Experiment Number: 20105 - 59   **P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**   **Date Report Requested:** 01/04/2018
Test Type: CHRONIC   Cell Phone Radiation: GSM   **Time Report Requested:** 10:17:55
Route: Whole Body Exposure   **CAS Number:** CELLPRADGSM   **First Dose M/F:** 09/16/12 / 09/16/12
Species/Strain: RATS/HSD   **Lab:** IIT

Custom Report with Rao-Scott Poly6

NTP Study Number: C20105

Lock Date: 12/29/2015

Cage Range: ALL

Date Range: ALL

Reasons For Removal: 25022 ACCK   25021 TSAC   25020 NATD

     25019 MSAC

Removal Date Range: ALL

Treatment Groups: Include ALL

Study Gender: Both

TDMSE Version: 2.5.0.0_sfh

PWG Approval Date: NONE

FOR ALL DOSES THE TUMOR RATES IN THE FOLLOWING TISSUES/ORGANS ARE BASED ON NUMBER OF TISSUES EXAMINED. IN OTHER TISSUES/ORGANS RATES ARE BASED ON THE NUMBER OF ANIMALS NECROPSIED.

Brain

Experiment Number: 20105 - 59
Test Type: CHRONIC
Route: Whole Body Exposure
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
Cell Phone Radiation: GSM
CAS Number: CELLPRADGSM

Date Report Requested: 01/04/2018
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First Dose M/F: 09/16/12 / 09/16/12
Lab: IIT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

	Males			
DOSE	0.0W/kg(GSM)chr	1.5W/kg(GSM)chr	3.0W/kg(GSM)chr	6.0W/kg(GSM)chr

Brain
Glioma Malignant

TUMOR RATES

OVERALL (a)	0/90 (0%)	3/90 (3%)	3/90 (3%)	2/90 (2%)
LITTERS (b)	0/35 (0%)	3/35 (9%)	3/35 (9%)	2/35 (6%)
POLY-3 RATE (c)	0/65.47	3/74.93	3/78.27	2/77.71
POLY-3 PERCENT (g)	0%	4%	3.8%	2.6%
TERMINAL (d)	0/25 (0%)	2/45 (4%)	1/50 (2%)	1/60 (2%)
FIRST INCIDENCE	---	715	649	716

STATISTICAL TESTS

POLY 3	P=0.412	P=0.147	P=0.156	P=0.278
POLY 1.5	P=0.366	P=0.134	P=0.140	P=0.259
POLY 6	P=0.489	P=0.169	P=0.184	P=0.312
RAO-SCOTT POLY-6	P=0.415	P=0.154	P=0.166	P=0.271
LITTER C-A/FISHERS	P=0.311	P=0.120	P=0.120	P=0.246

Experiment Number: 20105 - 59
Test Type: CHRONIC
Route: Whole Body Exposure
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
Cell Phone Radiation: GSM
CAS Number: CELLPRADGSM

Date Report Requested: 01/04/2018
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First Dose M/F: 09/16/12 / 09/16/12
Lab: IIT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

	Males			
DOSE	0.0W/kg(GSM)chr	1.5W/kg(GSM)chr	3.0W/kg(GSM)chr	6.0W/kg(GSM)chr

Brain
Granular Cell Tumor Benign

TUMOR RATES

OVERALL (a)	1/90 (1%)	3/90 (3%)	3/90 (3%)	3/90 (3%)
LITTERS (b)	1/35 (3%)	3/35 (9%)	3/35 (9%)	3/35 (9%)
POLY-3 RATE (c)	1/65.47	3/75.31	3/77.89	3/77.66
POLY-3 PERCENT (g)	1.5%	4%	3.9%	3.9%
TERMINAL (d)	1/25 (4%)	1/45 (2%)	3/50 (6%)	3/60 (5%)
FIRST INCIDENCE	730 (T)	655	730 (T)	730 (T)

