Test Type: CHRONIC

Route: Whole Body Exposure Species/Strain: RATS/HSD

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

Cell Phone Radiation: GSM CAS Number: CELLPRADGSM

Date Report Requested: 01/02/2018 **Time Report Requested:** 12:00:01 **First Dose M/F:** 09/16/12 / 09/16/12

Lab: IIT

Final 2 - Data Changes through 12-15-17 GSM Rats SSAC Only

NTP Study Number: C20105

Lock Date: 12/29/2015

Cage Range: ALL

Date Range: ALL

Reasons For Removal: 25017 SSAC

Removal Date Range: ALL

Treatment Groups: Include ALL

Study Gender: Both

TDMSE Version: 3.0.2.3_002

PWG Approval Date: NONE

Test Type: CHRONIC

Route: Whole Body Exposure Species/Strain: RATS/HSD

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

Cell Phone Radiation: GSM CAS Number: CELLPRADGSM

Date Report Requested: 01/02/2018 Time Report Requested: 12:00:01 First Dose M/F: 09/16/12 / 09/16/12

Harlan Sprague Dawley RATS MALE	0.0W/kg(GSM)chr	1.5W/kg(GSM)chr	3.0W/kg(GSM)chr	6.0W/kg(GSM)chr	
Disposition Summary					
Animals Initially In Study	105	105	105	105	
Scheduled Sacrifice	15	15	15	15	
Early Deaths					
Survivors					
Animals Examined Microscopically	10	10	10	10	
ALIMENTARY SYSTEM					
Esophagus	(10)	(10)	(10)	(10)	
Intestine Large, Cecum	(10)	(10)	(10)	(10)	
Intestine Large, Colon	(10)	(10)	(10)	(10)	
Intestine Large, Rectum	(10)	(10)	(10)	(10)	
Lymphoid Tissue, Hyperplasia	1 (10%)	1 (10%)			
Intestine Small, Duodenum	(10)	(10)	(10)	(10)	
Intestine Small, Ileum	(10)	(10)	(10)	(10)	
Intestine Small, Jejunum	(10)	(10)	(10)	(10)	
Liver	(10)	(10)	(10)	(10)	
Infiltration Cellular, Mixed Cell	1 (10%)		3 (30%)	3 (30%)	
Pancreas	(10)	(10)	(10)	(10)	
Salivary Glands	(10)	(10)	(10)	(10)	
Stomach, Forestomach	(10)	(10)	(10)	(10)	
Stomach, Glandular	(10)	(10)	(10)	(10)	
CARDIOVASCULAR SYSTEM					
Aorta	(10)	(10)	(10)	(10)	
Heart	(10)	(10)	(10)	(10)	
Cardiomyopathy	2 (20%)	4 (40%)	3 (30%)	4 (40%)	
Ventricle Right, Cardiomyopathy	1 (10%)	1 (10%)	5 (50%)	5 (50%)	
ENDOCRINE SYSTEM					
Adrenal Cortex	(10)	(10)	(10)	(10)	

Test Type: CHRONIC

Route: Whole Body Exposure Species/Strain: RATS/HSD

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

Cell Phone Radiation: GSM **CAS Number: CELLPRADGSM** Date Report Requested: 01/02/2018 Time Report Requested: 12:00:01 First Dose M/F: 09/16/12 / 09/16/12

Lab: IIT

Harlan Sprague Dawley RATS MALE	0.0W/kg(GSM)chr	1.5W/kg(GSM)chr	3.0W/kg(GSM)chr	6.0W/kg(GSM)chr	
Adrenal Medulla	(10)	(10)	(10)	(10)	
Islets, Pancreatic	(10)	(10)	(10)	(10)	
Parathyroid Gland	(9)	(10)	(10)	(8)	
Pituitary Gland	(10)	(10)	(10)	(10)	
Pars Distalis, Cyst		1 (10%)	2 (20%)	2 (20%)	
Rathke's Cleft, Cyst		1 (10%)	3 (30%)	3 (30%)	
Thyroid Gland	(10)	(10)	(10)	(10)	
Ectopic Thymus		1 (10%)	1 (10%)	2 (20%)	
GENERAL BODY SYSTEM					
None					
GENITAL SYSTEM					
Epididymis	(10)	(10)	(10)	(10)	
Preputial Gland	(10)	(10)	(10)	(10)	
Inflammation, Chronic Active	7 (70%)	3 (30%)	1 (10%)	4 (40%)	
Prostate	(10)	(10)	(10)	(10)	
Inflammation, Chronic Active	, ,	1 (10%)	1 (10%)	, ,	
Seminal Vesicle	(10)	(10)	(10)	(10)	
Testis	(10)	(10)	(10)	(10)	
Germ Cell, Degeneration				1 (10%)	
HEMATOPOIETIC SYSTEM					
Bone Marrow	(10)	(10)	(10)	(10)	
Lymph Node, Mandibular	(10)	(10)	(10)	(10)	
Hemorrhage	2 (20%)	2 (20%)	2 (20%)	1 (10%)	
Hyperplasia, Lymphocyte	,	, ,	, ,	4 (40%)	
Proliferation, Plasma Cell				2 (20%)	
Lymph Node, Mesenteric	(10)	(10)	(10)	(10)	
Hemorrhage	, ,	2 (20%)	, ,	,	
<u> </u>					

