

Experiment Number: 20008-01

Test Type: 90-DAY

Species/Strain: Rat/F 344/N

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

Test Compound: Milk thistle extract

CAS Number: 84604-20-6

Date Report Requested: 10/21/2014

Time Report Requested: 09:04:40

First Dose M/F: NA / NA

Lab: SRI

| | |
|-----------------------------|------------|
| C Number: | C20008 |
| Lock Date: | 11/08/2002 |
| 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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Species/Strain: Rat/F 344/N

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First Dose M/F: NA / NA

Lab: SRI

| F 344/N Rat MALE | 0 PPM | 3125 PPM | 6250 PPM | 12500 PPM | 25000 PPM | 50000 PPM |
|---|-----------|-----------|-----------|-----------|-----------|-----------|
| Disposition Summary | | | | | | |
| Animals Initially In Study | 10 | 10 | 10 | 10 | 10 | 10 |
| Early Deaths | | | | | | |
| Survivors | | | | | | |
| Terminal Sacrifice | 10 | 10 | 10 | 10 | 10 | 10 |
| Animals Examined Microscopically | 10 | 10 | 10 | 10 | 10 | 10 |
| ALIMENTARY SYSTEM | | | | | | |
| Esophagus | (10) | (0) | (0) | (0) | (0) | (10) |
| Intestine Large, Cecum | (10) | (0) | (0) | (0) | (0) | (10) |
| Intestine Large, Colon | (10) | (0) | (0) | (0) | (0) | (10) |
| Intussusception | | | | | | 1 (10%) |
| Intestine Large, Rectum | (10) | (0) | (0) | (0) | (0) | (10) |
| Intussusception | | | | | | 1 (10%) |
| Intestine Small, Duodenum | (10) | (0) | (0) | (0) | (0) | (10) |
| Intestine Small, Ileum | (10) | (0) | (0) | (0) | (0) | (10) |
| Intestine Small, Jejunum | (10) | (0) | (0) | (0) | (0) | (10) |
| Liver | (10) | (1) | (10) | (10) | (10) | (10) |
| Hepatodiaphragmatic Nodule | | 1 (100%) | 1 (10%) | 1 (10%) | | 1 (10%) |
| Inflammation, Chronic, Focal | 6 (60%) | | 9 (90%) | 10 (100%) | 2 (20%) | 3 (30%) |
| Vacuolization Cytoplasmic, Focal | 2 (20%) | | | | | 1 (10%) |
| Pancreas | (10) | (0) | (0) | (0) | (0) | (10) |
| Acinus, Basophilic Focus | 1 (10%) | | | | | |
| Basophilic Focus | | | | | | 1 (10%) |
| Fibrosis | 1 (10%) | | | | | |
| Interstitial, Fibrosis, Focal | 1 (10%) | | | | | |
| Salivary Glands | (10) | (0) | (0) | (0) | (0) | (10) |
| Parotid GI, Basophilic Focus | 3 (30%) | | | | | |
| Parotid GI, Basophilic Focus, Multiple | 5 (50%) | | | | | 8 (80%) |
| Stomach, Forestomach | (10) | (0) | (0) | (0) | (0) | (10) |