STATISTICAL TESTS

POLY 3	P=0.376	P=0.358	P=0.371	P=0.370
POLY 1.5	P=0.338	P=0.334	P=0.343	P=0.340
POLY 6	P=0.439	P=0.400	P=0.415	P=0.422
RAO-SCOTT POLY-6	P=0.388	P=0.340	P=0.355	P=0.362
LITTER C-A/FISHERS	P=0.290	P=0.307	P=0.307	P=0.307

Experiment Number: 20105 - 59
Test Type: CHRONIC
Route: Whole Body Exposure
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
Cell Phone Radiation: GSM
CAS Number: CELLPRADGSM

Date Report Requested: 01/04/2018
Time Report Requested: 10:17:55
First Dose M/F: 09/16/12 / 09/16/12
Lab: IIT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

	Males			
DOSE	**0.0W/kg(GSM)chr**	**1.5W/kg(GSM)chr**	**3.0W/kg(GSM)chr**	**6.0W/kg(GSM)chr**

Brain
Granular Cell Tumor: Benign or Malignant

TUMOR RATES

OVERALL (a)	1/90 (1%)	3/90 (3%)	4/90 (4%)	3/90 (3%)
LITTERS (b)	1/35 (3%)	3/35 (9%)	4/35 (11%)	3/35 (9%)
POLY-3 RATE (c)	1/65.47	3/75.31	4/78.01	3/77.66
POLY-3 PERCENT (g)	1.5%	4%	5.1%	3.9%
TERMINAL (d)	1/25 (4%)	1/45 (2%)	3/50 (6%)	3/60 (5%)
FIRST INCIDENCE	730 (T)	655	699	730 (T)

STATISTICAL TESTS

POLY 3	P=0.373	P=0.358	P=0.239	P=0.370
POLY 1.5	P=0.332	P=0.334	P=0.214	P=0.340
POLY 6	P=0.442	P=0.400	P=0.282	P=0.422
RAO-SCOTT POLY-6	P=0.385	P=0.341	P=0.238	P=0.363
LITTER C-A/FISHERS	P=0.280	P=0.307	P=0.178	P=0.307

Experiment Number: 20105 - 59
Test Type: CHRONIC
Route: Whole Body Exposure
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
Cell Phone Radiation: GSM
CAS Number: CELLPRADGSM

Date Report Requested: 01/04/2018
Time Report Requested: 10:17:55
First Dose M/F: 09/16/12 / 09/16/12
Lab: IIT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 106 WEEKS

	Females			
DOSE	0.0W/kg(GSM)chr	1.5W/kg(GSM)chr	3.0W/kg(GSM)chr	6.0W/kg(GSM)chr

Brain
Glioma Malignant

TUMOR RATES

OVERALL (a)	0/90 (0%)	0/90 (0%)	0/90 (0%)	1/90 (1%)
LITTERS (b)	0/35 (0%)	0/35 (0%)	0/35 (0%)	1/35 (3%)
POLY-3 RATE (c)	0/69.46	0/75.67	0/70.74	1/74.86
POLY-3 PERCENT (g)	0%	0%	0%	1.3%
TERMINAL (d)	0/48 (0%)	0/53 (0%)	0/48 (0%)	0/57 (0%)
FIRST INCIDENCE	---	---	---	669

STATISTICAL TESTS

POLY 3	(n)	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)	(n)
RAO-SCOTT POLY-6	(n)	(n)	(n)	(n)
LITTER C-A/FISHERS	(n)	(n)	(n)	(n)

Experiment Number: 20105 - 59
Test Type: CHRONIC
Route: Whole Body Exposure
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
Cell Phone Radiation: GSM
CAS Number: CELLPRADGSM

Date Report Requested: 01/04/2018
Time Report Requested: 10:17:55
First Dose M/F: 09/16/12 / 09/16/12
Lab: IIT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 106 WEEKS

	Females			
DOSE	**0.0W/kg(GSM)chr**	**1.5W/kg(GSM)chr**	**3.0W/kg(GSM)chr**	**6.0W/kg(GSM)chr**