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

Test Type: CHRONIC

Route: Whole Body Exposure Species/Strain: RATS/HSD

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

Cell Phone Radiation: GSM CAS Number: CELLPRADGSM

Date Report Requested: 01/02/2018 Time Report Requested: 12:00:01 First Dose M/F: 09/16/12 / 09/16/12

Harlan Sprague Dawley RATS MALE	0.0W/kg(GSM)chr	1.5W/kg(GSM)chr	3.0W/kg(GSM)chr	6.0W/kg(GSM)chr
Thymus Hemorrhage	(10) 5 (50%)	(10) 1 (10%)	(10) 2 (20%)	(10)
INTEGUMENTARY SYSTEM				
Mammary Gland	(10)	(10)	(10)	(8)
Skin	(10)	(10)	(10)	(10)
MUSCULOSKELETAL SYSTEM				
Bone	(10)	(10)	(10)	(10)
Tibia, Fracture, Chronic				1 (10%)
Skeletal Muscle	(10)	(10)	(10)	(10)
NERVOUS SYSTEM				
Brain	(10)	(10)	(10)	(10)
Nerve Trigeminal	(10)	(10)	(10)	(10)
Peripheral Nerve, Sciatic	(10)	(10)	(10)	(10)
Peripheral Nerve, Tibial	(10)	(10)	(10)	(10)
Spinal Cord, Cervical	(10)	(10)	(10)	(10)
Spinal Cord, Lumbar	(10)	(10)	(10)	(10)
Spinal Cord, Thoracic	(10)	(10)	(10)	(10)
Trigeminal Ganglion	(10)	(10)	(10)	(10)
RESPIRATORY SYSTEM				
Lung	(10)	(10)	(10)	(10)
Congestion	. ,	. ,	1 (10%)	• •
Inflammation, Chronic Active	1 (10%)	1 (10%)		
Nose	(10)	(10)	(10)	(10)
Trachea	(10)	(10)	(10)	(10)

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

Test Type: CHRONIC

Route: Whole Body Exposure Species/Strain: RATS/HSD

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

Cell Phone Radiation: GSM CAS Number: CELLPRADGSM

Date Report Requested: 01/02/2018 Time Report Requested: 12:00:01 First Dose M/F: 09/16/12 / 09/16/12

Harlan Sprague Dawley RATS MALE	0.0W/kg(GSM)chr	1.5W/kg(GSM)chr	3.0W/kg(GSM)chr	6.0W/kg(GSM)chr	
SPECIAL SENSES SYSTEM					
Eye Retina, Developmental Malformation	(10)	(10)	(10)	(10) 1 (10%)	
Harderian Gland Inflammation, Chronic Active	(10)	(10) 3 (30%)	(10) 2 (20%)	(10) 2 (20%)	
URINARY SYSTEM					
Kidney Congestion	(10)	(10)	(10) 1 (10%)	(10)	
Nephropathy, Chronic Progressive Pelvis, Dilation	9 (90%)	8 (80%)	8 (80%) 1 (10%)	7 (70%)	
Renal Tubule, Dilation Urinary Bladder	(10)	1 (10%) (10)	(10)	(10)	
Renal Tubule, Dilation	(10)			(10)	

^{***} END OF MALE ***

Test Type: CHRONIC
Route: Whole Body Exposure

Species/Strain: RATS/HSD

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

Cell Phone Radiation: GSM CAS Number: CELLPRADGSM

Date Report Requested: 01/02/2018 Time Report Requested: 12:00:01 First Dose M/F: 09/16/12 / 09/16/12

Lab: IIT

Harlan Sprague Dawley RATS FEMALE	0.0W/kg(GSM)chr	1.5W/kg(GSM)chr	3.0W/kg(GSM)chr	6.0W/kg(GSM)chr	
Disposition Summary					
Animals Initially In Study	105	105	105	105	
Scheduled Sacrifice	15	15	15	15	
Early Deaths					
Survivors					
Animals Examined Microscopically	10	10	10	10	
ALIMENTARY SYSTEM					
Esophagus	(10)	(10)	(10)	(10)	
Intestine Large, Cecum	(10)	(10)	(10)	(10)	
Intestine Large, Colon	(10)	(10)	(10)	(10)	
Intestine Large, Rectum	(10)	(10)	(10)	(10)	
Lymphoid Tissue, Hyperplasia	1 (10%)	1 (10%)			
Intestine Small, Duodenum	(10)	(10)	(10)	(10)	
Intestine Small, Ileum	(10)	(10)	(10)	(10)	
Intestine Small, Jejunum	(10)	(10)	(10)	(10)	
Liver	(10)	(10)	(10)	(10)	
Infiltration Cellular, Mixed Cell	1 (10%)	1 (10%)	2 (20%)	1 (10%)	
Pancreas	(10)	(10)	(10)	(10)	
Salivary Glands	(10)	(10)	(10)	(10)	
Degeneration, Cystic				1 (10%)	
Stomach, Forestomach	(10)	(10)	(10)	(10)	
Stomach, Glandular	(10)	(10)	(10)	(10)	
CARDIOVASCULAR SYSTEM					
Aorta	(10)	(10)	(10)	(10)	
Heart	(10)	(10)	(10)	(10)	
Cardiomyopathy	,	2 (20%)	1 (10%)	2 (20%)	
Ventricle Right, Cardiomyopathy		,	1 (10%)	,	