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

Experiment Number: 20008-01

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

Date Report Requested: 10/21/2014

Test Type: 90-DAY

Test Compound: Milk thistle extract

Time Report Requested: 09:04:41

Species/Strain: Rat/F 344/N

CAS Number: 84604-20-6

First Dose M/F: NA / NA

Lab: SRI

| F 344/N Rat MALE | 0 PPM | 3125 PPM | 6250 PPM | 12500 PPM | 25000 PPM | 50000 PPM |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Stomach, Glandular | (10) | (0) | (0) | (0) | (0) | (10) |
| CARDIOVASCULAR SYSTEM | | | | | | |
| Heart | (10) | (10) | (10) | (10) | (10) | (10) |
| Cardiomyopathy, Focal | 10 (100%) | 10 (100%) | 10 (100%) | 10 (100%) | 9 (90%) | 10 (100%) |
| ENDOCRINE SYSTEM | | | | | | |
| Adrenal Cortex | (10) | (0) | (0) | (0) | (0) | (10) |
| Accessory Adrenal Cortical Nodule | 2 (20%) | | | | | 2 (20%) |
| Adrenal Medulla | (10) | (0) | (0) | (0) | (0) | (10) |
| Parathyroid Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| Pituitary Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| Pars Distalis, Cyst | 1 (10%) | | | | | |
| Pars Nervosa, Cyst | | | | | | 1 (10%) |
| Thyroid Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| Ultimobranchial Cyst | | | | | | 1 (10%) |
| GENERAL BODY SYSTEM | | | | | | |
| None | | | | | | |
| GENITAL SYSTEM | | | | | | |
| Epididymis | (10) | (0) | (0) | (0) | (0) | (10) |
| Preputial Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| Prostate | (10) | (0) | (0) | (0) | (0) | (10) |
| Seminal Vesicle | (10) | (0) | (0) | (0) | (0) | (10) |
| Testes | (10) | (0) | (0) | (0) | (0) | (10) |
| HEMATOPOIETIC SYSTEM | | | | | | |
| Bone Marrow | (10) | (0) | (0) | (0) | (0) | (10) |
| Myeloid Cell, Hyperplasia, Focal | | | | | | 1 (10%) |
| Lymph Node | (1) | (0) | (0) | (0) | (0) | (1) |
| Pancreatic, Hemorrhage | 1 (100%) | | | | | 1 (100%) |
| Lymph Node, Mandibular | (1) | (0) | (0) | (0) | (0) | (0) |

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

Experiment Number: 20008-01

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Date Report Requested: 10/21/2014

Test Type: 90-DAY

Test Compound: Milk thistle extract

Time Report Requested: 09:04:41

Species/Strain: Rat/F 344/N

CAS Number: 84604-20-6

First Dose M/F: NA / NA

Lab: SRI

| F 344/N Rat MALE | 0 PPM | 3125 PPM | 6250 PPM | 12500 PPM | 25000 PPM | 50000 PPM |
|----------------------------------|---------|----------|----------|-----------|-----------|-----------|
| Lymph Node, Mesenteric | (10) | (0) | (0) | (0) | (0) | (10) |
| Inflammation, Histiocytic, Focal | 1 (10%) | | | | | 1 (10%) |
| Spleen | (10) | (0) | (0) | (0) | (0) | (10) |
| Thymus | (10) | (0) | (0) | (0) | (0) | (10) |
| Hemorrhage | | | | | | 1 (10%) |
| INTEGUMENTARY SYSTEM | | | | | | |
| Mammary Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| Skin | (10) | (0) | (1) | (0) | (0) | (10) |
| Lip, Hemorrhage, Focal | | | 1 (100%) | | | |
| MUSCULOSKELETAL SYSTEM | | | | | | |
| Bone | (10) | (0) | (0) | (0) | (0) | (10) |
| NERVOUS SYSTEM | | | | | | |
| Brain | (10) | (0) | (0) | (0) | (0) | (10) |
| RESPIRATORY SYSTEM | | | | | | |
| Lung | (10) | (0) | (0) | (0) | (0) | (10) |
| Inflammation, Chronic, Focal | 2 (20%) | | | | | 2 (20%) |
| Nose | (10) | (0) | (0) | (0) | (0) | (10) |
| Trachea | (10) | (0) | (0) | (0) | (0) | (10) |
| SPECIAL SENSES SYSTEM | | | | | | |
| Eye | (10) | (0) | (0) | (0) | (0) | (10) |
| Harderian Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| Lacrimal Gland | (1) | (0) | (0) | (0) | (0) | (1) |
| URINARY SYSTEM | | | | | | |
| Kidney | (10) | (0) | (10) | (10) | (10) | (10) |
| Nephropathy | 4 (40%) | | 3 (30%) | 3 (30%) | 5 (50%) | 5 (50%) |
| Nephropathy, Focal | | | | | | 1 (10%) |
| Urinary Bladder | (10) | (0) | (0) | (0) | (0) | (10) |