Brain
Granular Cell Tumor Benign

TUMOR RATES

OVERALL (a)	1/90 (1%)	1/90 (1%)	2/90 (2%)	0/90 (0%)
LITTERS (b)	1/35 (3%)	1/35 (3%)	2/35 (6%)	0/35 (0%)
POLY-3 RATE (c)	1/69.46	1/75.67	2/71.00	0/74.61
POLY-3 PERCENT (g)	1.4%	1.3%	2.8%	0%
TERMINAL (d)	1/48 (2%)	1/53 (2%)	1/48 (2%)	0/57 (0%)
FIRST INCIDENCE	737 (T)	737 (T)	669	---

STATISTICAL TESTS

POLY 3	P=0.351N	P=0.741N	P=0.508	P=0.486N
POLY 1.5	P=0.359N	P=0.749N	P=0.504	P=0.492N
POLY 6	P=0.341N	P=0.732N	P=0.514	P=0.477N
RAO-SCOTT POLY-6	P=0.360N	P=0.692N	P=0.489	P=0.449N
LITTER C-A/FISHERS	P=0.366N	P=0.754	P=0.500	P=0.500N

Experiment Number: 20105 - 59
Test Type: CHRONIC
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Species/Strain: RATS/HSD

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Lab: IIT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 106 WEEKS

	Females			
DOSE	**0.0W/kg(GSM)chr**	**1.5W/kg(GSM)chr**	**3.0W/kg(GSM)chr**	**6.0W/kg(GSM)chr**

Brain
Granular Cell Tumor: Benign or Malignant

TUMOR RATES

	0.0W/kg	1.5W/kg	3.0W/kg	6.0W/kg
OVERALL (a)	1/90 (1%)	1/90 (1%)	2/90 (2%)	1/90 (1%)
LITTERS (b)	1/35 (3%)	1/35 (3%)	2/35 (6%)	1/35 (3%)
POLY-3 RATE (c)	1/69.46	1/75.67	2/71.00	1/74.61
POLY-3 PERCENT (g)	1.4%	1.3%	2.8%	1.3%
TERMINAL (d)	1/48 (2%)	1/53 (2%)	1/48 (2%)	1/57 (2%)
FIRST INCIDENCE	737 (T)	737 (T)	669	737 (T)

STATISTICAL TESTS

	0.0W/kg	1.5W/kg	3.0W/kg	6.0W/kg
POLY 3	P=0.611	P=0.741N	P=0.508	P=0.745N
POLY 1.5	P=0.601	P=0.749N	P=0.504	P=0.752N
POLY 6	P=0.624N	P=0.732N	P=0.514	P=0.735N
RAO-SCOTT POLY-6	P=0.596	P=0.681N	P=0.471	P=0.683N
LITTER C-A/FISHERS	P=0.591	P=0.754	P=0.500	P=0.754

Experiment Number: 20105 - 59
Test Type: CHRONIC
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Species/Strain: RATS/HSD

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LEGEND

(a)	Number of tumor-bearing animals/number of animals examined at site.
(b)	Number of litters with tumor-bearing animals/number of litters examined at site
(c)	Number of tumor-bearing animals/Poly-3 number
(d)	Observed incidence at terminal kill.
(e)	Value of statistic cannot be computed.
(f)	Beneath the control incidence are the P-values associated with the trend test. Beneath the dosed group incidence are the P-values corresponding to pairwise comparisons between the controls and that dosed group.
(g)	Poly-3 adjusted lifetime tumor incidence.
(n)	No statistics are calculated if all dose groups have fewer than two tumors.
(I)	Interim sacrifice
(T)	Terminal sacrifice
#	Tumor rates based on numbers of animals necropsied.
*	To the right of any statistical result, indicates significance at (P<=0.05).
**	To the right of any statistical result, indicates significance at (P<=0.01).
N	Indicates a negative trend for all tests
	The Rao-Scott statistic performs the Poly-6 test with an adjustment for within-litter correlation.
	The Litter C-A/Fishers statistic compare directly the litter incidence rates.

*** END OF REPORT ***