ENDOCRINE SYSTEM

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

Test Type: CHRONIC

Route: Whole Body Exposure Species/Strain: RATS/HSD

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

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Date Report Requested: 01/02/2018 Time Report Requested: 12:00:01 First Dose M/F: 09/16/12 / 09/16/12

Harlan Sprague Dawley RATS FEMALE	0.0W/kg(GSM)chr	1.5W/kg(GSM)chr	3.0W/kg(GSM)chr	6.0W/kg(GSM)chr
Adrenal Cortex	(10)	(10)	(10)	(10)
Adrenal Medulla	(10)	(10)	(10)	(10)
Islets, Pancreatic	(10)	(10)	(10)	(10)
Parathyroid Gland	(10)	(8)	(9)	(9)
Pituitary Gland	(10)	(10)	(10)	(10)
Pars Distalis, Cyst	2 (20%)	, ,	,	,
Pars Intermedia, Cyst	1 (10%)	1 (10%)		
Thyroid Gland	(10)	(10)	(10)	(10)
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Clitoral Gland	(10)	(10)	(10)	(10)
Inflammation, Chronic Active	4 (40%)	5 (50%)	6 (60%)	4 (40%)
Ovary	(10)	(10)	(10)	(10)
Cyst	(13)	(10)	(10)	1 (10%)
Follicle, Cyst	1 (10%)			1 (1070)
Uterus	(10)	(10)	(10)	(10)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(10)	(10)	(10)	(10)
Lymph Node, Mandibular	(10)	(10)	(10)	(10)
Hemorrhage	(10)	2 (20%)	(10)	(10)
Hyperplasia, Lymphocyte		2 (2070)		2 (20%)
Proliferation, Plasma Cell				3 (30%)
Lymph Node, Mesenteric	(10)	(10)	(10)	(10)
Spleen	(10)	(10)	(10)	(10)
Thymus	(10)	(10)	(10)	(10)
Hemorrhage	1 (10%)	(10)	1 (10%)	(10)

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

Test Type: CHRONIC

Route: Whole Body Exposure Species/Strain: RATS/HSD

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

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Harlan Sprague Dawley RATS FEMALE	0.0W/kg(GSM)chr	1.5W/kg(GSM)chr	3.0W/kg(GSM)chr	6.0W/kg(GSM)chr
INTEGUMENTARY SYSTEM				
Mammary Gland	(10)	(10)	(10)	(10)
Skin	(10)	(10)	(10)	(10)
MUSCULOSKELETAL SYSTEM				
Bone	(10)	(10)	(10)	(10)
Skeletal Muscle	(10)	(10)	(10)	(10)
Infiltration Cellular, Histiocyte			1 (10%)	
NERVOUS SYSTEM				
Brain	(10)	(10)	(10)	(10)
Nerve Trigeminal	(10)	(10)	(10)	(10)
Peripheral Nerve, Sciatic	(10)	(10)	(10)	(10)
Peripheral Nerve, Tibial	(10)	(10)	(10)	(10)
Spinal Cord, Cervical	(10)	(10)	(10)	(10)
Spinal Cord, Lumbar	(10)	(10)	(10)	(10)
Spinal Cord, Thoracic	(10)	(10)	(10)	(10)
Trigeminal Ganglion	(9)	(10)	(10)	(10)
RESPIRATORY SYSTEM				
Lung	(10)	(10)	(10)	(10)
Congestion	. ,		1 (10%)	• •
Inflammation, Chronic Active			1 (10%)	
Alveolus, Infiltration Cellular, Histiocyte	2 (20%)			
Epithelium Alveolus, Hyperplasia			1 (10%)	
Nose	(10)	(10)	(10)	(10)
Trachea	(10)	(10)	(10)	(10)

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

Test Type: CHRONIC

Route: Whole Body Exposure Species/Strain: RATS/HSD

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

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Harlan Sprague Dawley RATS FEMALE	0.0W/kg(GSM)chr	1.5W/kg(GSM)chr	3.0W/kg(GSM)chr	6.0W/kg(GSM)chr	
SPECIAL SENSES SYSTEM					
Eye Harderian Gland Infiltration Cellular, Lymphocyte	(10) (10) 1 (10%)	(10) (10)	(10) (10)	(10) (10)	
URINARY SYSTEM					
Kidney Nephropathy, Chronic Progressive Urinary Bladder	(10) 3 (30%) (10)	(10) 4 (40%) (10)	(10) 3 (30%) (10)	(10) 2 (20%) (10)	

^{***} END OF REPORT ***