell | |
| Degeneration, Cystic | |
| Hyperplasia, Lymphoid | |
| Infiltration Cellular, Plasma Cell | |
| Inguinal, Degeneration, Cystic | 2 [2.0] |
| Inguinal, Hyperplasia, Lymphoid | 2 [2.5] |
| Inguinal, Infiltration Cellular, Plasma Cell | 2 [3.0] |
| Lumbar, Degeneration, Cystic | 5 [3.0] |
| Lumbar, Hemorrhage | |
| Lumbar, Hyperplasia, Lymphoid | 7 [2.3] |
| Lumbar, Infiltration Cellular, Plasma Cell | 9 [2.8] |
| Mediastinal, Hemorrhage | 1 [2.0] |
| Mediastinal, Hyperplasia, Lymphoid | |
| Mediastinal, Infiltration Cellular, Plasma Cell | 2 [2.5] |
| Mediastinal, Pigmentation | |
| Mediastinal, Sinus, Dilatation | |
| Pancreatic, Hemorrhage | |
| Pancreatic, Hyperplasia, Lymphoid | |
| Pancreatic, Pigmentation | |
| Popliteal, Degeneration, Cystic | |
| Popliteal, Hyperplasia, Lymphoid | |
| Popliteal, Infiltration Cellular, Plasma Cell | 1 [2.0] |
| Renal, Degeneration, Cystic | 3 [2.7] |
| Renal, Hyperplasia, Lymphoid | 2 [2.0] |
| Renal, Infiltration Cellular, Plasma Cell | 4 [2.8] |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:02
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat FEMALE | F1/50PPB TO CTL |
|--|-----------------|
| Thoracic, Infiltration Cellular, Plasma Cell | |
| Lymph Node, Mandibular | (50) |
| Degeneration, Cystic | 12 [2.3] |
| Hemorrhage | 1 [2.0] |
| Hyperplasia, Lymphoid | 5 [2.0] |
| Infiltration Cellular, Plasma Cell | 41 [2.4] |
| Inflammation, Suppurative | |
| Lymph Node, Mesenteric | (50) |
| Degeneration, Cystic | 5 [2.0] |
| Depletion Lymphoid | 1 [2.0] |
| Hemorrhage | |
| Hyperplasia, Lymphoid | 7 [2.0] |
| Infiltration Cellular, Plasma Cell | 5 [1.8] |
| Pigmentation | |
| Sinus, Dilatation | |
| Spleen | (50) |
| Hematopoietic Cell Proliferation | 10 [1.6] |
| Hyperplasia, Lymphoid | |
| Hyperplasia, Stromal | |
| Lymphocyte, Atrophy | |
| Pigmentation | 30 [1.8] |
| Red Pulp, Atrophy | |
| Thymus | (48) |
| Cyst | 17 |
| Hemorrhage | |
| Hyperplasia, Lymphoid | |
| Inflammation, Chronic | |

