

**Experiment Number:** 99920-95

**Test Type:** SPECIAL STUDY

**Route:** DOSED FEED

**Species/Strain:** Rat/CD

**P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

**Test Compound:** ENDOCRINE DISRUPTOR(Ethiny Estradiol)

**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 12:59:05

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

**Lab:** NCTR

**C Number:** MG96006  
**Lock Date:** Not Entered.  
**Cage Range:** All  
**Date Range:** All  
**Reasons For Removal:** All  
**Removal Date Range:** All  
**Treatment Groups:** All  
**Study Gender:** Both  
**PWG Approval Date** NONE





Experiment Number: 99920-95

Test Type: SPECIAL STUDY

Route: DOSED FEED

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## P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: ENDOCRINE DISRUPTOR(Ethynodiol Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 12:59:05

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Male  
F4/2PPB TO CTRL**

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

\*TOTALS

**Alimentary System**

Liver

+

1

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

|                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Coagulating Gland             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Epididymis                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Preputial Gland               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Prostate, Dorsal/Lateral Lobe | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Prostate, Ventral Lobe        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Rete Testes                   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 24 |
| Seminal Vesicle               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Testes                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |

**Hematopoietic System**

NONE

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue



Experiment Number: 99920-95

Test Type: SPECIAL STUDY

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Species/Strain: Rat/CD

## P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: ENDOCRINE DISRUPTOR(Ethynodiol Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 12:59:05

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Male  
F4/10PPB TO CTRL**

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

\*TOTALS

**Alimentary System**

|           |   |   |
|-----------|---|---|
| Esophagus | + | 1 |
| Liver     | + | 2 |
| Pancreas  | + | 1 |

**Cardiovascular System**

|              |   |   |
|--------------|---|---|
| Blood Vessel | + | 1 |
| Heart        | + | 1 |

**Endocrine System**

|                 |   |   |
|-----------------|---|---|
| Adrenal Cortex  | + | 1 |
| Adrenal Medulla | + | 1 |
| Pituitary Gland | + | 2 |
| Thyroid Gland   | M | 0 |

**General Body System**

NONE

**Genital System**

|                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Coagulating Gland             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 26 |
| Epididymis                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 26 |
| Preputial Gland               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Prostate, Dorsal/Lateral Lobe | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 26 |
| Prostate, Ventral Lobe        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 26 |

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

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Route: DOSED FEED

Species/Strain: Rat/CD

## P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: ENDOCRINE DISRUPTOR(Ethynodiol Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 12:59:05

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Male  
F4/10PPB TO CTRL**

|                               | DAY ON TEST   | 0   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------------|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                               |   | 0 1   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ANIMAL ID                     | 7 6     | 6   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | 2 1 1 1 1 1 0 0 2 2 1 1 0 0 2 2 1 1 0 2 2 2 1 5 4 4   | 2 1 1 1 1 1 0 0 2 2 1 1 0 0 2 2 1 1 0 2 2 2 1 5 4 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>*TOTALS</b>                |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rete Testes                   | +   | 26  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Seminal Vesicle               | +   | 26  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Testes                        | +   | 26  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Hematopoietic System</b>   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bone Marrow                   | +   | 1   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Spleen                        | +   | 1   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Thymus                        | +   | 1   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Integumentary System</b>   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mammary Gland                 | M + | 25  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Skin                          | +   | 1   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Musculoskeletal System</b> |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bone                          | +   | 1   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Nervous System</b>         |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Brain                         | +   | 1   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Spinal Cord                   | +   | 1   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Respiratory System</b>     |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Lung                          | +   | 1   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Trachea                       | +   | 1   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Special Senses System</b>  |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

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Test Compound: ENDOCRINE DISRUPTOR(Ethynodiol Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 12:59:05

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Male  
F4/10PPB TO CTRL**

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

**\*TOTALS**

NONE

**Urinary System**

|                 |   |   |
|-----------------|---|---|
| Kidney          | + | 1 |
| Urinary Bladder | + | 1 |

**SYSTEMIC LESIONS**

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 26 |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

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## P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: ENDOCRINE DISRUPTOR(Ethynodiol Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 12:59:06

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Male  
F4/50PPB TO CTRL**

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

**Hematopoietic System**

|             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Spleen      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Thymus      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |

**Integumentary System**

|               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

**MUSCULOSKELETAL SYSTEM**

|      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

**Nervous System**

NONE

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

Kidney

**SYSTEMIC LESIONS**

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

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**CAS Number:** 57-63-6

**Date Report Requested:** 10/23/2014

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

**Lab:** NCTR

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

\* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

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CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 12:59:06