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

Experiment Number: 20008-01

Test Type: 90-DAY

Species/Strain: Rat/F 344/N

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

Test Compound: Milk thistle extract

CAS Number: 84604-20-6

Date Report Requested: 10/21/2014

Time Report Requested: 09:04:41

First Dose M/F: NA / NA

Lab: SRI

| F 344/N Rat MALE | 0 PPM | 3125 PPM | 6250 PPM | 12500 PPM | 25000 PPM | 50000 PPM |
|-------------------------|--------------|-----------------|-----------------|------------------|------------------|------------------|
|-------------------------|--------------|-----------------|-----------------|------------------|------------------|------------------|

END OF MALE DATA

Experiment Number: 20008-01

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Date Report Requested: 10/21/2014

Test Type: 90-DAY

Test Compound: Milk thistle extract

Time Report Requested: 09:04:41

Species/Strain: Rat/F 344/N

CAS Number: 84604-20-6

First Dose M/F: NA / NA

Lab: SRI

| F 344/N Rat FEMALE | 0 PPM | 3125 PPM | 6250 PPM | 12500 PPM | 25000 PPM | 50000 PPM |
|--|-----------|-----------|-----------|-----------|-----------|-----------|
| Disposition Summary | | | | | | |
| Animals Initially In Study | 10 | 10 | 10 | 10 | 10 | 10 |
| Early Deaths | | | | | | |
| Survivors | | | | | | |
| Terminal Sacrifice | 10 | 10 | 10 | 10 | 10 | 10 |
| Animals Examined Microscopically | 10 | 10 | 10 | 10 | 10 | 10 |
| ALIMENTARY SYSTEM | | | | | | |
| Esophagus | (10) | (0) | (0) | (0) | (0) | (9) |
| Intestine Large, Cecum | (10) | (0) | (0) | (0) | (0) | (10) |
| Intestine Large, Colon | (10) | (0) | (0) | (0) | (0) | (10) |
| Intussusception | | | | | | 1 (10%) |
| Intestine Large, Rectum | (10) | (0) | (0) | (0) | (0) | (10) |
| Intussusception | | | | | | 1 (10%) |
| Intestine Small, Duodenum | (10) | (0) | (0) | (0) | (0) | (10) |
| Intestine Small, Ileum | (10) | (0) | (0) | (0) | (0) | (10) |
| Intestine Small, Jejunum | (10) | (0) | (0) | (0) | (0) | (10) |
| Liver | (10) | (10) | (10) | (10) | (10) | (10) |
| Hepatodiaphragmatic Nodule | 1 (10%) | 2 (20%) | 2 (20%) | 1 (10%) | 1 (10%) | 1 (10%) |
| Inflammation, Chronic, Focal | 7 (70%) | 10 (100%) | 8 (80%) | 9 (90%) | 10 (100%) | 9 (90%) |
| Pancreas | (10) | (0) | (0) | (0) | (0) | (10) |
| Acinus, Atrophy, Focal | 1 (10%) | | | | | |
| Interstitium, Fibrosis, Focal | | | | | | 1 (10%) |
| Salivary Glands | (10) | (10) | (10) | (10) | (7) | (10) |
| Duct, Parotid GI, Inflammation, Chronic, Focal | | | | 1 (10%) | | |
| Duct, Parotid GI, Proliferation, Focal | | | | | | 1 (10%) |
| Interstitium, Fibrosis, Focal | | | | | | 1 (10%) |
| Parotid GI, Basophilic Focus | 1 (10%) | 3 (30%) | 4 (40%) | 3 (30%) | 5 (71%) | 1 (10%) |
| Parotid GI, Basophilic Focus, Multiple | 1 (10%) | 4 (40%) | | 1 (10%) | 1 (14%) | 6 (60%) |
| Stomach, Forestomach | (10) | (0) | (0) | (0) | (0) | (10) |

