

**Experiment Number:** 20515 - 04  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
Metal working fluids (CIMSTAR 3800)  
**CAS Number:** CIMSTAR3800

**Date Report Requested:** 03/08/2013  
**Time Report Requested:** 14:13:47  
**First Dose M/F:** 05/05/08 / 05/05/08  
**Lab:** BNW

F1\_M3

**NTP Study Number:** C20515  
**Lock Date:** 01/12/2011  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 3.0.1.1\_001  
**PWG Approval Date:** NONE

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**HISTORICAL CONTROL STUDIES**  
**From May 2011 report**

**SAME ROUTE**

20011-06 -- 1-Bromopropane (INHALATION AIR)  
99017-06 -- Diethylamine (INHALATION AIR)  
93025-06 -- Tetralin (INHALATION AIR)

**ALL ROUTES**

99037-06 -- alpha/beta Thujone mixture (GAVAGE METHYLCELLULOSE)  
20011-06 -- 1-Bromopropane (INHALATION AIR)  
99017-06 -- Diethylamine (INHALATION AIR)  
99031-04 -- Ginkgo biloba extract (GAVAGE CORN OIL)  
20005-06 -- Ginseng (GAVAGE WATER)  
99007-06 -- Goldenseal root powder (ORAL FEED)  
20007-06 -- Kava kava extract (GAVAGE CORN OIL)  
95003-06 -- Methyl trans-styryl ketone (SKIN ETHANOL)  
20107-04 -- N,N-Dimethyl-p-toluidine (GAVAGE CORN OIL)  
20009-04 -- beta-Picoline (ORAL WATER)  
99032-04 -- Pyrogallol (SKIN ETHANOL)  
93025-06 -- Tetralin (INHALATION AIR)  
88133-08 -- Trimethylolpropane triacrylate (SKIN ACETONE)

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**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.**

Adrenal Cortex  
Adrenal Medulla  
Islets, Pancreatic  
Kidney  
Liver  
Lung  
Ovary  
Pituitary Gland  
Spleen  
Thyroid Gland

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## SUMMARY OF STATISTICALLY SIGNIFICANT ( $P \leq .05$ ) RESULTS IN THE ANALYSIS OF METAL WORKING FLUIDS (CIMSTAR 3800)

### MALE MICE

#### Organ

Harderian Gland

Liver  
All Organs

#### FEMALE MICE

#### Organ

Harderian Gland  
Liver

Lung

Skin  
Thyroid Gland: Follicular Cell  
Uterus

#### Morphology

Carcinoma  
Carcinoma or Adenoma  
Hepatocellular Carcinoma or Hepatoblastoma  
Malignant Tumors

#### Morphology

Carcinoma or Adenoma  
Hepatocellular Carcinoma  
Hepatocellular Carcinoma or Hepatoblastoma  
Hepatocellular Carcinoma or Hepatocellular Adenoma  
Hepatocellular Carcinoma, Hepatocellular Adenoma, or Hepatoblastoma  
Alveolar/Bronchiolar Carcinoma  
Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma  
Hemangiosarcoma  
Carcinoma  
Polyp Stromal

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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                          | Males       |            |            |             |
|-------------------------------|-------------|------------|------------|-------------|
|                               | Control     | 10 mg/m3   | 30 mg/m3   | 100 mg/m3   |
| <b>Adrenal Cortex Adenoma</b> |             |            |            |             |
| <b>TUMOR RATES</b>            |             |            |            |             |
| OVERALL (a)                   | 9/49 (18%)  | 4/50 (8%)  | 5/50 (10%) | 10/50 (20%) |
| POLY-3 RATE (b)               | 9/46.05     | 4/43.62    | 5/44.45    | 10/46.86    |
| POLY-3 PERCENT (g)            | 19.5%       | 9.2%       | 11.3%      | 21.3%       |
| TERMINAL (d)                  | 8/39 (21%)  | 3/31 (10%) | 4/36 (11%) | 9/40 (23%)  |
| FIRST INCIDENCE               | 669         | 591        | 698        | 623         |
| HC TUMORS SAME ROUTE          | 12/148 (8%) |            |            |             |
| HC TUMORS ALL ROUTES          | 44/647 (7%) |            |            |             |
| <b>STATISTICAL TESTS</b>      |             |            |            |             |
| POLY 3                        | P=0.212     | P=0.136N   | P=0.212N   | P=0.517     |
| POLY 1.5                      | P=0.200     | P=0.123N   | P=0.199N   | P=0.517     |
| POLY 6                        | P=0.228     | P=0.159N   | P=0.230N   | P=0.514     |
| COCH-ARM / FISHERS            | P=0.188     | P=0.109N   | P=0.183N   | P=0.520     |
| MAX-ISO-POLY-3                | P=0.230     | P=0.088N   | P=0.143N   | P=0.414     |
| HISTCONT SAME RTE             | P=0.032*    | P=1.000    | P=0.433    | P=0.051     |
| HISTCONT ALL RTES             | P=0.011*    | P=0.482    | P=0.298    | P=0.005**   |
| CURR VS HC SAME RTE           | P=0.066     |            |            |             |
| CURR VS HC ALL RTES           | P=0.005**   |            |            |             |

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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                           | Males      |           |           |           |
|--------------------------------|------------|-----------|-----------|-----------|
|                                | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Adrenal Medulla</b>         |            |           |           |           |
| <b>Pheochromocytoma Benign</b> |            |           |           |           |
| <b>TUMOR RATES</b>             |            |           |           |           |
| OVERALL (a)                    | 1/48 (2%)  | 0/50 (0%) | 1/50 (2%) | 0/50 (0%) |
| POLY-3 RATE (b)                | 1/44.92    | 0/43.16   | 1/44.33   | 0/46.48   |
| POLY-3 PERCENT (g)             | 2.2%       | 0%        | 2.3%      | 0%        |
| TERMINAL (d)                   | 0/39 (0%)  | 0/31 (0%) | 1/36 (3%) | 0/40 (0%) |
| FIRST INCIDENCE                | 709        | ---       | 729 (T)   | ---       |
| HC TUMORS SAME ROUTE           | 2/147 (1%) |           |           |           |
| HC TUMORS ALL ROUTES           | 2/643 (0%) |           |           |           |
| <b>STATISTICAL TESTS</b>       |            |           |           |           |
| POLY 3                         | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5                       | (n)        | (n)       | (n)       | (n)       |
| POLY 6                         | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS             | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3                 | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE              | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES              | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE            | (n)        |           |           |           |
| CURR VS HC ALL RTES            | (n)        |           |           |           |

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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE   | Males      |           |           |           |
|--|------------|-----------|-----------|-----------|
|  | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Adrenal Medulla</b>                                   |            |           |           |           |
| <b>Pheochromocytoma: Benign, Complex, Malignant, NOS</b> |            |           |           |           |
| <b>TUMOR RATES</b>                                       |            |           |           |           |
| OVERALL (a)  | 1/48 (2%)  | 0/50 (0%) | 1/50 (2%) | 0/50 (0%) |
| POLY-3 RATE (b)  | 1/44.92    | 0/43.16   | 1/44.33   | 0/46.48   |
| POLY-3 PERCENT (g)                                       | 2.2%       | 0%        | 2.3%      | 0%        |
| TERMINAL (d)   | 0/39 (0%)  | 0/31 (0%) | 1/36 (3%) | 0/40 (0%) |
| FIRST INCIDENCE  | 709        | ---       | 729 (T)   | ---       |
| HC TUMORS SAME ROUTE                                     | 2/147 (1%) |           |           |           |
| HC TUMORS ALL ROUTES                                     | 3/643 (1%) |           |           |           |
| <b>STATISTICAL TESTS</b>                                 |            |           |           |           |
| POLY 3   | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5   | (n)        | (n)       | (n)       | (n)       |
| POLY 6   | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS                                       | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3   | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE  | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES  | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE                                      | (n)        |           |           |           |
| CURR VS HC ALL RTES                                      | (n)        |           |           |           |

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 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                           | Males        |            |           |           |
|--------------------------------|--------------|------------|-----------|-----------|
|                                | Control      | 10 mg/m3   | 30 mg/m3  | 100 mg/m3 |
| <b>Harderian Gland Adenoma</b> |              |            |           |           |
| <b>TUMOR RATES</b>             | #            | #          | #         | #         |
| OVERALL (a)                    | 7/50 (14%)   | 3/50 (6%)  | 4/50 (8%) | 3/50 (6%) |
| POLY-3 RATE (b)                | 7/46.68      | 3/43.16    | 4/44.39   | 3/46.90   |
| POLY-3 PERCENT (g)             | 15%          | 7%         | 9%        | 6.4%      |
| TERMINAL (d)                   | 7/39 (18%)   | 3/31 (10%) | 3/36 (8%) | 2/40 (5%) |
| FIRST INCIDENCE                | 729 (T)      | 729 (T)    | 715       | 607       |
| HC TUMORS SAME ROUTE           | 13/150 (9%)  |            |           |           |
| HC TUMORS ALL ROUTES           | 80/650 (12%) |            |           |           |
| <b>STATISTICAL TESTS</b>       |              |            |           |           |
| POLY 3                         | P=0.210N     | P=0.191N   | P=0.290N  | P=0.156N  |
| POLY 1.5                       | P=0.223N     | P=0.176N   | P=0.279N  | P=0.157N  |
| POLY 6                         | P=0.193N     | P=0.215N   | P=0.306N  | P=0.154N  |
| COCH-ARM / FISHERS             | P=0.238N     | P=0.159N   | P=0.262N  | P=0.159N  |
| MAX-ISO-POLY-3                 | P=0.119N     | P=0.122N   | P=0.197N  | P=0.090N  |
| HISTCONT SAME RTE              | (h)          | (h)        | (h)       | (h)       |
| HISTCONT ALL RTES              | (h)          | (h)        | (h)       | (h)       |
| CURR VS HC SAME RTE            | P=0.377      |            |           |           |
| CURR VS HC ALL RTES            | P=0.840      |            |           |           |



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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                             | Males       |            |           |           |
|----------------------------------|-------------|------------|-----------|-----------|
|                                  | Control     | 10 mg/m3   | 30 mg/m3  | 100 mg/m3 |
| <b>Harderian Gland Carcinoma</b> |             |            |           |           |
| <b>TUMOR RATES</b>               | #           | #          | #         | #         |
| OVERALL (a)                      | 5/50 (10%)  | 5/50 (10%) | 1/50 (2%) | 1/50 (2%) |
| POLY-3 RATE (b)                  | 5/46.76     | 5/43.78    | 1/44.33   | 1/46.48   |
| POLY-3 PERCENT (g)               | 10.7%       | 11.4%      | 2.3%      | 2.2%      |
| TERMINAL (d)                     | 4/39 (10%)  | 2/31 (7%)  | 1/36 (3%) | 1/40 (3%) |
| FIRST INCIDENCE                  | 709         | 632        | 729 (T)   | 729 (T)   |
| HC TUMORS SAME ROUTE             | 10/150 (7%) |            |           |           |
| HC TUMORS ALL ROUTES             | 26/650 (4%) |            |           |           |
| <b>STATISTICAL TESTS</b>         |             |            |           |           |
| POLY 3                           | P=0.053N    | P=0.588    | P=0.114N  | P=0.103N  |
| POLY 1.5                         | P=0.055N    | P=0.607    | P=0.109N  | P=0.103N  |
| POLY 6                           | P=0.051N    | P=0.562    | P=0.121N  | P=0.104N  |
| COCH-ARM / FISHERS               | P=0.058N    | P=0.630N   | P=0.102N  | P=0.102N  |
| MAX-ISO-POLY-3                   | P=0.064N    | P=0.457    | P=0.056N  | P=0.046N* |
| HISTCONT SAME RTE                | P=1.000     | P=0.142    | P=1.000   | P=1.000   |
| HISTCONT ALL RTES                | P=0.689     | P=0.012*   | P=1.000   | P=1.000   |
| CURR VS HC SAME RTE              | P=0.457     |            |           |           |
| CURR VS HC ALL RTES              | P=0.054     |            |           |           |

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 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Males         |            |            |           |
|---|---------------|------------|------------|-----------|
|   | Control       | 10 mg/m3   | 30 mg/m3   | 100 mg/m3 |
| <b>Harderian Gland<br/>Carcinoma or Adenoma</b> |               |            |            |           |
| <b>TUMOR RATES</b>                              | #             | #          | #          | #         |
| OVERALL (a)                                     | 12/50 (24%)   | 8/50 (16%) | 5/50 (10%) | 4/50 (8%) |
| POLY-3 RATE (b)                                 | 12/46.76      | 8/43.78    | 5/44.39    | 4/46.90   |
| POLY-3 PERCENT (g)                              | 25.7%         | 18.3%      | 11.3%      | 8.5%      |
| TERMINAL (d)                                    | 11/39 (28%)   | 5/31 (16%) | 4/36 (11%) | 3/40 (8%) |
| FIRST INCIDENCE                                 | 709           | 632        | 715        | 607       |
| HC TUMORS SAME ROUTE                            | 23/150 (15%)  |            |            |           |
| HC TUMORS ALL ROUTES                            | 106/650 (16%) |            |            |           |
| <b>STATISTICAL TESTS</b>                        |               |            |            |           |
| POLY 3  | P=0.027N*     | P=0.276N   | P=0.065N   | P=0.025N* |
| POLY 1.5  | P=0.030N*     | P=0.254N   | P=0.060N   | P=0.026N* |
| POLY 6  | P=0.023N*     | P=0.312N   | P=0.073N   | P=0.024N* |
| COCH-ARM / FISHERS                              | P=0.035N*     | P=0.227N   | P=0.054N   | P=0.027N* |
| MAX-ISO-POLY-3                                  | P=0.016N*     | P=0.206N   | P=0.041N*  | P=0.012N* |
| HISTCONT SAME RTE                               | P=1.000       | P=1.000    | P=1.000    | P=1.000   |
| HISTCONT ALL RTES                               | (h)           | (h)        | (h)        | (h)       |
| CURR VS HC SAME RTE                             | P=0.230       |            |            |           |
| CURR VS HC ALL RTES                             | P=0.215       |            |            |           |