| | |
|----------------------|------|
| INTEGUMENTARY SYSTEM | |
| Mammary Gland | (50) |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:02
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat FEMALE | F1/50PPB TO CTL |
|-------------------------------|-----------------|
| Alveolus, Hyperplasia | 45 [2.2] |
| Atypical Focus | 18 [1.4] |
| Duct, Dilatation | 4 [2.0] |
| Duct, Inflammation | 1 [2.0] |
| Fibrosis | 1 [3.0] |
| Galactocele | 3 |
| Lactation | 20 [2.0] |
| Lobules, Hyperplasia | |
| Skin | (50) |
| Abscess | |
| Cyst Epithelial Inclusion | |
| Hyperkeratosis | |
| Inflammation | 29 [3.8] |
| MUSCULOSKELETAL SYSTEM | |
| Bone, Femur | (50) |
| Fibrous Osteodystrophy | |
| Osteopetrosis | |
| Skeletal Muscle | (1) |
| Head, Hyalinization, Focal | |
| NERVOUS SYSTEM | |
| Brain, Brain Stem | (50) |
| Compression | 19 [2.4] |
| Hemorrhage | |
| Hydrocephalus | 1 [2.0] |
| Brain, Cerebellum | (50) |
| Hemorrhage | 1 [3.0] |
| Hydrocephalus | 2 [1.5] |
| Brain, Cerebrum | (50) |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:02
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat FEMALE | F1/50PPB TO CTL |
|--------------------------------------|-----------------|
| Hemorrhage | |
| Hydrocephalus | 3 [2.0] |
| Peripheral Nerve | (0) |
| RESPIRATORY SYSTEM | |
| Lung | (50) |
| Alveolar Epith, Hyperplasia | |
| Artery, Mineralization | 1 [1.0] |
| Autolysis | |
| Edema | 1 [2.0] |
| Hemorrhage | 1 [2.0] |
| Infiltration Cellular, Histiocyte | 8 [2.0] |
| Infiltration Cellular, Lymphocyte | 1 [1.0] |
| Inflammation | 3 [1.7] |
| Peribronchial, Inflammation, Chronic | |
| Perivascular, Inflammation | |
| Nose | (50) |
| Fibrous Osteodystrophy | |
| Foreign Body | 1 |
| Goblet Cell, Hyperplasia | |
| Hemorrhage | |
| Inflammation | 5 [2.2] |
| Nasolacrim Dct, Inflammation | 33 [1.8] |
| Olfactory Epi, Hyaline Droplet | 2 [1.5] |
| Osteopetrosis | |
| Respirat Epith, Hyaline Droplet | |
| Respirat Epith, Hyperplasia | |
| Trachea | (50) |
| Inflammation | 6 [1.2] |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94
Test Type: SPECIAL STUDY
Route: DOSED FEED
Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

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

Date Report Requested: 10/23/2014
Time Report Requested: 13:19:03
First Dose M/F: NA / NA
Lab: NCTR

| CD Rat FEMALE | F1/50PPB TO CTL |
|-----------------------------------|-----------------|
| SPECIAL SENSES SYSTEM | |
| Ear | (0) |
| Eye | (47) |
| Bilateral, Cataract | |
| Bilateral, Retina, Degeneration | 3 [2.0] |
| Cataract | |
| Cornea, Inflammation | 2 [1.5] |
| Retina, Autolysis | |
| Retina, Degeneration | 2 [1.0] |
| Harderian Gland | (50) |
| Atrophy, Focal | |
| Epithelium, Degeneration | |
| Hyperplasia | 4 [1.0] |
| Infiltration Cellular, Lymphocyte | 1 [1.0] |
| Inflammation | 8 [1.0] |
| Zymbal's Gland | (1) |
| URINARY SYSTEM | |
| Kidney | (50) |
| Bilateral, Hydronephrosis | |
| Cyst | 9 |
| Degeneration, Mucoïd | |
| Epithelium, Pelvis, Hyperplasia | |
| Hemorrhage | |
| Hydronephrosis | |
| Infiltration Cellular, Lymphocyte | 1 [2.0] |
| Inflammation | |
| Mineralization | 35 [1.9] |
| Nephropathy | 20 [1.1] |

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Experiment Number: 99920-94

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

Test Compound: ENDOCRINE DISRUPTOR(Ethinyl Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 13:19:03

First Dose M/F: NA / NA

Lab: NCTR

| CD Rat FEMALE | F1/50PPB TO CTL |
|--|------------------------|
| Polycystic Kidney | 1 [2.0] |
| Renal Tubule, Accumulation, Hyaline Droplet | |
| Renal Tubule, Hyperplasia, Focal | 1 [2.0] |
| Urinary Bladder | (49) |
| Dilatation | |
| Hemorrhage | |
| Infiltration Cellular, Lymphocyte | |
| Inflammation | |

**** END OF REPORT ****

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)