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| F 344/N Rat FEMALE | 0 PPM | 3125 PPM | 6250 PPM | 12500 PPM | 25000 PPM | 50000 PPM |
|-----------------------------------|----------|----------|----------|-----------|-----------|-----------|
| Stomach, Glandular | (10) | (0) | (0) | (0) | (0) | (10) |
| Tooth | (1) | (0) | (0) | (0) | (0) | (0) |
| Pulp, Dysplasia | 1 (100%) | | | | | |
| CARDIOVASCULAR SYSTEM | | | | | | |
| Heart | (10) | (0) | (0) | (0) | (0) | (10) |
| Cardiomyopathy, Focal | 2 (20%) | | | | | 2 (20%) |
| ENDOCRINE SYSTEM | | | | | | |
| Adrenal Cortex | (10) | (0) | (0) | (0) | (0) | (10) |
| Accessory Adrenal Cortical Nodule | 1 (10%) | | | | | |
| Adrenal Medulla | (10) | (0) | (0) | (0) | (0) | (10) |
| Parathyroid Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| Pituitary Gland | (10) | (0) | (0) | (0) | (0) | (9) |
| Pars Distalis, Cyst | | | | | | 2 (22%) |
| Thyroid Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| Ultimobranchial Cyst | 1 (10%) | | | | | 1 (10%) |
| GENERAL BODY SYSTEM | | | | | | |
| None | | | | | | |
| GENITAL SYSTEM | | | | | | |
| Clitoral Gland | (10) | (1) | (1) | (1) | (0) | (10) |
| Cyst | | | | 1 (100%) | | |
| Ovary | (10) | (0) | (0) | (0) | (0) | (10) |
| Uterus | (10) | (1) | (0) | (2) | (0) | (10) |
| Hydrometra | 1 (10%) | 1 (100%) | | 2 (100%) | | 1 (10%) |
| HEMATOPOIETIC SYSTEM | | | | | | |
| Bone Marrow | (10) | (0) | (0) | (0) | (0) | (10) |
| Lymph Node | (1) | (0) | (2) | (1) | (0) | (0) |
| Mediastinal, Hemorrhage | 1 (100%) | | | | | |
| Pancreatic, Hyperplasia, Lymphoid | | | 2 (100%) | 1 (100%) | | |

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Lab: SRI

| F 344/N Rat FEMALE | 0 PPM | 3125 PPM | 6250 PPM | 12500 PPM | 25000 PPM | 50000 PPM |
|------------------------------|---------|----------|----------|-----------|-----------|-----------|
| Lymph Node, Mandibular | (2) | (0) | (0) | (0) | (0) | (1) |
| Lymph Node, Mesenteric | (10) | (0) | (0) | (0) | (0) | (10) |
| Hyperplasia, Histiocytic | 2 (20%) | | | | | 5 (50%) |
| Spleen | (10) | (0) | (0) | (0) | (0) | (10) |
| Thymus | (10) | (0) | (0) | (0) | (0) | (10) |
| INTEGUMENTARY SYSTEM | | | | | | |
| Mammary Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| Skin | (10) | (0) | (0) | (0) | (0) | (10) |
| MUSCULOSKELETAL SYSTEM | | | | | | |
| Bone | (10) | (0) | (0) | (0) | (0) | (10) |
| NERVOUS SYSTEM | | | | | | |
| Brain | (10) | (0) | (0) | (0) | (0) | (10) |
| RESPIRATORY SYSTEM | | | | | | |
| Lung | (10) | (0) | (0) | (0) | (0) | (10) |
| Inflammation, Chronic, Focal | 1 (10%) | | | | | |
| Nose | (10) | (0) | (0) | (0) | (0) | (10) |
| Trachea | (10) | (0) | (0) | (0) | (0) | (10) |
| SPECIAL SENSES SYSTEM | | | | | | |
| Eye | (10) | (0) | (0) | (0) | (0) | (10) |
| Harderian Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| URINARY SYSTEM | | | | | | |
| Kidney | (10) | (0) | (0) | (0) | (0) | (10) |
| Nephropathy | 2 (20%) | | | | | 2 (20%) |
| Pelvis, Inflammation | | | | | | 1 (10%) |
| Urinary Bladder | (10) | (0) | (0) | (0) | (0) | (10) |

** END OF REPORT **

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