First Dose M/F: NA / NA

Lab: NCTR

| CD Rat Female<br>F4 CONTROL   | DAY ON TEST |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-------------------------------|-------------|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
|                               |             | 0       | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  |
|                               | ANIMAL ID   | 1       | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  |
|                               | 0           | 0       | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  |
|                               | 0           | 0       | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  |
|                               | 9           | 9       | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1  |
|                               | 4           | 4       | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 2 | 2 | 2 | 2 | 6 | 6 | 6 | 7 | 7 | 0 | 0 | 3  |
|                               | 0           | 1       | 2 | 3 | 4 | 3 | 4 | 5 | 6 | 7 | 6 | 7 | 8 | 9 | 7 | 8 | 9 | 0 | 1 | 2 | 8 | 9 | 0  |
|                               |             | *TOTALS |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| Spleen                        |             | +       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| Thymus                        |             | +       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| <b>Integumentary System</b>   |             |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| Mammary Gland                 |             | +       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| <b>Musculoskeletal System</b> |             |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| Bone                          |             | +       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| <b>Nervous System</b>         |             |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| NONE                          |             |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| <b>Respiratory System</b>     |             |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| NONE                          |             |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| <b>Special Senses System</b>  |             |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| NONE                          |             |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| <b>Urinary System</b>         |             |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| Kidney                        |             | +       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |
| <b>SYSTEMIC LESIONS</b>       |             |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
| Multiple Organ                |             | +       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25 |

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue





Experiment Number: 99920-95

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: ENDOCRINE DISRUPTOR(Ethynodiol Diacetate)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 12:59:06

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Female  
F4/10PPB TO CTRL**

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

**Alimentary System**

|           |   |   |
|-----------|---|---|
| Esophagus | + | 1 |
| Liver     | + | 1 |
| Pancreas  | + | 1 |

**Cardiovascular System**

|              |   |   |
|--------------|---|---|
| Blood Vessel | + | 1 |
| Heart        | + | 1 |

**Endocrine System**

|                 |   |   |   |
|-----------------|---|---|---|
| Adrenal Cortex  | + | + | 2 |
| Adrenal Medulla | + | + | 2 |
| Pituitary Gland | + |   | 1 |
| Thyroid Gland   | + |   | 1 |

**General Body System**

NONE

**Genital System**

|                |   |    |
|----------------|---|----|
| Clitoral Gland | M | 0  |
| Ovary          | + | 26 |
| Oviduct        | + | 26 |
| Uterus         | + | 26 |
| Vagina         | + | 26 |

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue



Experiment Number: 99920-95

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: ENDOCRINE DISRUPTOR(Ethynodiol Diacetate)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 12:59:06

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Female**  
**F4/10PPB TO CTRL**

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

**\*TOTALS****Urinary System**

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Kidney          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 26 |
| Urinary Bladder | M |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 0  |

**SYSTEMIC LESIONS**

|                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 26 |
| Lymphoma Malignant | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 99920-95

Test Type: SPECIAL STUDY

Route: DOSED FEED

Species/Strain: Rat/CD

## P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: ENDOCRINE DISRUPTOR(Ethynodiol Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 12:59:07

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Female**  
**F4/50PPB TO CTRL**

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

\*TOTALS

**Alimentary System**

Liver + 25

**Cardiovascular System**

NONE

**Endocrine System**

Adrenal Cortex + 25

Adrenal Medulla + 25

Pituitary Gland + 25

Thyroid Gland + 25

**General Body System**

NONE

**Genital System**

Ovary + 25

Oviduct + 25

Uterus + 25

Vagina + 25

**Hematopoietic System**

Bone Marrow + 25

Spleen + 25

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 99920-95

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Test Compound: ENDOCRINE DISRUPTOR(Ethynodiol Estradiol)

CAS Number: 57-63-6

Date Report Requested: 10/23/2014

Time Report Requested: 12:59:07

First Dose M/F: NA / NA

Lab: NCTR

**CD Rat Female**  
**F4/50PPB TO CTRL**

|                               | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | *TOTALS |   |
|-------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|---|
|                               |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |   |
| ANIMAL ID                     | 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1       |   |
|                               | 6           | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6       |   |
|                               | 1           | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 4 | 4       | 0 |
| Thymus                        | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25      |   |
| <b>Integumentary System</b>   | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       |   |
| Mammary Gland                 | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25      |   |
| <b>Musculoskeletal System</b> | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       |   |
| Bone                          | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 25      |   |
| <b>Nervous System</b>         | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       |   |
| NONE                          | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       |   |
| <b>Respiratory System</b>     | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       |   |
| NONE                          | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       |   |
| <b>Special Senses System</b>  | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       |   |
| NONE                          | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       |   |
| <b>Urinary System</b>         | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       |   |
| Kidney                        | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       |   |
| <b>SYSTEMIC LESIONS</b>       | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       |   |
| Multiple Organ                | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +       |   |

\*\* END OF REPORT \*\*

\* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically