

Experiment Number: 20615 - 01
Test Type: 28-DAY
Route: GAVAGE
Species/Strain: RATS/HSD

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

Perfluorodecanoic Acid
CAS Number: 335-76-2

Date Report Requested: 02/06/2018
Time Report Requested: 12:37:08
First Dose M/F: 02/07/12 / 02/08/12
Lab: BAT

PFDA_Final 1

NTP Study Number: C20615
Lock Date: 01/22/2016
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 3.0.2.3_002
PWG Approval Date: NONE

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Harlan Sprague Dawley RATS MALE

0mg/kg/d M

0.156mg/kg/d M

0.312mg/kg/d M

0.625mg/kg/d M

1.25mg/kg/d M

2.5mg/kg/d M

Disposition Summary

| | 0mg/kg/d M | 0.156mg/kg/d M | 0.312mg/kg/d M | 0.625mg/kg/d M | 1.25mg/kg/d M | 2.5mg/kg/d M |
|----------------------------------|------------|----------------|----------------|----------------|---------------|--------------|
| 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) |
| Intestine Large, Rectum | (10) | (0) | (0) | (0) | (0) | (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) |
| Infiltration Cellular, Mixed Cell | 3 (30%) | | | | | 2 (20%) |
| Hepatocyte, Cytoplasmic Alteration | | | | 10 (100%) | 10 (100%) | 10 (100%) |
| Hepatocyte, Hypertrophy | | | | 2 (20%) | 10 (100%) | 10 (100%) |
| Hepatocyte, Necrosis | | 1 (10%) | | 1 (10%) | 3 (30%) | 1 (10%) |
| Hepatocyte, Vacuolization Cytoplasmic | | | | | 9 (90%) | 10 (100%) |
| Pancreas | (10) | (10) | (10) | (10) | (10) | (10) |
| Salivary Glands | (10) | (0) | (0) | (0) | (0) | (10) |
| Stomach, Forestomach | (10) | (10) | (10) | (10) | (10) | (10) |
| Inflammation | | | | | | 2 (20%) |
| Ulcer | | | | | | 1 (10%) |
| Epithelium, Hyperplasia | | | | | | 2 (20%) |
| Stomach, Glandular | (10) | (10) | (10) | (10) | (10) | (10) |

CARDIOVASCULAR SYSTEM

| | | | | | | |
|--------------|------|-----|-----|-----|-----|------|
| Blood Vessel | (10) | (0) | (0) | (0) | (0) | (10) |
| Heart | (10) | (0) | (0) | (0) | (0) | (10) |

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

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| Harlan Sprague Dawley RATS MALE | 0mg/kg/d M | 0.156mg/kg/d M | 0.312mg/kg/d M | 0.625mg/kg/d M | 1.25mg/kg/d M | 2.5mg/kg/d M |
|--|------------|----------------|----------------|----------------|---------------|--------------|
| Cardiomyopathy | 1 (10%) | | | | | |
| ENDOCRINE SYSTEM | | | | | | |
| Adrenal Cortex | (10) | (0) | (0) | (0) | (0) | (10) |
| Adrenal Medulla | (10) | (0) | (0) | (0) | (0) | (10) |
| Parathyroid Gland | (10) | (0) | (0) | (0) | (0) | (8) |
| Pituitary Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| Thyroid Gland | (10) | (10) | (10) | (10) | (10) | (10) |
| GENERAL BODY SYSTEM | | | | | | |
| None | | | | | | |
| GENITAL SYSTEM | | | | | | |
| Epididymis | (10) | (0) | (0) | (10) | (10) | (10) |
| Granuloma Sperm | 1 (10%) | | | | | |
| Hypospermia | | | | | | 1 (10%) |
| Duct, Exfoliated Germ Cell | 1 (10%) | | | | | 4 (40%) |
| 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) | (10) | (10) | (10) | (10) | (10) |
| Germinal Epithelium, Degeneration | 1 (10%) | | | | | 4 (40%) |
| Interstitial Cell, Atrophy | | | | | 8 (80%) | 10 (100%) |
| Seminiferous Tubule, Spermatid Retention | | | | | | 4 (40%) |
| HEMATOPOIETIC SYSTEM | | | | | | |
| Bone Marrow | (10) | (10) | (10) | (10) | (10) | (10) |
| Hypocellularity | | | | | | 10 (100%) |
| Lymph Node, Mandibular | (10) | (0) | (0) | (0) | (0) | (10) |

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| Harlan Sprague Dawley RATS MALE | 0mg/kg/d M | 0.156mg/kg/d M | 0.312mg/kg/d M | 0.625mg/kg/d M | 1.25mg/kg/d M | 2.5mg/kg/d M |
|--|------------|----------------|----------------|----------------|---------------|--------------|
| Lymph Node, Mesenteric | (10) | (0) | (0) | (0) | (0) | (10) |
| Spleen | (10) | (10) | (10) | (10) | (10) | (10) |
| Thymus | (10) | (10) | (10) | (10) | (10) | (10) |
| Atrophy | | | | | | 9 (90%) |
| Lymphocyte, Apoptosis | | | | | 8 (80%) | |
| 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) |
| Infiltration Cellular, Mixed Cell | 1 (10%) | | | | | |
| Nose | (10) | (10) | (10) | (10) | (10) | (10) |
| Respiratory Epithelium, Degeneration | 2 (20%) | 4 (40%) | 5 (50%) | 4 (40%) | | |
| Respiratory Epithelium, Hyperplasia | 2 (20%) | | 5 (50%) | 4 (40%) | | |
| Respiratory Epithelium, Inflammation, Chronic Active | 2 (20%) | 5 (50%) | 5 (50%) | 4 (40%) | | |
| SPECIAL SENSES SYSTEM | | | | | | |
| Eye | (10) | (0) | (0) | (0) | (0) | (10) |
| Harderian Gland | (10) | (0) | (0) | (0) | (0) | (10) |

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| Harlan Sprague Dawley RATS MALE | 0mg/kg/d M | 0.156mg/kg/d M | 0.312mg/kg/d M | 0.625mg/kg/d M | 1.25mg/kg/d M | 2.5mg/kg/d M |
|----------------------------------|------------|----------------|----------------|----------------|---------------|--------------|
| <hr/> | | | | | | |
| URINARY SYSTEM | | | | | | |
| Kidney | (10) | (10) | (10) | (10) | (10) | (10) |
| Nephropathy, Chronic Progressive | 6 (60%) | 8 (80%) | 5 (50%) | 6 (60%) | 7 (70%) | 3 (30%) |
| Urinary Bladder | (10) | (0) | (0) | (0) | (0) | (9) |

*** END OF MALE ***

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0.156mg/kg/d F

0.312mg/kg/d F

0.625mg/kg/d F

1.25mg/kg/d F

2.5mg/kg/d F

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) |
| Periesophageal Tissue, Inflammation, Granulomatous | | | | | | 1 (10%) |
| Intestine Large, Cecum | (10) | (0) | (0) | (0) | (0) | (10) |
| Intestine Large, Colon | (10) | (0) | (0) | (0) | (0) | (10) |
| Intestine Large, Rectum | (10) | (0) | (0) | (0) | (0) | (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) |
| Infiltration Cellular, Mixed Cell | 3 (30%) | | | | 1 (10%) | 2 (20%) |
| Hepatocyte, Cytoplasmic Alteration | | | | 8 (80%) | 10 (100%) | 10 (100%) |
| Hepatocyte, Hypertrophy | | | | | 8 (80%) | 10 (100%) |
| Hepatocyte, Necrosis | | | | | 1 (10%) | 4 (40%) |
| Hepatocyte, Vacuolization Cytoplasmic | | | | | 1 (10%) | 10 (100%) |
| Pancreas | (10) | (10) | (10) | (10) | (10) | (10) |
| Salivary Glands | (10) | (0) | (0) | (0) | (0) | (10) |
| Stomach, Forestomach | (10) | (0) | (0) | (0) | (0) | (10) |
| Stomach, Glandular | (10) | (0) | (0) | (0) | (0) | (10) |

CARDIOVASCULAR SYSTEM

| | | | | | | |
|---|---------|-----|-----|-----|-----|------|
| Blood Vessel | (10) | (0) | (0) | (0) | (0) | (10) |
| Heart | (10) | (0) | (0) | (0) | (0) | (10) |
| Epicardium, Fibrosis | 1 (10%) | | | | | |
| Epicardium, Infiltration Cellular, Mixed Cell | 1 (10%) | | | | | |

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|--|------------|----------------|----------------|----------------|---------------|--------------|
| Epicardium, Inflammation, Granulomatous | | | | | | 2 (20%) |
| ENDOCRINE SYSTEM | | | | | | |
| Adrenal Cortex | (10) | (0) | (0) | (0) | (0) | (10) |
| Adrenal Medulla | (10) | (0) | (0) | (0) | (0) | (10) |
| Parathyroid Gland | (7) | (0) | (0) | (0) | (0) | (6) |
| Pituitary Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| Thyroid Gland | (10) | (10) | (10) | (10) | (10) | (10) |
| GENERAL BODY SYSTEM | | | | | | |
| None | | | | | | |
| GENITAL SYSTEM | | | | | | |
| Clitoral Gland | (10) | (0) | (0) | (0) | (0) | (10) |
| Ovary | (10) | (10) | (10) | (10) | (10) | (10) |
| Uterus | (10) | (0) | (0) | (0) | (0) | (10) |
| Bilateral, Dilatation | 2 (20%) | | | | | |
| HEMATOPOIETIC SYSTEM | | | | | | |
| Bone Marrow | (10) | (10) | (10) | (10) | (10) | (10) |
| Hypocellularity | | | | | | 10 (100%) |
| Lymph Node | (0) | (0) | (1) | (0) | (0) | (0) |
| Mediastinal, Inflammation, Granulomatous | | | 1 (100%) | | | |
| Lymph Node, Mandibular | (10) | (0) | (0) | (0) | (0) | (10) |
| Lymph Node, Mesenteric | (10) | (0) | (0) | (0) | (0) | (10) |
| Spleen | (10) | (10) | (10) | (10) | (10) | (10) |
| Thymus | (10) | (10) | (10) | (10) | (10) | (10) |
| Atrophy | | | | | | 8 (80%) |

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|--|------------|----------------|----------------|----------------|---------------|--------------|
| 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) |
| Bronchiole, Inflammation, Granulomatous | | | | | | 1 (10%) |
| Interstitial, Inflammation, Granulomatous | 1 (10%) | | | | | |
| Serosa, Fibrosis | 1 (10%) | | | | | |
| Nose | (10) | (10) | (10) | (10) | (10) | (10) |
| Respiratory Epithelium, Degeneration | | 1 (10%) | | | | |
| Respiratory Epithelium, Hyperplasia | | 1 (10%) | | | | |
| Respiratory Epithelium, Inflammation, Chronic Active | 1 (10%) | 2 (20%) | | 3 (30%) | 2 (20%) | |
| 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

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|-----------------------------------|------------|----------------|----------------|----------------|---------------|--------------|
| Kidney | (10) | (10) | (10) | (10) | (10) | (10) |
| Nephropathy, Chronic Progressive | 5 (50%) | 7 (70%) | 6 (60%) | 6 (60%) | 5 (50%) | |
| Urinary Bladder | (10) | (0) | (0) | (0) | (0) | (10) |

*** END OF REPORT ***

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