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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Males       |           |           |           |
|---|-------------|-----------|-----------|-----------|
|   | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Intestine Small: Site Unspecified<br/>Carcinoma or Adenoma</b> |             |           |           |           |
| <b>TUMOR RATES</b>  | #           | #         | #         | #         |
| OVERALL (a)   | 1/50 (2%)   | 2/50 (4%) | 2/50 (4%) | 1/50 (2%) |
| POLY-3 RATE (b)   | 1/46.68     | 2/43.60   | 2/44.33   | 1/46.48   |
| POLY-3 PERCENT (g)  | 2.1%        | 4.6%      | 4.5%      | 2.2%      |
| TERMINAL (d)  | 1/39 (3%)   | 1/31 (3%) | 2/36 (6%) | 1/40 (3%) |
| FIRST INCIDENCE   | 729 (T)     | 598       | 729 (T)   | 729 (T)   |
| HC TUMORS SAME ROUTE  | 6/150 (4%)  |           |           |           |
| HC TUMORS ALL ROUTES  | 19/650 (3%) |           |           |           |
| <b>STATISTICAL TESTS</b>  |             |           |           |           |
| POLY 3  | P=0.514N    | P=0.476   | P=0.482   | P=0.760   |
| POLY 1.5  | P=0.517N    | P=0.487   | P=0.489   | P=0.760   |
| POLY 6  | P=0.511N    | P=0.460   | P=0.473   | P=0.759   |
| COCH-ARM / FISHERS  | P=0.521N    | P=0.500   | P=0.500   | P=0.753N  |
| MAX-ISO-POLY-3  | P=0.531     | P=0.267   | P=0.270   | P=0.498   |
| HISTCONT SAME RTE   | P=1.000     | P=1.000   | P=1.000   | P=1.000   |
| HISTCONT ALL RTES   | P=0.716     | P=0.495   | P=1.000   | P=1.000   |
| CURR VS HC SAME RTE   | P=0.547     |           |           |           |
| CURR VS HC ALL RTES   | P=0.653     |           |           |           |

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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                              | Males       |           |           |           |
|-----------------------------------|-------------|-----------|-----------|-----------|
|                                   | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Islets, Pancreatic Adenoma</b> |             |           |           |           |
| <b>TUMOR RATES</b>                |             |           |           |           |
| OVERALL (a)                       | 2/50 (4%)   | 2/50 (4%) | 1/50 (2%) | 1/50 (2%) |
| POLY-3 RATE (b)                   | 2/46.68     | 2/43.16   | 1/44.94   | 1/46.48   |
| POLY-3 PERCENT (g)                | 4.3%        | 4.6%      | 2.2%      | 2.2%      |
| TERMINAL (d)                      | 2/39 (5%)   | 2/31 (7%) | 0/36 (0%) | 1/40 (3%) |
| FIRST INCIDENCE                   | 729 (T)     | 729 (T)   | 534       | 729 (T)   |
| HC TUMORS SAME ROUTE              | 4/147 (3%)  |           |           |           |
| HC TUMORS ALL ROUTES              | 15/645 (2%) |           |           |           |
| <b>STATISTICAL TESTS</b>          |             |           |           |           |
| POLY 3                            | P=0.385N    | P=0.665   | P=0.513N  | P=0.502N  |
| POLY 1.5                          | P=0.389N    | P=0.678   | P=0.508N  | P=0.501N  |
| POLY 6                            | P=0.380N    | P=0.646   | P=0.520N  | P=0.503N  |
| COCH-ARM / FISHERS                | P=0.393N    | P=0.691N  | P=0.500N  | P=0.500N  |
| MAX-ISO-POLY-3                    | P=0.430N    | P=0.468   | P=0.295N  | P=0.282N  |
| HISTCONT SAME RTE                 | P=1.000     | P=0.493   | P=1.000   | P=1.000   |
| HISTCONT ALL RTEs                 | P=0.719     | P=0.350   | P=1.000   | P=1.000   |
| CURR VS HC SAME RTE               | P=0.698     |           |           |           |
| CURR VS HC ALL RTEs               | P=0.508     |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE   | Males      |           |           |           |
|--|------------|-----------|-----------|-----------|
|  | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Kidney: Renal Tubule<br/>Carcinoma or Adenoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>                                   |            |           |           |           |
| OVERALL (a)  | 0/50 (0%)  | 0/50 (0%) | 2/50 (4%) | 1/50 (2%) |
| POLY-3 RATE (b)                                      | 0/46.68    | 0/43.16   | 2/44.94   | 1/46.48   |
| POLY-3 PERCENT (g)                                   | 0%         | 0%        | 4.5%      | 2.2%      |
| TERMINAL (d)   | 0/39 (0%)  | 0/31 (0%) | 1/36 (3%) | 1/40 (3%) |
| FIRST INCIDENCE                                      | ---        | ---       | 534       | 729 (T)   |
| HC TUMORS SAME ROUTE                                 | 0/148 (0%) |           |           |           |
| HC TUMORS ALL ROUTES                                 | 6/644 (1%) |           |           |           |
| <b>STATISTICAL TESTS</b>                             |            |           |           |           |
| POLY 3   | P=0.389    | (e)       | P=0.229   | P=0.499   |
| POLY 1.5   | P=0.383    | (e)       | P=0.232   | P=0.499   |
| POLY 6   | P=0.397    | (e)       | P=0.224   | P=0.499   |
| COCH-ARM / FISHERS                                   | P=0.377    | (e)       | P=0.247   | P=0.500   |
| MAX-ISO-POLY-3                                       | P=0.169    | (e)       | P=0.076   | P=0.159   |
| HISTCONT SAME RTE                                    | P=0.107    | (e)       | P=0.078   | P=0.245   |
| HISTCONT ALL RTES                                    | P=0.170    | (e)       | P=0.047*  | P=1.000   |
| CURR VS HC SAME RTE                                  | P=1.000    |           |           |           |
| CURR VS HC ALL RTES                                  | P=0.434    |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                          | Males         |             |             |             |
|-------------------------------|---------------|-------------|-------------|-------------|
|                               | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>Liver</b>                  |               |             |             |             |
| <b>Hepatocellular Adenoma</b> |               |             |             |             |
| <b>TUMOR RATES</b>            |               |             |             |             |
| OVERALL (a)                   | 24/50 (48%)   | 24/50 (48%) | 25/50 (50%) | 30/49 (61%) |
| POLY-3 RATE (b)               | 24/48.51      | 24/46.46    | 25/45.46    | 30/48.29    |
| POLY-3 PERCENT (g)            | 49.5%         | 51.7%       | 55%         | 62.1%       |
| TERMINAL (d)                  | 20/39 (51%)   | 14/31 (45%) | 20/36 (56%) | 25/40 (63%) |
| FIRST INCIDENCE               | 499           | 547         | 636         | 344         |
| HC TUMORS SAME ROUTE          | 91/149 (61%)  |             |             |             |
| HC TUMORS ALL ROUTES          | 395/649 (61%) |             |             |             |
| <b>STATISTICAL TESTS</b>      |               |             |             |             |
| POLY 3                        | P=0.110       | P=0.497     | P=0.370     | P=0.145     |
| POLY 1.5                      | P=0.097       | P=0.531     | P=0.419     | P=0.140     |
| POLY 6                        | P=0.129       | P=0.456     | P=0.324     | P=0.153     |
| COCH-ARM / FISHERS            | P=0.081       | P=0.579N    | P=0.500     | P=0.131     |
| MAX-ISO-POLY-3                | P=0.163       | P=0.415     | P=0.301     | P=0.104     |
| HISTCONT SAME RTE             | (h)           | (h)         | (h)         | (h)         |
| HISTCONT ALL RTES             | (h)           | (h)         | (h)         | (h)         |
| CURR VS HC SAME RTE           | P=0.050*      |             |             |             |
| CURR VS HC ALL RTES           | P=0.018*      |             |             |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                            | Males         |             |            |             |
|---------------------------------|---------------|-------------|------------|-------------|
|                                 | Control       | 10 mg/m3    | 30 mg/m3   | 100 mg/m3   |
| <b>Liver</b>                    |               |             |            |             |
| <b>Hepatocellular Carcinoma</b> |               |             |            |             |
| <b>TUMOR RATES</b>              |               |             |            |             |
| OVERALL (a)                     | 11/50 (22%)   | 17/50 (34%) | 8/50 (16%) | 15/49 (31%) |
| POLY-3 RATE (b)                 | 11/47.93      | 17/46.31    | 8/45.81    | 15/47.60    |
| POLY-3 PERCENT (g)              | 23%           | 36.7%       | 17.5%      | 31.5%       |
| TERMINAL (d)                    | 5/39 (13%)    | 7/31 (23%)  | 4/36 (11%) | 9/40 (23%)  |
| FIRST INCIDENCE                 | 565           | 547         | 438        | 572         |
| HC TUMORS SAME ROUTE            | 46/149 (31%)  |             |            |             |
| HC TUMORS ALL ROUTES            | 244/649 (38%) |             |            |             |
| <b>STATISTICAL TESTS</b>        |               |             |            |             |
| POLY 3                          | P=0.362       | P=0.107     | P=0.344N   | P=0.239     |
| POLY 1.5                        | P=0.346       | P=0.118     | P=0.328N   | P=0.233     |
| POLY 6                          | P=0.386       | P=0.092     | P=0.367N   | P=0.249     |
| COCH-ARM / FISHERS              | P=0.333       | P=0.133     | P=0.306N   | P=0.228     |
| MAX-ISO-POLY-3                  | P=0.275       | P=0.074     | P=0.260N   | P=0.175     |
| HISTCONT SAME RTE               | P=0.735       | P=0.383     | P=1.000    | P=1.000     |
| HISTCONT ALL RTES               | (h)           | (h)         | (h)        | (h)         |
| CURR VS HC SAME RTE             | P=0.248       |             |            |             |
| CURR VS HC ALL RTES             | P=0.020*      |             |            |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Males         |             |            |             |
|---|---------------|-------------|------------|-------------|
|   | Control       | 10 mg/m3    | 30 mg/m3   | 100 mg/m3   |
| <b>Liver</b>                                      |               |             |            |             |
| <b>Hepatocellular Carcinoma or Hepatoblastoma</b> |               |             |            |             |
| <b>TUMOR RATES</b>                                |               |             |            |             |
| OVERALL (a)                                       | 11/50 (22%)   | 18/50 (36%) | 8/50 (16%) | 15/49 (31%) |
| POLY-3 RATE (b)                                   | 11/47.93      | 18/46.31    | 8/45.81    | 15/47.60    |
| POLY-3 PERCENT (g)                                | 23%           | 38.9%       | 17.5%      | 31.5%       |
| TERMINAL (d)                                      | 5/39 (13%)    | 8/31 (26%)  | 4/36 (11%) | 9/40 (23%)  |
| FIRST INCIDENCE                                   | 565           | 547         | 438        | 572         |
| HC TUMORS SAME ROUTE                              | 47/149 (32%)  |             |            |             |
| HC TUMORS ALL ROUTES                              | 256/649 (39%) |             |            |             |
| <b>STATISTICAL TESTS</b>                          |               |             |            |             |
| POLY 3  | P=0.403       | P=0.071     | P=0.344N   | P=0.239     |
| POLY 1.5  | P=0.387       | P=0.080     | P=0.328N   | P=0.233     |
| POLY 6  | P=0.428       | P=0.060     | P=0.367N   | P=0.249     |
| COCH-ARM / FISHERS                                | P=0.372       | P=0.093     | P=0.306N   | P=0.228     |
| MAX-ISO-POLY-3                                    | P=0.276       | P=0.048*    | P=0.260N   | P=0.175     |
| HISTCONT SAME RTE                                 | P=1.000       | P=0.318     | P=1.000    | P=1.000     |
| HISTCONT ALL RTES                                 | (h)           | (h)         | (h)        | (h)         |
| CURR VS HC SAME RTE                               | P=0.218       |             |            |             |
| CURR VS HC ALL RTES                               | P=0.011*      |             |            |             |



Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Males         |             |             |             |
|---|---------------|-------------|-------------|-------------|
|   | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>Liver</b>  |               |             |             |             |
| <b>Hepatocellular Carcinoma or Hepatocellular Adenoma</b> |               |             |             |             |
| <b>TUMOR RATES</b>  |               |             |             |             |
| OVERALL (a)   | 32/50 (64%)   | 32/50 (64%) | 31/50 (62%) | 35/49 (71%) |
| POLY-3 RATE (b)   | 32/49.22      | 32/47.77    | 31/46.69    | 35/48.92    |
| POLY-3 PERCENT (g)  | 65%           | 67%         | 66.4%       | 71.6%       |
| TERMINAL (d)  | 23/39 (59%)   | 18/31 (58%) | 23/36 (64%) | 27/40 (68%) |
| FIRST INCIDENCE   | 499           | 547         | 438         | 344         |
| HC TUMORS SAME ROUTE                                      | 115/149 (77%) |             |             |             |
| HC TUMORS ALL ROUTES                                      | 498/649 (77%) |             |             |             |
| <b>STATISTICAL TESTS</b>                                  |               |             |             |             |
| POLY 3  | P=0.281       | P=0.503     | P=0.529     | P=0.316     |
| POLY 1.5  | P=0.252       | P=0.535     | P=0.582     | P=0.303     |
| POLY 6  | P=0.320       | P=0.464     | P=0.471     | P=0.334     |
| COCH-ARM / FISHERS  | P=0.214       | P=0.582N    | P=0.500N    | P=0.283     |
| MAX-ISO-POLY-3  | P=0.391       | P=0.417     | P=0.442     | P=0.245     |
| HISTCONT SAME RTE   | (h)           | (h)         | (h)         | (h)         |
| HISTCONT ALL RTES   | (h)           | (h)         | (h)         | (h)         |
| CURR VS HC SAME RTE                                       | P=0.019*      |             |             |             |
| CURR VS HC ALL RTES                                       | P=0.014*      |             |             |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE   | Males         |             |             |             |
|--|---------------|-------------|-------------|-------------|
|  | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>Liver</b>   |               |             |             |             |
| <b>Hepatocellular Carcinoma, Hepatocellular Adenoma, or Hepatoblastoma</b> |               |             |             |             |
| <b>TUMOR RATES</b>   |               |             |             |             |
| OVERALL (a)  | 32/50 (64%)   | 33/50 (66%) | 31/50 (62%) | 35/49 (71%) |
| POLY-3 RATE (b)  | 32/49.22      | 33/47.77    | 31/46.69    | 35/48.92    |
| POLY-3 PERCENT (g)   | 65%           | 69.1%       | 66.4%       | 71.6%       |
| TERMINAL (d)   | 23/39 (59%)   | 19/31 (61%) | 23/36 (64%) | 27/40 (68%) |
| FIRST INCIDENCE  | 499           | 547         | 438         | 344         |
| HC TUMORS SAME ROUTE   | 115/149 (77%) |             |             |             |
| HC TUMORS ALL ROUTES   | 499/649 (77%) |             |             |             |
| <b>STATISTICAL TESTS</b>   |               |             |             |             |
| POLY 3   | P=0.315       | P=0.416     | P=0.529     | P=0.316     |
| POLY 1.5   | P=0.283       | P=0.450     | P=0.582     | P=0.303     |
| POLY 6   | P=0.357       | P=0.376     | P=0.471     | P=0.334     |
| COCH-ARM / FISHERS   | P=0.242       | P=0.500     | P=0.500N    | P=0.283     |
| MAX-ISO-POLY-3   | P=0.389       | P=0.335     | P=0.442     | P=0.245     |
| HISTCONT SAME RTE  | (h)           | (h)         | (h)         | (h)         |
| HISTCONT ALL RTES  | (h)           | (h)         | (h)         | (h)         |
| CURR VS HC SAME RTE  | P=0.019*      |             |             |             |
| CURR VS HC ALL RTES  | P=0.013*      |             |             |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                            | Males       |           |           |           |
|---------------------------------|-------------|-----------|-----------|-----------|
|                                 | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Liver</b>                    |             |           |           |           |
| <b>Hepatocholangiocarcinoma</b> |             |           |           |           |
| <b>TUMOR RATES</b>              |             |           |           |           |
| OVERALL (a)                     | 0/50 (0%)   | 0/50 (0%) | 2/50 (4%) | 0/49 (0%) |
| POLY-3 RATE (b)                 | 0/46.68     | 0/43.16   | 2/45.72   | 0/45.73   |
| POLY-3 PERCENT (g)              | 0%          | 0%        | 4.4%      | 0%        |
| TERMINAL (d)                    | 0/39 (0%)   | 0/31 (0%) | 0/36 (0%) | 0/40 (0%) |
| FIRST INCIDENCE                 | ---         | ---       | 438       | ---       |
| HC TUMORS SAME ROUTE            | 1/149 (1%)  |           |           |           |
| HC TUMORS ALL ROUTES            | 10/649 (2%) |           |           |           |
| <b>STATISTICAL TESTS</b>        |             |           |           |           |
| POLY 3                          | P=0.675N    | (e)       | P=0.233   | (e)       |
| POLY 1.5                        | P=0.680N    | (e)       | P=0.235   | (e)       |
| POLY 6                          | P=0.668N    | (e)       | P=0.229   | (e)       |
| COCH-ARM / FISHERS              | P=0.684N    | (e)       | P=0.247   | (e)       |
| MAX-ISO-POLY-3                  | P=0.251     | (e)       | P=0.076   | (e)       |
| HISTCONT SAME RTE               | P=0.379     | (e)       | P=0.138   | (e)       |
| HISTCONT ALL RTES               | P=0.685     | (e)       | P=0.242   | (e)       |
| CURR VS HC SAME RTE             | P=0.333     |           |           |           |
| CURR VS HC ALL RTES             | P=0.326     |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                                | Males        |           |            |            |
|-------------------------------------|--------------|-----------|------------|------------|
|                                     | Control      | 10 mg/m3  | 30 mg/m3   | 100 mg/m3  |
| <b>Lung</b>                         |              |           |            |            |
| <b>Alveolar/Bronchiolar Adenoma</b> |              |           |            |            |
| <b>TUMOR RATES</b>                  |              |           |            |            |
| OVERALL (a)                         | 5/50 (10%)   | 2/50 (4%) | 8/50 (16%) | 9/50 (18%) |
| POLY-3 RATE (b)                     | 5/46.68      | 2/43.16   | 8/44.90    | 9/47.33    |
| POLY-3 PERCENT (g)                  | 10.7%        | 4.6%      | 17.8%      | 19%        |
| TERMINAL (d)                        | 5/39 (13%)   | 2/31 (7%) | 6/36 (17%) | 7/40 (18%) |
| FIRST INCIDENCE                     | 729 (T)      | 729 (T)   | 573        | 590        |
| HC TUMORS SAME ROUTE                | 20/150 (13%) |           |            |            |
| HC TUMORS ALL ROUTES                | 95/650 (15%) |           |            |            |
| <b>STATISTICAL TESTS</b>            |              |           |            |            |
| POLY 3                              | P=0.068      | P=0.249N  | P=0.250    | P=0.200    |
| POLY 1.5                            | P=0.061      | P=0.234N  | P=0.261    | P=0.197    |
| POLY 6                              | P=0.079      | P=0.272N  | P=0.238    | P=0.204    |
| COCH-ARM / FISHERS                  | P=0.055      | P=0.218N  | P=0.277    | P=0.194    |
| MAX-ISO-POLY-3                      | P=0.082      | P=0.151N  | P=0.171    | P=0.131    |
| HISTCONT SAME RTE                   | P=0.310      | P=1.000   | P=0.389    | P=0.299    |
| HISTCONT ALL RTES                   | P=0.535      | P=1.000   | P=0.496    | P=0.391    |
| CURR VS HC SAME RTE                 | P=0.499      |           |            |            |
| CURR VS HC ALL RTES                 | P=0.288      |           |            |            |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                                  | Males        |            |            |             |
|---------------------------------------|--------------|------------|------------|-------------|
|                                       | Control      | 10 mg/m3   | 30 mg/m3   | 100 mg/m3   |
| <b>Lung</b>                           |              |            |            |             |
| <b>Alveolar/Bronchiolar Carcinoma</b> |              |            |            |             |
| <b>TUMOR RATES</b>                    |              |            |            |             |
| OVERALL (a)                           | 8/50 (16%)   | 8/50 (16%) | 8/50 (16%) | 10/50 (20%) |
| POLY-3 RATE (b)                       | 8/47.50      | 8/44.51    | 8/46.52    | 10/47.79    |
| POLY-3 PERCENT (g)                    | 16.8%        | 18%        | 17.2%      | 20.9%       |
| TERMINAL (d)                          | 6/39 (15%)   | 4/31 (13%) | 3/36 (8%)  | 6/40 (15%)  |
| FIRST INCIDENCE                       | 541          | 547        | 534        | 590         |
| HC TUMORS SAME ROUTE                  | 31/150 (21%) |            |            |             |
| HC TUMORS ALL ROUTES                  | 93/650 (14%) |            |            |             |
| <b>STATISTICAL TESTS</b>              |              |            |            |             |
| POLY 3                                | P=0.354      | P=0.552    | P=0.590    | P=0.403     |
| POLY 1.5                              | P=0.340      | P=0.576    | P=0.596    | P=0.399     |
| POLY 6                                | P=0.375      | P=0.517    | P=0.583    | P=0.408     |
| COCH-ARM / FISHERS                    | P=0.323      | P=0.607N   | P=0.607N   | P=0.398     |
| MAX-ISO-POLY-3                        | P=0.484      | P=0.443    | P=0.481    | P=0.307     |
| HISTCONT SAME RTE                     | (h)          | (h)        | (h)        | (h)         |
| HISTCONT ALL RTES                     | P=0.398      | P=0.454    | P=1.000    | P=0.257     |
| CURR VS HC SAME RTE                   | P=0.352      |            |            |             |
| CURR VS HC ALL RTES                   | P=0.893      |            |            |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Males         |            |             |             |
|---|---------------|------------|-------------|-------------|
|   | Control       | 10 mg/m3   | 30 mg/m3    | 100 mg/m3   |
| <b>Lung</b>   |               |            |             |             |
| <b>Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma</b> |               |            |             |             |
| <b>TUMOR RATES</b>  |               |            |             |             |
| OVERALL (a)   | 13/50 (26%)   | 9/50 (18%) | 14/50 (28%) | 17/50 (34%) |
| POLY-3 RATE (b)   | 13/47.50      | 9/44.51    | 14/46.57    | 17/48.17    |
| POLY-3 PERCENT (g)  | 27.4%         | 20.2%      | 30.1%       | 35.3%       |
| TERMINAL (d)  | 11/39 (28%)   | 5/31 (16%) | 8/36 (22%)  | 12/40 (30%) |
| FIRST INCIDENCE   | 541           | 547        | 534         | 590         |
| HC TUMORS SAME ROUTE  | 48/150 (32%)  |            |             |             |
| HC TUMORS ALL ROUTES  | 180/650 (28%) |            |             |             |
| <b>STATISTICAL TESTS</b>  |               |            |             |             |
| POLY 3  | P=0.120       | P=0.288N   | P=0.476     | P=0.270     |
| POLY 1.5  | P=0.106       | P=0.264N   | P=0.484     | P=0.262     |
| POLY 6  | P=0.141       | P=0.326N   | P=0.467     | P=0.281     |
| COCH-ARM / FISHERS  | P=0.094       | P=0.235N   | P=0.500     | P=0.257     |
| MAX-ISO-POLY-3  | P=0.173       | P=0.219N   | P=0.386     | P=0.204     |
| HISTCONT SAME RTE   | P=0.512       | P=1.000    | P=1.000     | P=1.000     |
| HISTCONT ALL RTES   | P=0.334       | P=1.000    | P=1.000     | P=0.203     |
| CURR VS HC SAME RTE   | P=0.365       |            |             |             |
| CURR VS HC ALL RTES   | P=0.608       |            |             |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                           | Males      |           |           |           |
|--------------------------------|------------|-----------|-----------|-----------|
|                                | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Mammary Gland Carcinoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>             | #          | #         | #         | #         |
| OVERALL (a)                    | 0/50 (0%)  | 0/50 (0%) | 0/50 (0%) | 0/50 (0%) |
| POLY-3 RATE (b)                | 0/46.68    | 0/43.16   | 0/44.33   | 0/46.48   |
| POLY-3 PERCENT (g)             | 0%         | 0%        | 0%        | 0%        |
| TERMINAL (d)                   | 0/39 (0%)  | 0/31 (0%) | 0/36 (0%) | 0/40 (0%) |
| FIRST INCIDENCE                | ---        | ---       | ---       | ---       |
| HC TUMORS SAME ROUTE           | 0/150 (0%) |           |           |           |
| HC TUMORS ALL ROUTES           | 0/650 (0%) |           |           |           |
| <b>STATISTICAL TESTS</b>       |            |           |           |           |
| POLY 3                         | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5                       | (n)        | (n)       | (n)       | (n)       |
| POLY 6                         | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS             | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3                 | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE              | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES              | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE            | (n)        |           |           |           |
| CURR VS HC ALL RTES            | (n)        |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Males      |           |           |           |
|---|------------|-----------|-----------|-----------|
|   | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Mammary Gland<br/>Carcinoma or Adenoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>                            | #          | #         | #         | #         |
| OVERALL (a)                                   | 0/50 (0%)  | 0/50 (0%) | 0/50 (0%) | 0/50 (0%) |
| POLY-3 RATE (b)                               | 0/46.68    | 0/43.16   | 0/44.33   | 0/46.48   |
| POLY-3 PERCENT (g)                            | 0%         | 0%        | 0%        | 0%        |
| TERMINAL (d)                                  | 0/39 (0%)  | 0/31 (0%) | 0/36 (0%) | 0/40 (0%) |
| FIRST INCIDENCE                               | ---        | ---       | ---       | ---       |
| HC TUMORS SAME ROUTE                          | 0/150 (0%) |           |           |           |
| HC TUMORS ALL ROUTES                          | 0/650 (0%) |           |           |           |
| <b>STATISTICAL TESTS</b>                      |            |           |           |           |
| POLY 3  | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5                                      | (n)        | (n)       | (n)       | (n)       |
| POLY 6  | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS                            | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3                                | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE                             | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES                             | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE                           | (n)        |           |           |           |
| CURR VS HC ALL RTES                           | (n)        |           |           |           |



Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Males      |           |           |           |
|---|------------|-----------|-----------|-----------|
|   | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Mammary Gland</b>                                |            |           |           |           |
| <b>Fibroma, Fibroadenoma, Carcinoma, or Adenoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>                                  | #          | #         | #         | #         |
| OVERALL (a)   | 0/50 (0%)  | 0/50 (0%) | 0/50 (0%) | 0/50 (0%) |
| POLY-3 RATE (b)                                     | 0/46.68    | 0/43.16   | 0/44.33   | 0/46.48   |
| POLY-3 PERCENT (g)                                  | 0%         | 0%        | 0%        | 0%        |
| TERMINAL (d)  | 0/39 (0%)  | 0/31 (0%) | 0/36 (0%) | 0/40 (0%) |
| FIRST INCIDENCE                                     | ---        | ---       | ---       | ---       |
| HC TUMORS SAME ROUTE                                | 0/150 (0%) |           |           |           |
| HC TUMORS ALL ROUTES                                | 0/650 (0%) |           |           |           |
| <b>STATISTICAL TESTS</b>                            |            |           |           |           |
| POLY 3  | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5  | (n)        | (n)       | (n)       | (n)       |
| POLY 6  | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS                                  | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3                                      | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE                                   | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES                                   | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE                                 | (n)        |           |           |           |
| CURR VS HC ALL RTES                                 | (n)        |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                        | Males      |           |           |           |
|-----------------------------|------------|-----------|-----------|-----------|
|                             | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Mesentery Hemangioma</b> |            |           |           |           |
| <b>TUMOR RATES</b>          | #          | #         | #         | #         |
| OVERALL (a)                 | 1/50 (2%)  | 0/50 (0%) | 0/50 (0%) | 0/50 (0%) |
| POLY-3 RATE (b)             | 1/46.68    | 0/43.16   | 0/44.33   | 0/46.48   |
| POLY-3 PERCENT (g)          | 2.1%       | 0%        | 0%        | 0%        |
| TERMINAL (d)                | 1/39 (3%)  | 0/31 (0%) | 0/36 (0%) | 0/40 (0%) |
| FIRST INCIDENCE             | 729 (T)    | ---       | ---       | ---       |
| HC TUMORS SAME ROUTE        | 0/150 (0%) |           |           |           |
| HC TUMORS ALL ROUTES        | 0/650 (0%) |           |           |           |
| <b>STATISTICAL TESTS</b>    |            |           |           |           |
| POLY 3                      | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5                    | (n)        | (n)       | (n)       | (n)       |
| POLY 6                      | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS          | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3              | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE           | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES           | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE         | (n)        |           |           |           |
| CURR VS HC ALL RTES         | (n)        |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Males      |           |           |           |
|---|------------|-----------|-----------|-----------|
|   | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Pituitary Gland: Pars Distalis or Unspecified Site Adenoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>  |            |           |           |           |
| OVERALL (a)   | 0/50 (0%)  | 0/50 (0%) | 0/50 (0%) | 0/48 (0%) |
| POLY-3 RATE (b)   | 0/46.68    | 0/43.16   | 0/44.33   | 0/44.48   |
| POLY-3 PERCENT (g)  | 0%         | 0%        | 0%        | 0%        |
| TERMINAL (d)  | 0/39 (0%)  | 0/31 (0%) | 0/36 (0%) | 0/38 (0%) |
| FIRST INCIDENCE   | ---        | ---       | ---       | ---       |
| HC TUMORS SAME ROUTE  | 1/146 (1%) |           |           |           |
| HC TUMORS ALL ROUTES  | 2/638 (0%) |           |           |           |
| <b>STATISTICAL TESTS</b>  |            |           |           |           |
| POLY 3  | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5  | (n)        | (n)       | (n)       | (n)       |
| POLY 6  | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS  | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3  | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE   | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES   | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE   | (n)        |           |           |           |
| CURR VS HC ALL RTES   | (n)        |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Males      |           |           |           |
|---|------------|-----------|-----------|-----------|
|   | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Pituitary Gland: Pars Intermedia Adenoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>                              |            |           |           |           |
| OVERALL (a)                                     | 0/50 (0%)  | 0/50 (0%) | 0/50 (0%) | 0/48 (0%) |
| POLY-3 RATE (b)                                 | 0/46.68    | 0/43.16   | 0/44.33   | 0/44.48   |
| POLY-3 PERCENT (g)                              | 0%         | 0%        | 0%        | 0%        |
| TERMINAL (d)                                    | 0/39 (0%)  | 0/31 (0%) | 0/36 (0%) | 0/38 (0%) |
| FIRST INCIDENCE                                 | ---        | ---       | ---       | ---       |
| HC TUMORS SAME ROUTE                            | 0/146 (0%) |           |           |           |
| HC TUMORS ALL ROUTES                            | 1/638 (0%) |           |           |           |
| <b>STATISTICAL TESTS</b>                        |            |           |           |           |
| POLY 3  | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5  | (n)        | (n)       | (n)       | (n)       |
| POLY 6  | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS                              | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3                                  | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE                               | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES                               | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE                             | (n)        |           |           |           |
| CURR VS HC ALL RTES                             | (n)        |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE   | Males      |           |           |           |
|--|------------|-----------|-----------|-----------|
|  | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Skin</b>  |            |           |           |           |
| Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma |            |           |           |           |
| <b>TUMOR RATES</b>   | #          | #         | #         | #         |
| OVERALL (a)  | 0/50 (0%)  | 0/50 (0%) | 2/50 (4%) | 0/50 (0%) |
| POLY-3 RATE (b)  | 0/46.68    | 0/43.16   | 2/44.33   | 0/46.48   |
| POLY-3 PERCENT (g)   | 0%         | 0%        | 4.5%      | 0%        |
| TERMINAL (d)   | 0/39 (0%)  | 0/31 (0%) | 2/36 (6%) | 0/40 (0%) |
| FIRST INCIDENCE  | ---        | ---       | 729 (T)   | ---       |
| HC TUMORS SAME ROUTE   | 3/150 (2%) |           |           |           |
| HC TUMORS ALL ROUTES   | 7/650 (1%) |           |           |           |
| <b>STATISTICAL TESTS</b>   |            |           |           |           |
| POLY 3   | P=0.671N   | (e)       | P=0.226   | (e)       |
| POLY 1.5   | P=0.676N   | (e)       | P=0.230   | (e)       |
| POLY 6   | P=0.666N   | (e)       | P=0.220   | (e)       |
| COCH-ARM / FISHERS   | P=0.679N   | (e)       | P=0.247   | (e)       |
| MAX-ISO-POLY-3   | P=0.245    | (e)       | P=0.076   | (e)       |
| HISTCONT SAME RTE  | P=0.677    | (e)       | P=0.358   | (e)       |
| HISTCONT ALL RTES  | P=0.455    | (e)       | P=0.053   | (e)       |
| CURR VS HC SAME RTE  | P=0.251    |           |           |           |
| CURR VS HC ALL RTES  | P=0.359    |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Males       |           |           |           |
|--------------------------|-------------|-----------|-----------|-----------|
|                          | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Skin</b>              |             |           |           |           |
| <b>Hemangiosarcoma</b>   |             |           |           |           |
| <b>TUMOR RATES</b>       | #           | #         | #         | #         |
| OVERALL (a)              | 0/50 (0%)   | 0/50 (0%) | 0/50 (0%) | 1/50 (2%) |
| POLY-3 RATE (b)          | 0/46.68     | 0/43.16   | 0/44.33   | 1/46.48   |
| POLY-3 PERCENT (g)       | 0%          | 0%        | 0%        | 2.2%      |
| TERMINAL (d)             | 0/39 (0%)   | 0/31 (0%) | 0/36 (0%) | 1/40 (3%) |
| FIRST INCIDENCE          | ---         | ---       | ---       | 729 (T)   |
| HC TUMORS SAME ROUTE     | 3/150 (2%)  |           |           |           |
| HC TUMORS ALL ROUTES     | 10/650 (2%) |           |           |           |
| <b>STATISTICAL TESTS</b> |             |           |           |           |
| POLY 3                   | (n)         | (n)       | (n)       | (n)       |
| POLY 1.5                 | (n)         | (n)       | (n)       | (n)       |
| POLY 6                   | (n)         | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS       | (n)         | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3           | (n)         | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE        | (n)         | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES        | (n)         | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE      | (n)         |           |           |           |
| CURR VS HC ALL RTES      | (n)         |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                          | Males       |           |           |           |
|-------------------------------|-------------|-----------|-----------|-----------|
|                               | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Spleen Hemangiosarcoma</b> |             |           |           |           |
| <b>TUMOR RATES</b>            |             |           |           |           |
| OVERALL (a)                   | 0/50 (0%)   | 2/50 (4%) | 0/49 (0%) | 0/49 (0%) |
| POLY-3 RATE (b)               | 0/46.68     | 2/43.50   | 0/43.64   | 0/45.95   |
| POLY-3 PERCENT (g)            | 0%          | 4.6%      | 0%        | 0%        |
| TERMINAL (d)                  | 0/39 (0%)   | 1/31 (3%) | 0/36 (0%) | 0/40 (0%) |
| FIRST INCIDENCE               | ---         | 632       | ---       | ---       |
| HC TUMORS SAME ROUTE          | 6/147 (4%)  |           |           |           |
| HC TUMORS ALL ROUTES          | 23/638 (4%) |           |           |           |
| <b>STATISTICAL TESTS</b>      |             |           |           |           |
| POLY 3                        | P=0.399N    | P=0.222   | (e)       | (e)       |
| POLY 1.5                      | P=0.395N    | P=0.229   | (e)       | (e)       |
| POLY 6                        | P=0.405N    | P=0.212   | (e)       | (e)       |
| COCH-ARM / FISHERS            | P=0.391N    | P=0.247   | (e)       | (e)       |
| MAX-ISO-POLY-3                | P=0.244N    | P=0.076   | (e)       | (e)       |
| HISTCONT SAME RTE             | (h)         | (h)       | (e)       | (e)       |
| HISTCONT ALL RTES             | P=1.000     | P=1.000   | (e)       | (e)       |
| CURR VS HC SAME RTE           | P=0.097     |           |           |           |
| CURR VS HC ALL RTES           | P=0.115     |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Males      |           |           |           |
|---|------------|-----------|-----------|-----------|
|   | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Thyroid Gland: Follicular Cell Carcinoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>                              |            |           |           |           |
| OVERALL (a)                                     | 0/50 (0%)  | 0/50 (0%) | 0/49 (0%) | 0/50 (0%) |
| POLY-3 RATE (b)                                 | 0/46.68    | 0/43.16   | 0/43.33   | 0/46.48   |
| POLY-3 PERCENT (g)                              | 0%         | 0%        | 0%        | 0%        |
| TERMINAL (d)                                    | 0/39 (0%)  | 0/31 (0%) | 0/35 (0%) | 0/40 (0%) |
| FIRST INCIDENCE                                 | ---        | ---       | ---       | ---       |
| HC TUMORS SAME ROUTE                            | 0/148 (0%) |           |           |           |
| HC TUMORS ALL ROUTES                            | 1/645 (0%) |           |           |           |
| <b>STATISTICAL TESTS</b>                        |            |           |           |           |
| POLY 3  | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5  | (n)        | (n)       | (n)       | (n)       |
| POLY 6  | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS                              | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3                                  | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE                               | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES                               | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE                             | (n)        |           |           |           |
| CURR VS HC ALL RTES                             | (n)        |           |           |           |



Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Males      |           |           |           |
|--------------------------|------------|-----------|-----------|-----------|
|                          | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>All Organs</b>        |            |           |           |           |
| <b>Hemangioma</b>        |            |           |           |           |
| <b>TUMOR RATES</b>       | #          | #         | #         | #         |
| OVERALL (a)              | 1/50 (2%)  | 0/50 (0%) | 1/50 (2%) | 0/50 (0%) |
| POLY-3 RATE (b)          | 1/46.68    | 0/43.16   | 1/44.33   | 0/46.48   |
| POLY-3 PERCENT (g)       | 2.1%       | 0%        | 2.3%      | 0%        |
| TERMINAL (d)             | 1/39 (3%)  | 0/31 (0%) | 1/36 (3%) | 0/40 (0%) |
| FIRST INCIDENCE          | 729 (T)    | ---       | 729 (T)   | ---       |
| HC TUMORS SAME ROUTE     | 1/150 (1%) |           |           |           |
| HC TUMORS ALL ROUTES     | 7/650 (1%) |           |           |           |
| <b>STATISTICAL TESTS</b> |            |           |           |           |
| POLY 3                   | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5                 | (n)        | (n)       | (n)       | (n)       |
| POLY 6                   | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS       | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3           | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE        | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES        | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE      | (n)        |           |           |           |
| CURR VS HC ALL RTES      | (n)        |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Males        |           |           |           |
|--------------------------|--------------|-----------|-----------|-----------|
|                          | Control      | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>All Organs</b>        |              |           |           |           |
| <b>Hemangiosarcoma</b>   |              |           |           |           |
| <b>TUMOR RATES</b>       | #            | #         | #         | #         |
| OVERALL (a)              | 1/50 (2%)    | 4/50 (8%) | 1/50 (2%) | 1/50 (2%) |
| POLY-3 RATE (b)          | 1/47.23      | 4/44.62   | 1/44.33   | 1/46.48   |
| POLY-3 PERCENT (g)       | 2.1%         | 9%        | 2.3%      | 2.2%      |
| TERMINAL (d)             | 0/39 (0%)    | 1/31 (3%) | 1/36 (3%) | 1/40 (3%) |
| FIRST INCIDENCE          | 559          | 547       | 729 (T)   | 729 (T)   |
| HC TUMORS SAME ROUTE     | 13/150 (9%)  |           |           |           |
| HC TUMORS ALL ROUTES     | 69/650 (11%) |           |           |           |
| <b>STATISTICAL TESTS</b> |              |           |           |           |
| POLY 3                   | P=0.347N     | P=0.162   | P=0.746   | P=0.757   |
| POLY 1.5                 | P=0.345N     | P=0.170   | P=0.752   | P=0.758   |
| POLY 6                   | P=0.350N     | P=0.151   | P=0.739   | P=0.755   |
| COCH-ARM / FISHERS       | P=0.343N     | P=0.181   | P=0.753N  | P=0.753N  |
| MAX-ISO-POLY-3           | P=0.328N     | P=0.080   | P=0.482   | P=0.495   |
| HISTCONT SAME RTE        | (h)          | (h)       | (h)       | (h)       |
| HISTCONT ALL RTES        | (h)          | (h)       | (h)       | (h)       |
| CURR VS HC SAME RTE      | P=0.120      |           |           |           |
| CURR VS HC ALL RTES      | P=0.033*     |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                                 | Males        |           |           |           |
|--------------------------------------|--------------|-----------|-----------|-----------|
|                                      | Control      | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>All Organs</b>                    |              |           |           |           |
| <b>Hemangiosarcoma or Hemangioma</b> |              |           |           |           |
| <b>TUMOR RATES</b>                   | #            | #         | #         | #         |
| OVERALL (a)                          | 2/50 (4%)    | 4/50 (8%) | 2/50 (4%) | 1/50 (2%) |
| POLY-3 RATE (b)                      | 2/47.23      | 4/44.62   | 2/44.33   | 1/46.48   |
| POLY-3 PERCENT (g)                   | 4.2%         | 9%        | 4.5%      | 2.2%      |
| TERMINAL (d)                         | 1/39 (3%)    | 1/31 (3%) | 2/36 (6%) | 1/40 (3%) |
| FIRST INCIDENCE                      | 559          | 547       | 729 (T)   | 729 (T)   |
| HC TUMORS SAME ROUTE                 | 14/150 (9%)  |           |           |           |
| HC TUMORS ALL ROUTES                 | 76/650 (12%) |           |           |           |
| <b>STATISTICAL TESTS</b>             |              |           |           |           |
| POLY 3                               | P=0.241N     | P=0.311   | P=0.671   | P=0.506N  |
| POLY 1.5                             | P=0.242N     | P=0.323   | P=0.680   | P=0.504N  |
| POLY 6                               | P=0.241N     | P=0.294   | P=0.659   | P=0.509N  |
| COCH-ARM / FISHERS                   | P=0.240N     | P=0.339   | P=0.691N  | P=0.500N  |
| MAX-ISO-POLY-3                       | P=0.265N     | P=0.188   | P=0.474   | P=0.287N  |
| HISTCONT SAME RTE                    | (h)          | (h)       | (h)       | (h)       |
| HISTCONT ALL RTES                    | (h)          | (h)       | (h)       | (h)       |
| CURR VS HC SAME RTE                  | P=0.224      |           |           |           |
| CURR VS HC ALL RTES                  | P=0.061      |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                       | Males      |           |           |           |
|----------------------------|------------|-----------|-----------|-----------|
|                            | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>All Organs</b>          |            |           |           |           |
| <b>Histiocytic Sarcoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>         | #          | #         | #         | #         |
| OVERALL (a)                | 1/50 (2%)  | 0/50 (0%) | 1/50 (2%) | 0/50 (0%) |
| POLY-3 RATE (b)            | 1/46.76    | 0/43.16   | 1/44.33   | 0/46.48   |
| POLY-3 PERCENT (g)         | 2.1%       | 0%        | 2.3%      | 0%        |
| TERMINAL (d)               | 0/39 (0%)  | 0/31 (0%) | 1/36 (3%) | 0/40 (0%) |
| FIRST INCIDENCE            | 709        | ---       | 729 (T)   | ---       |
| HC TUMORS SAME ROUTE       | 1/150 (1%) |           |           |           |
| HC TUMORS ALL ROUTES       | 4/650 (1%) |           |           |           |
| <b>STATISTICAL TESTS</b>   |            |           |           |           |
| POLY 3                     | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5                   | (n)        | (n)       | (n)       | (n)       |
| POLY 6                     | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS         | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3             | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE          | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES          | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE        | (n)        |           |           |           |
| CURR VS HC ALL RTES        | (n)        |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE   | Males       |            |           |           |
|--|-------------|------------|-----------|-----------|
|  | Control     | 10 mg/m3   | 30 mg/m3  | 100 mg/m3 |
| <b>All Organs</b>  |             |            |           |           |
| <b>Malignant Lymphoma: Histiocytic, Lymphocytic, Mixed, NOS, or Undifferentiated Cell Type</b> |             |            |           |           |
| <b>TUMOR RATES</b>   | #           | #          | #         | #         |
| OVERALL (a)  | 3/50 (6%)   | 5/50 (10%) | 1/50 (2%) | 1/50 (2%) |
| POLY-3 RATE (b)  | 3/46.70     | 5/43.77    | 1/44.33   | 1/46.48   |
| POLY-3 PERCENT (g)   | 6.4%        | 11.4%      | 2.3%      | 2.2%      |
| TERMINAL (d)   | 2/39 (5%)   | 3/31 (10%) | 1/36 (3%) | 1/40 (3%) |
| FIRST INCIDENCE  | 724         | 628        | 729 (T)   | 729 (T)   |
| HC TUMORS SAME ROUTE   | 6/150 (4%)  |            |           |           |
| HC TUMORS ALL ROUTES   | 30/650 (5%) |            |           |           |
| <b>STATISTICAL TESTS</b>   |             |            |           |           |
| POLY 3   | P=0.125N    | P=0.321    | P=0.324N  | P=0.307N  |
| POLY 1.5   | P=0.126N    | P=0.337    | P=0.317N  | P=0.307N  |
| POLY 6   | P=0.123N    | P=0.299    | P=0.334N  | P=0.308N  |
| COCH-ARM / FISHERS   | P=0.128N    | P=0.357    | P=0.309N  | P=0.309N  |
| MAX-ISO-POLY-3   | P=0.122N    | P=0.210    | P=0.174N  | P=0.156N  |
| HISTCONT SAME RTE  | P=0.686     | P=0.050*   | P=1.000   | P=1.000   |
| HISTCONT ALL RTES  | P=1.000     | P=0.024*   | P=1.000   | P=1.000   |
| CURR VS HC SAME RTE  | P=0.562     |            |           |           |
| CURR VS HC ALL RTES  | P=0.730     |            |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Males         |             |             |             |
|--------------------------|---------------|-------------|-------------|-------------|
|                          | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>All Organs</b>        |               |             |             |             |
| <b>Benign Tumors</b>     |               |             |             |             |
| <b>TUMOR RATES</b>       | #             | #           | #           | #           |
| OVERALL (a)              | 39/50 (78%)   | 33/50 (66%) | 33/50 (66%) | 38/50 (76%) |
| POLY-3 RATE (b)          | 39/48.95      | 33/47.31    | 33/46.70    | 38/49.50    |
| POLY-3 PERCENT (g)       | 79.7%         | 69.8%       | 70.7%       | 76.8%       |
| TERMINAL (d)             | 32/39 (82%)   | 21/31 (68%) | 25/36 (69%) | 31/40 (78%) |
| FIRST INCIDENCE          | 499           | 547         | 534         | 344         |
| HC TUMORS SAME ROUTE     | 111/150 (74%) |             |             |             |
| HC TUMORS ALL ROUTES     | 469/650 (72%) |             |             |             |
| <b>STATISTICAL TESTS</b> |               |             |             |             |
| POLY 3                   | P=0.478       | P=0.182N    | P=0.211N    | P=0.458N    |
| POLY 1.5                 | P=0.436       | P=0.159N    | P=0.177N    | P=0.474N    |
| POLY 6                   | P=0.523       | P=0.217N    | P=0.251N    | P=0.447N    |
| COCH-ARM / FISHERS       | P=0.375       | P=0.133N    | P=0.133N    | P=0.500N    |
| MAX-ISO-POLY-3           | P=0.326N      | P=0.129N    | P=0.153N    | P=0.362N    |
| HISTCONT SAME RTE        | (h)           | (h)         | (h)         | (h)         |
| HISTCONT ALL RTES        | P=0.721       | P=1.000     | P=1.000     | P=1.000     |
| CURR VS HC SAME RTE      | P=0.720       |             |             |             |
| CURR VS HC ALL RTES      | P=0.624       |             |             |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Males         |             |             |             |
|--------------------------|---------------|-------------|-------------|-------------|
|                          | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>All Organs</b>        |               |             |             |             |
| <b>Malignant Tumors</b>  |               |             |             |             |
| <b>TUMOR RATES</b>       | #             | #           | #           | #           |
| OVERALL (a)              | 26/50 (52%)   | 31/50 (62%) | 17/50 (34%) | 23/50 (46%) |
| POLY-3 RATE (b)          | 26/49.32      | 31/47.91    | 17/47.75    | 23/49.03    |
| POLY-3 PERCENT (g)       | 52.7%         | 64.7%       | 35.6%       | 46.9%       |
| TERMINAL (d)             | 16/39 (41%)   | 16/31 (52%) | 9/36 (25%)  | 15/40 (38%) |
| FIRST INCIDENCE          | 541           | 547         | 438         | 572         |
| HC TUMORS SAME ROUTE     | 92/150 (61%)  |             |             |             |
| HC TUMORS ALL ROUTES     | 408/650 (63%) |             |             |             |
| <b>STATISTICAL TESTS</b> |               |             |             |             |
| POLY 3                   | P=0.170N      | P=0.159     | P=0.066N    | P=0.355N    |
| POLY 1.5                 | P=0.179N      | P=0.178     | P=0.059N    | P=0.355N    |
| POLY 6                   | P=0.159N      | P=0.137     | P=0.076N    | P=0.353N    |
| COCH-ARM / FISHERS       | P=0.187N      | P=0.210     | P=0.053N    | P=0.345N    |
| MAX-ISO-POLY-3           | P=0.064N      | P=0.117     | P=0.046N*   | P=0.285N    |
| HISTCONT SAME RTE        | P=1.000       | P=1.000     | P=1.000     | P=1.000     |
| HISTCONT ALL RTES        | (h)           | (h)         | (h)         | (h)         |
| CURR VS HC SAME RTE      | P=0.231       |             |             |             |
| CURR VS HC ALL RTES      | P=0.081       |             |             |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                               | Males         |             |             |             |
|------------------------------------|---------------|-------------|-------------|-------------|
|                                    | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>All Organs</b>                  |               |             |             |             |
| <b>Malignant and Benign Tumors</b> |               |             |             |             |
| <b>TUMOR RATES</b>                 | #             | #           | #           | #           |
| OVERALL (a)                        | 46/50 (92%)   | 46/50 (92%) | 40/50 (80%) | 44/50 (88%) |
| POLY-3 RATE (b)                    | 46/50.00      | 46/49.22    | 40/48.62    | 44/49.92    |
| POLY-3 PERCENT (g)                 | 92%           | 93.5%       | 82.3%       | 88.1%       |
| TERMINAL (d)                       | 35/39 (90%)   | 28/31 (90%) | 28/36 (78%) | 35/40 (88%) |
| FIRST INCIDENCE                    | 499           | 547         | 438         | 344         |
| HC TUMORS SAME ROUTE               | 142/150 (95%) |             |             |             |
| HC TUMORS ALL ROUTES               | 597/650 (92%) |             |             |             |
| <b>STATISTICAL TESTS</b>           |               |             |             |             |
| POLY 3                             | P=0.306N      | P=0.542     | P=0.122N    | P=0.379N    |
| POLY 1.5                           | P=0.319N      | P=0.577     | P=0.101N    | P=0.375N    |
| POLY 6                             | P=0.302N      | P=0.518     | P=0.146N    | P=0.386N    |
| COCH-ARM / FISHERS                 | P=0.353N      | P=0.643N    | P=0.074N    | P=0.370N    |
| MAX-ISO-POLY-3                     | P=0.181N      | P=0.389     | P=0.073N    | P=0.261N    |
| HISTCONT SAME RTE                  | (h)           | (h)         | (h)         | (h)         |
| HISTCONT ALL RTES                  | P=1.000       | P=1.000     | P=1.000     | P=1.000     |
| CURR VS HC SAME RTE                | P=0.342       |             |             |             |
| CURR VS HC ALL RTES                | P=0.720       |             |             |             |



Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Females    |           |           |           |
|--------------------------|------------|-----------|-----------|-----------|
|                          | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Adrenal Cortex</b>    |            |           |           |           |
| <b>Adenoma</b>           |            |           |           |           |
| <b>TUMOR RATES</b>       |            |           |           |           |
| OVERALL (a)              | 0/49 (0%)  | 2/50 (4%) | 2/50 (4%) | 0/50 (0%) |
| POLY-3 RATE (b)          | 0/44.40    | 2/45.68   | 2/45.92   | 0/43.61   |
| POLY-3 PERCENT (g)       | 0%         | 4.4%      | 4.4%      | 0%        |
| TERMINAL (d)             | 0/39 (0%)  | 2/37 (5%) | 2/37 (5%) | 0/33 (0%) |
| FIRST INCIDENCE          | ---        | 731 (T)   | 731 (T)   | ---       |
| HC TUMORS SAME ROUTE     | 1/150 (1%) |           |           |           |
| HC TUMORS ALL ROUTES     | 3/649 (1%) |           |           |           |
| <b>STATISTICAL TESTS</b> |            |           |           |           |
| POLY 3                   | P=0.385N   | P=0.244   | P=0.245   | (e)       |
| POLY 1.5                 | P=0.377N   | P=0.245   | P=0.245   | (e)       |
| POLY 6                   | P=0.397N   | P=0.239   | P=0.242   | (e)       |
| COCH-ARM / FISHERS       | P=0.370N   | P=0.253   | P=0.253   | (e)       |
| MAX-ISO-POLY-3           | P=0.291    | P=0.081   | P=0.082   | (e)       |
| HISTCONT SAME RTE        | P=0.343    | P=0.139   | P=0.139   | (e)       |
| HISTCONT ALL RTEs        | P=0.162    | P=0.006** | P=0.006** | (e)       |
| CURR VS HC SAME RTE      | P=0.350    |           |           |           |
| CURR VS HC ALL RTEs      | P=0.498    |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                           | Females    |           |           |           |
|--------------------------------|------------|-----------|-----------|-----------|
|                                | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Adrenal Medulla</b>         |            |           |           |           |
| <b>Pheochromocytoma Benign</b> |            |           |           |           |
| <b>TUMOR RATES</b>             |            |           |           |           |
| OVERALL (a)                    | 1/49 (2%)  | 2/50 (4%) | 1/49 (2%) | 0/50 (0%) |
| POLY-3 RATE (b)                | 1/44.40    | 2/45.68   | 1/45.11   | 0/43.61   |
| POLY-3 PERCENT (g)             | 2.3%       | 4.4%      | 2.2%      | 0%        |
| TERMINAL (d)                   | 1/39 (3%)  | 2/37 (5%) | 1/37 (3%) | 0/33 (0%) |
| FIRST INCIDENCE                | 731 (T)    | 731 (T)   | 731 (T)   | ---       |
| HC TUMORS SAME ROUTE           | 3/150 (2%) |           |           |           |
| HC TUMORS ALL ROUTES           | 9/649 (1%) |           |           |           |
| <b>STATISTICAL TESTS</b>       |            |           |           |           |
| POLY 3                         | P=0.244N   | P=0.510   | P=0.757N  | P=0.504N  |
| POLY 1.5                       | P=0.240N   | P=0.512   | P=0.757N  | P=0.500N  |
| POLY 6                         | P=0.251N   | P=0.504   | P=0.759N  | P=0.510N  |
| COCH-ARM / FISHERS             | P=0.234N   | P=0.508   | P=0.753N  | P=0.495N  |
| MAX-ISO-POLY-3                 | P=0.247N   | P=0.291   | P=0.495N  | P=0.164N  |
| HISTCONT SAME RTE              | P=1.000    | P=0.423   | P=1.000   | P=1.000   |
| HISTCONT ALL RTEs              | P=0.644    | P=0.172   | P=1.000   | P=1.000   |
| CURR VS HC SAME RTE            | P=0.945    |           |           |           |
| CURR VS HC ALL RTEs            | P=0.725    |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE   | Females     |           |           |           |
|--|-------------|-----------|-----------|-----------|
|  | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Adrenal Medulla</b>                                   |             |           |           |           |
| <b>Pheochromocytoma: Benign, Complex, Malignant, NOS</b> |             |           |           |           |
| <b>TUMOR RATES</b>                                       |             |           |           |           |
| OVERALL (a)  | 1/49 (2%)   | 2/50 (4%) | 2/49 (4%) | 0/50 (0%) |
| POLY-3 RATE (b)  | 1/44.40     | 2/45.68   | 2/45.11   | 0/43.61   |
| POLY-3 PERCENT (g)                                       | 2.3%        | 4.4%      | 4.4%      | 0%        |
| TERMINAL (d)   | 1/39 (3%)   | 2/37 (5%) | 2/37 (5%) | 0/33 (0%) |
| FIRST INCIDENCE  | 731 (T)     | 731 (T)   | 731 (T)   | ---       |
| HC TUMORS SAME ROUTE                                     | 4/150 (3%)  |           |           |           |
| HC TUMORS ALL ROUTES                                     | 13/649 (2%) |           |           |           |
| <b>STATISTICAL TESTS</b>                                 |             |           |           |           |
| POLY 3   | P=0.254N    | P=0.510   | P=0.505   | P=0.504N  |
| POLY 1.5   | P=0.248N    | P=0.512   | P=0.506   | P=0.500N  |
| POLY 6   | P=0.262N    | P=0.504   | P=0.503   | P=0.510N  |
| COCH-ARM / FISHERS                                       | P=0.240N    | P=0.508   | P=0.500   | P=0.495N  |
| MAX-ISO-POLY-3   | P=0.249N    | P=0.291   | P=0.287   | P=0.164N  |
| HISTCONT SAME RTE  | P=1.000     | P=1.000   | P=1.000   | P=1.000   |
| HISTCONT ALL RTEs  | P=0.655     | P=0.314   | P=0.307   | P=1.000   |
| CURR VS HC SAME RTE                                      | P=0.848     |           |           |           |
| CURR VS HC ALL RTEs                                      | P=0.993     |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                           | Females     |            |           |           |
|--------------------------------|-------------|------------|-----------|-----------|
|                                | Control     | 10 mg/m3   | 30 mg/m3  | 100 mg/m3 |
| <b>Harderian Gland Adenoma</b> |             |            |           |           |
| <b>TUMOR RATES</b>             | #           | #          | #         | #         |
| OVERALL (a)                    | 2/50 (4%)   | 6/50 (12%) | 3/50 (6%) | 1/50 (2%) |
| POLY-3 RATE (b)                | 2/45.30     | 6/45.89    | 3/45.92   | 1/43.92   |
| POLY-3 PERCENT (g)             | 4.4%        | 13.1%      | 6.5%      | 2.3%      |
| TERMINAL (d)                   | 2/39 (5%)   | 5/37 (14%) | 3/37 (8%) | 0/33 (0%) |
| FIRST INCIDENCE                | 731 (T)     | 677        | 731 (T)   | 644       |
| HC TUMORS SAME ROUTE           | 7/150 (5%)  |            |           |           |
| HC TUMORS ALL ROUTES           | 47/650 (7%) |            |           |           |
| <b>STATISTICAL TESTS</b>       |             |            |           |           |
| POLY 3                         | P=0.160N    | P=0.137    | P=0.506   | P=0.511N  |
| POLY 1.5                       | P=0.155N    | P=0.139    | P=0.507   | P=0.505N  |
| POLY 6                         | P=0.168N    | P=0.132    | P=0.502   | P=0.519N  |
| COCH-ARM / FISHERS             | P=0.150N    | P=0.134    | P=0.500   | P=0.500N  |
| MAX-ISO-POLY-3                 | P=0.183N    | P=0.072    | P=0.330   | P=0.292N  |
| HISTCONT SAME RTE              | P=0.561     | P=0.061    | P=1.000   | P=1.000   |
| HISTCONT ALL RTES              | P=1.000     | P=0.113    | P=1.000   | P=1.000   |
| CURR VS HC SAME RTE            | P=0.781     |            |           |           |
| CURR VS HC ALL RTES            | P=0.380     |            |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                             | Females     |           |           |           |
|----------------------------------|-------------|-----------|-----------|-----------|
|                                  | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Harderian Gland Carcinoma</b> |             |           |           |           |
| <b>TUMOR RATES</b>               | #           | #         | #         | #         |
| OVERALL (a)                      | 0/50 (0%)   | 1/50 (2%) | 1/50 (2%) | 2/50 (4%) |
| POLY-3 RATE (b)                  | 0/45.30     | 1/45.68   | 1/46.23   | 2/43.61   |
| POLY-3 PERCENT (g)               | 0%          | 2.2%      | 2.2%      | 4.6%      |
| TERMINAL (d)                     | 0/39 (0%)   | 1/37 (3%) | 0/37 (0%) | 2/33 (6%) |
| FIRST INCIDENCE                  | ---         | 731 (T)   | 644       | 731 (T)   |
| HC TUMORS SAME ROUTE             | 5/150 (3%)  |           |           |           |
| HC TUMORS ALL ROUTES             | 15/650 (2%) |           |           |           |
| <b>STATISTICAL TESTS</b>         |             |           |           |           |
| POLY 3                           | P=0.189     | P=0.502   | P=0.504   | P=0.229   |
| POLY 1.5                         | P=0.194     | P=0.503   | P=0.504   | P=0.233   |
| POLY 6                           | P=0.182     | P=0.498   | P=0.503   | P=0.222   |
| COCH-ARM / FISHERS               | P=0.200     | P=0.500   | P=0.500   | P=0.247   |
| MAX-ISO-POLY-3                   | P=0.124     | P=0.161   | P=0.164   | P=0.076   |
| HISTCONT SAME RTE                | P=0.304     | P=1.000   | P=1.000   | P=1.000   |
| HISTCONT ALL RTES                | P=0.287     | P=1.000   | P=1.000   | P=0.310   |
| CURR VS HC SAME RTE              | P=0.116     |           |           |           |
| CURR VS HC ALL RTES              | P=0.238     |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Females      |            |           |           |
|---|--------------|------------|-----------|-----------|
|   | Control      | 10 mg/m3   | 30 mg/m3  | 100 mg/m3 |
| <b>Harderian Gland<br/>Carcinoma or Adenoma</b> |              |            |           |           |
| <b>TUMOR RATES</b>                              | #            | #          | #         | #         |
| OVERALL (a)                                     | 2/50 (4%)    | 7/50 (14%) | 4/50 (8%) | 3/50 (6%) |
| POLY-3 RATE (b)                                 | 2/45.30      | 7/45.89    | 4/46.23   | 3/43.92   |
| POLY-3 PERCENT (g)                              | 4.4%         | 15.3%      | 8.7%      | 6.8%      |
| TERMINAL (d)                                    | 2/39 (5%)    | 6/37 (16%) | 3/37 (8%) | 2/33 (6%) |
| FIRST INCIDENCE                                 | 731 (T)      | 677        | 644       | 644       |
| HC TUMORS SAME ROUTE                            | 12/150 (8%)  |            |           |           |
| HC TUMORS ALL ROUTES                            | 62/650 (10%) |            |           |           |
| <b>STATISTICAL TESTS</b>                        |              |            |           |           |
| POLY 3  | P=0.428N     | P=0.082    | P=0.347   | P=0.486   |
| POLY 1.5  | P=0.417N     | P=0.083    | P=0.347   | P=0.493   |
| POLY 6  | P=0.443N     | P=0.078    | P=0.344   | P=0.475   |
| COCH-ARM / FISHERS                              | P=0.405N     | P=0.080    | P=0.339   | P=0.500   |
| MAX-ISO-POLY-3                                  | P=0.275      | P=0.041*   | P=0.210   | P=0.314   |
| HISTCONT SAME RTE                               | P=0.659      | P=0.125    | P=1.000   | P=1.000   |
| HISTCONT ALL RTES                               | P=1.000      | P=0.137    | P=1.000   | P=1.000   |
| CURR VS HC SAME RTE                             | P=0.283      |            |           |           |
| CURR VS HC ALL RTES                             | P=0.181      |            |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Females    |           |           |           |
|---|------------|-----------|-----------|-----------|
|   | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Intestine Small: Site Unspecified<br/>Carcinoma or Adenoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>  | #          | #         | #         | #         |
| OVERALL (a)   | 1/50 (2%)  | 1/50 (2%) | 1/50 (2%) | 0/50 (0%) |
| POLY-3 RATE (b)   | 1/45.47    | 1/45.68   | 1/45.92   | 0/43.61   |
| POLY-3 PERCENT (g)  | 2.2%       | 2.2%      | 2.2%      | 0%        |
| TERMINAL (d)  | 0/39 (0%)  | 1/37 (3%) | 1/37 (3%) | 0/33 (0%) |
| FIRST INCIDENCE   | 686        | 731 (T)   | 731 (T)   | ---       |
| HC TUMORS SAME ROUTE  | 0/150 (0%) |           |           |           |
| HC TUMORS ALL ROUTES  | 5/650 (1%) |           |           |           |
| <b>STATISTICAL TESTS</b>  |            |           |           |           |
| POLY 3  | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5  | (n)        | (n)       | (n)       | (n)       |
| POLY 6  | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS  | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3  | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE   | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES   | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE   | (n)        |           |           |           |
| CURR VS HC ALL RTES   | (n)        |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                              | Females    |           |           |           |
|-----------------------------------|------------|-----------|-----------|-----------|
|                                   | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Islets, Pancreatic Adenoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>                |            |           |           |           |
| OVERALL (a)                       | 1/50 (2%)  | 1/50 (2%) | 1/50 (2%) | 1/49 (2%) |
| POLY-3 RATE (b)                   | 1/45.30    | 1/45.68   | 1/45.92   | 1/43.29   |
| POLY-3 PERCENT (g)                | 2.2%       | 2.2%      | 2.2%      | 2.3%      |
| TERMINAL (d)                      | 1/39 (3%)  | 1/37 (3%) | 1/37 (3%) | 0/33 (0%) |
| FIRST INCIDENCE                   | 731 (T)    | 731 (T)   | 731 (T)   | 688       |
| HC TUMORS SAME ROUTE              | 0/150 (0%) |           |           |           |
| HC TUMORS ALL ROUTES              | 7/643 (1%) |           |           |           |
| <b>STATISTICAL TESTS</b>          |            |           |           |           |
| POLY 3                            | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5                          | (n)        | (n)       | (n)       | (n)       |
| POLY 6                            | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS                | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3                    | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE                 | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES                 | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE               | (n)        |           |           |           |
| CURR VS HC ALL RTES               | (n)        |           |           |           |



Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE   | Females    |           |           |           |
|--|------------|-----------|-----------|-----------|
|  | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Kidney: Renal Tubule<br/>Carcinoma or Adenoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>                                   |            |           |           |           |
| OVERALL (a)  | 0/50 (0%)  | 0/50 (0%) | 0/50 (0%) | 0/50 (0%) |
| POLY-3 RATE (b)                                      | 0/45.30    | 0/45.68   | 0/45.92   | 0/43.61   |
| POLY-3 PERCENT (g)                                   | 0%         | 0%        | 0%        | 0%        |
| TERMINAL (d)   | 0/39 (0%)  | 0/37 (0%) | 0/37 (0%) | 0/33 (0%) |
| FIRST INCIDENCE                                      | ---        | ---       | ---       | ---       |
| HC TUMORS SAME ROUTE                                 | 0/150 (0%) |           |           |           |
| HC TUMORS ALL ROUTES                                 | 0/647 (0%) |           |           |           |
| <b>STATISTICAL TESTS</b>                             |            |           |           |           |
| POLY 3   | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5   | (n)        | (n)       | (n)       | (n)       |
| POLY 6   | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS                                   | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3                                       | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE                                    | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES                                    | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE                                  | (n)        |           |           |           |
| CURR VS HC ALL RTES                                  | (n)        |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                          | Females       |             |             |             |
|-------------------------------|---------------|-------------|-------------|-------------|
|                               | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>Liver</b>                  |               |             |             |             |
| <b>Hepatocellular Adenoma</b> |               |             |             |             |
| <b>TUMOR RATES</b>            |               |             |             |             |
| OVERALL (a)                   | 14/50 (28%)   | 14/50 (28%) | 14/50 (28%) | 10/50 (20%) |
| POLY-3 RATE (b)               | 14/46.93      | 14/47.18    | 14/46.95    | 10/44.04    |
| POLY-3 PERCENT (g)            | 29.8%         | 29.7%       | 29.8%       | 22.7%       |
| TERMINAL (d)                  | 11/39 (28%)   | 10/37 (27%) | 10/37 (27%) | 7/33 (21%)  |
| FIRST INCIDENCE               | 527           | 583         | 576         | 669         |
| HC TUMORS SAME ROUTE          | 47/150 (31%)  |             |             |             |
| HC TUMORS ALL ROUTES          | 258/649 (40%) |             |             |             |
| <b>STATISTICAL TESTS</b>      |               |             |             |             |
| POLY 3                        | P=0.239N      | P=0.582N    | P=0.588N    | P=0.297N    |
| POLY 1.5                      | P=0.212N      | P=0.574N    | P=0.579N    | P=0.270N    |
| POLY 6                        | P=0.272N      | P=0.581     | P=0.576     | P=0.335N    |
| COCH-ARM / FISHERS            | P=0.177N      | P=0.588N    | P=0.588N    | P=0.241N    |
| MAX-ISO-POLY-3                | P=0.381N      | P=0.493N    | P=0.499N    | P=0.228N    |
| HISTCONT SAME RTE             | (h)           | (h)         | (h)         | (h)         |
| HISTCONT ALL RTES             | (h)           | (h)         | (h)         | (h)         |
| CURR VS HC SAME RTE           | P=0.454       |             |             |             |
| CURR VS HC ALL RTES           | P=0.106       |             |             |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                            | Females       |            |            |            |
|---------------------------------|---------------|------------|------------|------------|
|                                 | Control       | 10 mg/m3   | 30 mg/m3   | 100 mg/m3  |
| <b>Liver</b>                    |               |            |            |            |
| <b>Hepatocellular Carcinoma</b> |               |            |            |            |
| <b>TUMOR RATES</b>              |               |            |            |            |
| OVERALL (a)                     | 10/50 (20%)   | 9/50 (18%) | 2/50 (4%)  | 1/50 (2%)  |
| POLY-3 RATE (b)                 | 10/45.73      | 9/47.01    | 2/46.23    | 1/43.61    |
| POLY-3 PERCENT (g)              | 21.9%         | 19.2%      | 4.3%       | 2.3%       |
| TERMINAL (d)                    | 9/39 (23%)    | 5/37 (14%) | 1/37 (3%)  | 1/33 (3%)  |
| FIRST INCIDENCE                 | 605           | 552        | 644        | 731 (T)    |
| HC TUMORS SAME ROUTE            | 16/150 (11%)  |            |            |            |
| HC TUMORS ALL ROUTES            | 105/649 (16%) |            |            |            |
| <b>STATISTICAL TESTS</b>        |               |            |            |            |
| POLY 3                          | P=0.002N**    | P=0.473N   | P=0.012N*  | P=0.005N** |
| POLY 1.5                        | P=0.002N**    | P=0.476N   | P=0.012N*  | P=0.004N** |
| POLY 6                          | P=0.003N**    | P=0.478N   | P=0.013N*  | P=0.006N** |
| COCH-ARM / FISHERS              | P=0.002N**    | P=0.500N   | P=0.014N*  | P=0.004N** |
| MAX-ISO-POLY-3                  | P=0.004N**    | P=0.374N   | P=0.005N** | P=0.002N** |
| HISTCONT SAME RTE               | P=1.000       | P=0.110    | P=1.000    | P=1.000    |
| HISTCONT ALL RTES               | P=1.000       | P=0.492    | P=1.000    | P=1.000    |
| CURR VS HC SAME RTE             | P=0.106       |            |            |            |
| CURR VS HC ALL RTES             | P=0.544       |            |            |            |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Females       |            |            |            |
|---|---------------|------------|------------|------------|
|   | Control       | 10 mg/m3   | 30 mg/m3   | 100 mg/m3  |
| <b>Liver</b>                                      |               |            |            |            |
| <b>Hepatocellular Carcinoma or Hepatoblastoma</b> |               |            |            |            |
| <b>TUMOR RATES</b>                                |               |            |            |            |
| OVERALL (a)                                       | 10/50 (20%)   | 9/50 (18%) | 2/50 (4%)  | 1/50 (2%)  |
| POLY-3 RATE (b)                                   | 10/45.73      | 9/47.01    | 2/46.23    | 1/43.61    |
| POLY-3 PERCENT (g)                                | 21.9%         | 19.2%      | 4.3%       | 2.3%       |
| TERMINAL (d)                                      | 9/39 (23%)    | 5/37 (14%) | 1/37 (3%)  | 1/33 (3%)  |
| FIRST INCIDENCE                                   | 605           | 552        | 644        | 731 (T)    |
| HC TUMORS SAME ROUTE                              | 16/150 (11%)  |            |            |            |
| HC TUMORS ALL ROUTES                              | 108/649 (17%) |            |            |            |
| <b>STATISTICAL TESTS</b>                          |               |            |            |            |
| POLY 3  | P=0.002N**    | P=0.473N   | P=0.012N*  | P=0.005N** |
| POLY 1.5  | P=0.002N**    | P=0.476N   | P=0.012N*  | P=0.004N** |
| POLY 6  | P=0.003N**    | P=0.478N   | P=0.013N*  | P=0.006N** |
| COCH-ARM / FISHERS                                | P=0.002N**    | P=0.500N   | P=0.014N*  | P=0.004N** |
| MAX-ISO-POLY-3                                    | P=0.004N**    | P=0.374N   | P=0.005N** | P=0.002N** |
| HISTCONT SAME RTE                                 | P=1.000       | P=0.110    | P=1.000    | P=1.000    |
| HISTCONT ALL RTES                                 | P=1.000       | P=1.000    | P=1.000    | P=1.000    |
| CURR VS HC SAME RTE                               | P=0.106       |            |            |            |
| CURR VS HC ALL RTES                               | P=0.604       |            |            |            |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Females       |             |             |             |
|---|---------------|-------------|-------------|-------------|
|   | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>Liver</b>  |               |             |             |             |
| <b>Hepatocellular Carcinoma or Hepatocellular Adenoma</b> |               |             |             |             |
| <b>TUMOR RATES</b>  |               |             |             |             |
| OVERALL (a)   | 20/50 (40%)   | 19/50 (38%) | 15/50 (30%) | 10/50 (20%) |
| POLY-3 RATE (b)   | 20/46.93      | 19/48.01    | 15/46.95    | 10/44.04    |
| POLY-3 PERCENT (g)  | 42.6%         | 39.6%       | 32%         | 22.7%       |
| TERMINAL (d)  | 17/39 (44%)   | 12/37 (32%) | 11/37 (30%) | 7/33 (21%)  |
| FIRST INCIDENCE   | 527           | 552         | 576         | 669         |
| HC TUMORS SAME ROUTE                                      | 60/150 (40%)  |             |             |             |
| HC TUMORS ALL ROUTES                                      | 304/649 (47%) |             |             |             |
| <b>STATISTICAL TESTS</b>                                  |               |             |             |             |
| POLY 3  | P=0.024N*     | P=0.463N    | P=0.195N    | P=0.034N*   |
| POLY 1.5  | P=0.019N*     | P=0.466N    | P=0.190N    | P=0.028N*   |
| POLY 6  | P=0.032N*     | P=0.466N    | P=0.205N    | P=0.043N*   |
| COCH-ARM / FISHERS  | P=0.014N*     | P=0.500N    | P=0.201N    | P=0.024N*   |
| MAX-ISO-POLY-3  | P=0.039N*     | P=0.382N    | P=0.142N    | P=0.023N*   |
| HISTCONT SAME RTE   | (h)           | (h)         | (h)         | (h)         |
| HISTCONT ALL RTES   | (h)           | (h)         | (h)         | (h)         |
| CURR VS HC SAME RTE                                       | P=0.769       |             |             |             |
| CURR VS HC ALL RTES                                       | P=0.344       |             |             |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE   | Females       |             |             |             |
|--|---------------|-------------|-------------|-------------|
|  | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>Liver</b>   |               |             |             |             |
| <b>Hepatocellular Carcinoma, Hepatocellular Adenoma, or Hepatoblastoma</b> |               |             |             |             |
| <b>TUMOR RATES</b>   |               |             |             |             |
| OVERALL (a)  | 20/50 (40%)   | 19/50 (38%) | 15/50 (30%) | 10/50 (20%) |
| POLY-3 RATE (b)  | 20/46.93      | 19/48.01    | 15/46.95    | 10/44.04    |
| POLY-3 PERCENT (g)   | 42.6%         | 39.6%       | 32%         | 22.7%       |
| TERMINAL (d)   | 17/39 (44%)   | 12/37 (32%) | 11/37 (30%) | 7/33 (21%)  |
| FIRST INCIDENCE  | 527           | 552         | 576         | 669         |
| HC TUMORS SAME ROUTE   | 60/150 (40%)  |             |             |             |
| HC TUMORS ALL ROUTES   | 304/649 (47%) |             |             |             |
| <b>STATISTICAL TESTS</b>   |               |             |             |             |
| POLY 3   | P=0.024N*     | P=0.463N    | P=0.195N    | P=0.034N*   |
| POLY 1.5   | P=0.019N*     | P=0.466N    | P=0.190N    | P=0.028N*   |
| POLY 6   | P=0.032N*     | P=0.466N    | P=0.205N    | P=0.043N*   |
| COCH-ARM / FISHERS   | P=0.014N*     | P=0.500N    | P=0.201N    | P=0.024N*   |
| MAX-ISO-POLY-3   | P=0.039N*     | P=0.382N    | P=0.142N    | P=0.023N*   |
| HISTCONT SAME RTE  | (h)           | (h)         | (h)         | (h)         |
| HISTCONT ALL RTES  | (h)           | (h)         | (h)         | (h)         |
| CURR VS HC SAME RTE  | P=0.769       |             |             |             |
| CURR VS HC ALL RTES  | P=0.344       |             |             |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                            | Females    |           |           |           |
|---------------------------------|------------|-----------|-----------|-----------|
|                                 | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Liver</b>                    |            |           |           |           |
| <b>Hepatocholangiocarcinoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>              |            |           |           |           |
| OVERALL (a)                     | 0/50 (0%)  | 0/50 (0%) | 0/50 (0%) | 1/50 (2%) |
| POLY-3 RATE (b)                 | 0/45.30    | 0/45.68   | 0/45.92   | 1/43.61   |
| POLY-3 PERCENT (g)              | 0%         | 0%        | 0%        | 2.3%      |
| TERMINAL (d)                    | 0/39 (0%)  | 0/37 (0%) | 0/37 (0%) | 1/33 (3%) |
| FIRST INCIDENCE                 | ---        | ---       | ---       | 731 (T)   |
| HC TUMORS SAME ROUTE            | 0/150 (0%) |           |           |           |
| HC TUMORS ALL ROUTES            | 0/649 (0%) |           |           |           |
| <b>STATISTICAL TESTS</b>        |            |           |           |           |
| POLY 3                          | (n)        | (n)       | (n)       | (n)       |
| POLY 1.5                        | (n)        | (n)       | (n)       | (n)       |
| POLY 6                          | (n)        | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS              | (n)        | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3                  | (n)        | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE               | (n)        | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES               | (n)        | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE             | (n)        |           |           |           |
| CURR VS HC ALL RTES             | (n)        |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                                | Females     |            |           |           |
|-------------------------------------|-------------|------------|-----------|-----------|
|                                     | Control     | 10 mg/m3   | 30 mg/m3  | 100 mg/m3 |
| <b>Lung</b>                         |             |            |           |           |
| <b>Alveolar/Bronchiolar Adenoma</b> |             |            |           |           |
| <b>TUMOR RATES</b>                  |             |            |           |           |
| OVERALL (a)                         | 1/50 (2%)   | 4/50 (8%)  | 2/50 (4%) | 4/50 (8%) |
| POLY-3 RATE (b)                     | 1/45.30     | 4/45.68    | 2/46.12   | 4/43.68   |
| POLY-3 PERCENT (g)                  | 2.2%        | 8.8%       | 4.3%      | 9.2%      |
| TERMINAL (d)                        | 1/39 (3%)   | 4/37 (11%) | 1/37 (3%) | 3/33 (9%) |
| FIRST INCIDENCE                     | 731 (T)     | 731 (T)    | 677       | 712       |
| HC TUMORS SAME ROUTE                | 9/150 (6%)  |            |           |           |
| HC TUMORS ALL ROUTES                | 37/650 (6%) |            |           |           |
| <b>STATISTICAL TESTS</b>            |             |            |           |           |
| POLY 3                              | P=0.245     | P=0.181    | P=0.506   | P=0.168   |
| POLY 1.5                            | P=0.254     | P=0.183    | P=0.506   | P=0.174   |
| POLY 6                              | P=0.234     | P=0.176    | P=0.504   | P=0.159   |
| COCH-ARM / FISHERS                  | P=0.264     | P=0.181    | P=0.500   | P=0.181   |
| MAX-ISO-POLY-3                      | P=0.148     | P=0.086    | P=0.288   | P=0.081   |
| HISTCONT SAME RTE                   | P=0.542     | P=0.473    | P=1.000   | P=0.445   |
| HISTCONT ALL RTES                   | P=0.447     | P=0.345    | P=1.000   | P=0.313   |
| CURR VS HC SAME RTE                 | P=0.338     |            |           |           |
| CURR VS HC ALL RTES                 | P=0.265     |            |           |           |



Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                                  | Females     |           |           |            |
|---------------------------------------|-------------|-----------|-----------|------------|
|                                       | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3  |
| <b>Lung</b>                           |             |           |           |            |
| <b>Alveolar/Bronchiolar Carcinoma</b> |             |           |           |            |
| <b>TUMOR RATES</b>                    |             |           |           |            |
| OVERALL (a)                           | 4/50 (8%)   | 1/50 (2%) | 4/50 (8%) | 8/50 (16%) |
| POLY-3 RATE (b)                       | 4/45.30     | 1/45.68   | 4/46.67   | 8/44.09    |
| POLY-3 PERCENT (g)                    | 8.8%        | 2.2%      | 8.6%      | 18.2%      |
| TERMINAL (d)                          | 4/39 (10%)  | 1/37 (3%) | 3/37 (8%) | 6/33 (18%) |
| FIRST INCIDENCE                       | 731 (T)     | 731 (T)   | 460       | 644        |
| HC TUMORS SAME ROUTE                  | 3/150 (2%)  |           |           |            |
| HC TUMORS ALL ROUTES                  | 23/650 (4%) |           |           |            |
| <b>STATISTICAL TESTS</b>              |             |           |           |            |
| POLY 3                                | P=0.021*    | P=0.176N  | P=0.627N  | P=0.163    |
| POLY 1.5                              | P=0.022*    | P=0.175N  | P=0.628N  | P=0.171    |
| POLY 6                                | P=0.019*    | P=0.181N  | P=0.630N  | P=0.152    |
| COCH-ARM / FISHERS                    | P=0.025*    | P=0.181N  | P=0.643N  | P=0.178    |
| MAX-ISO-POLY-3                        | P=0.033*    | P=0.083N  | P=0.482N  | P=0.101    |
| HISTCONT SAME RTE                     | P=0.020*    | P=1.000   | P=0.120   | P=0.032*   |
| HISTCONT ALL RTES                     | P=0.002**   | P=1.000   | P=0.126   | P<0.001**  |
| CURR VS HC SAME RTE                   | P=0.112     |           |           |            |
| CURR VS HC ALL RTES                   | P=0.126     |           |           |            |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Females     |            |            |             |
|---|-------------|------------|------------|-------------|
|   | Control     | 10 mg/m3   | 30 mg/m3   | 100 mg/m3   |
| <b>Lung</b>   |             |            |            |             |
| <b>Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma</b> |             |            |            |             |
| <b>TUMOR RATES</b>  |             |            |            |             |
| OVERALL (a)   | 4/50 (8%)   | 5/50 (10%) | 6/50 (12%) | 12/50 (24%) |
| POLY-3 RATE (b)   | 4/45.30     | 5/45.68    | 6/46.87    | 12/44.17    |
| POLY-3 PERCENT (g)  | 8.8%        | 10.9%      | 12.8%      | 27.2%       |
| TERMINAL (d)  | 4/39 (10%)  | 5/37 (14%) | 4/37 (11%) | 9/33 (27%)  |
| FIRST INCIDENCE   | 731 (T)     | 731 (T)    | 460        | 644         |
| HC TUMORS SAME ROUTE  | 12/150 (8%) |            |            |             |
| HC TUMORS ALL ROUTES  | 59/650 (9%) |            |            |             |
| <b>STATISTICAL TESTS</b>  |             |            |            |             |
| POLY 3  | P=0.006**   | P=0.505    | P=0.391    | P=0.021*    |
| POLY 1.5  | P=0.007**   | P=0.509    | P=0.388    | P=0.023*    |
| POLY 6  | P=0.005**   | P=0.495    | P=0.391    | P=0.018*    |
| COCH-ARM / FISHERS  | P=0.009**   | P=0.500    | P=0.370    | P=0.027*    |
| MAX-ISO-POLY-3  | P=0.010**   | P=0.368    | P=0.275    | P=0.011*    |
| HISTCONT SAME RTE   | P=0.029*    | P=0.483    | P=0.338    | P=0.041*    |
| HISTCONT ALL RTES   | P=0.005**   | P=1.000    | P=0.350    | P=0.002**   |
| CURR VS HC SAME RTE   | P=0.935     |            |            |             |
| CURR VS HC ALL RTES   | P=0.787     |            |            |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                           | Females     |           |           |           |
|--------------------------------|-------------|-----------|-----------|-----------|
|                                | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Mammary Gland Carcinoma</b> |             |           |           |           |
| <b>TUMOR RATES</b>             | #           | #         | #         | #         |
| OVERALL (a)                    | 2/50 (4%)   | 0/50 (0%) | 2/50 (4%) | 1/50 (2%) |
| POLY-3 RATE (b)                | 2/45.92     | 0/45.68   | 2/46.04   | 1/43.68   |
| POLY-3 PERCENT (g)             | 4.4%        | 0%        | 4.3%      | 2.3%      |
| TERMINAL (d)                   | 1/39 (3%)   | 0/37 (0%) | 1/37 (3%) | 0/33 (0%) |
| FIRST INCIDENCE                | 527         | ---       | 698       | 712       |
| HC TUMORS SAME ROUTE           | 7/150 (5%)  |           |           |           |
| HC TUMORS ALL ROUTES           | 11/650 (2%) |           |           |           |
| <b>STATISTICAL TESTS</b>       |             |           |           |           |
| POLY 3                         | P=0.609N    | P=0.238N  | P=0.693N  | P=0.517N  |
| POLY 1.5                       | P=0.604N    | P=0.236N  | P=0.690N  | P=0.509N  |
| POLY 6                         | P=0.615N    | P=0.243N  | P=0.690   | P=0.529N  |
| COCH-ARM / FISHERS             | P=0.594N    | P=0.247N  | P=0.691N  | P=0.500N  |
| MAX-ISO-POLY-3                 | P=0.444N    | P=0.077N  | P=0.498N  | P=0.300N  |
| HISTCONT SAME RTE              | (h)         | (h)       | (h)       | (h)       |
| HISTCONT ALL RTES              | P=0.486     | P=1.000   | P=0.258   | P=1.000   |
| CURR VS HC SAME RTE            | P=0.792     |           |           |           |
| CURR VS HC ALL RTES            | P=0.267     |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Females     |           |           |           |
|---|-------------|-----------|-----------|-----------|
|   | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Mammary Gland<br/>Carcinoma or Adenoma</b> |             |           |           |           |
| <b>TUMOR RATES</b>                            | #           | #         | #         | #         |
| OVERALL (a)                                   | 2/50 (4%)   | 0/50 (0%) | 2/50 (4%) | 2/50 (4%) |
| POLY-3 RATE (b)                               | 2/45.92     | 0/45.68   | 2/46.04   | 2/43.68   |
| POLY-3 PERCENT (g)                            | 4.4%        | 0%        | 4.3%      | 4.6%      |
| TERMINAL (d)                                  | 1/39 (3%)   | 0/37 (0%) | 1/37 (3%) | 1/33 (3%) |
| FIRST INCIDENCE                               | 527         | ---       | 698       | 712       |
| HC TUMORS SAME ROUTE                          | 7/150 (5%)  |           |           |           |
| HC TUMORS ALL ROUTES                          | 12/650 (2%) |           |           |           |
| <b>STATISTICAL TESTS</b>                      |             |           |           |           |
| POLY 3  | P=0.413     | P=0.238N  | P=0.693N  | P=0.676   |
| POLY 1.5                                      | P=0.420     | P=0.236N  | P=0.690N  | P=0.685   |
| POLY 6  | P=0.405     | P=0.243N  | P=0.690   | P=0.664   |
| COCH-ARM / FISHERS                            | P=0.433     | P=0.247N  | P=0.691N  | P=0.691N  |
| MAX-ISO-POLY-3                                | P=0.436     | P=0.077N  | P=0.498N  | P=0.479   |
| HISTCONT SAME RTE                             | (h)         | (h)       | (h)       | (h)       |
| HISTCONT ALL RTES                             | P=0.273     | P=1.000   | P=0.282   | P=0.263   |
| CURR VS HC SAME RTE                           | P=0.792     |           |           |           |
| CURR VS HC ALL RTES                           | P=0.318     |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Females     |           |           |           |
|---|-------------|-----------|-----------|-----------|
|   | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Mammary Gland</b>                                |             |           |           |           |
| <b>Fibroma, Fibroadenoma, Carcinoma, or Adenoma</b> |             |           |           |           |
| <b>TUMOR RATES</b>                                  | #           | #         | #         | #         |
| OVERALL (a)   | 2/50 (4%)   | 0/50 (0%) | 2/50 (4%) | 2/50 (4%) |
| POLY-3 RATE (b)                                     | 2/45.92     | 0/45.68   | 2/46.04   | 2/43.68   |
| POLY-3 PERCENT (g)                                  | 4.4%        | 0%        | 4.3%      | 4.6%      |
| TERMINAL (d)  | 1/39 (3%)   | 0/37 (0%) | 1/37 (3%) | 1/33 (3%) |
| FIRST INCIDENCE                                     | 527         | ---       | 698       | 712       |
| HC TUMORS SAME ROUTE                                | 8/150 (5%)  |           |           |           |
| HC TUMORS ALL ROUTES                                | 13/650 (2%) |           |           |           |
| <b>STATISTICAL TESTS</b>                            |             |           |           |           |
| POLY 3  | P=0.413     | P=0.238N  | P=0.693N  | P=0.676   |
| POLY 1.5  | P=0.420     | P=0.236N  | P=0.690N  | P=0.685   |
| POLY 6  | P=0.405     | P=0.243N  | P=0.690   | P=0.664   |
| COCH-ARM / FISHERS                                  | P=0.433     | P=0.247N  | P=0.691N  | P=0.691N  |
| MAX-ISO-POLY-3                                      | P=0.436     | P=0.077N  | P=0.498N  | P=0.479   |
| HISTCONT SAME RTE                                   | (h)         | (h)       | (h)       | (h)       |
| HISTCONT ALL RTES                                   | P=0.367     | P=1.000   | P=0.337   | P=0.318   |
| CURR VS HC SAME RTE                                 | P=0.691     |           |           |           |
| CURR VS HC ALL RTES                                 | P=0.374     |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                        | Females    |           |           |           |
|-----------------------------|------------|-----------|-----------|-----------|
|                             | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Mesentery Hemangioma</b> |            |           |           |           |
| <b>TUMOR RATES</b>          | #          | #         | #         | #         |
| OVERALL (a)                 | 0/50 (0%)  | 2/50 (4%) | 0/50 (0%) | 0/50 (0%) |
| POLY-3 RATE (b)             | 0/45.30    | 2/45.68   | 0/45.92   | 0/43.61   |
| POLY-3 PERCENT (g)          | 0%         | 4.4%      | 0%        | 0%        |
| TERMINAL (d)                | 0/39 (0%)  | 2/37 (5%) | 0/37 (0%) | 0/33 (0%) |
| FIRST INCIDENCE             | ---        | 731 (T)   | ---       | ---       |
| HC TUMORS SAME ROUTE        | 0/150 (0%) |           |           |           |
| HC TUMORS ALL ROUTES        | 0/650 (0%) |           |           |           |
| <b>STATISTICAL TESTS</b>    |            |           |           |           |
| POLY 3                      | P=0.391N   | P=0.239   | (e)       | (e)       |
| POLY 1.5                    | P=0.387N   | P=0.241   | (e)       | (e)       |
| POLY 6                      | P=0.397N   | P=0.235   | (e)       | (e)       |
| COCH-ARM / FISHERS          | P=0.387N   | P=0.247   | (e)       | (e)       |
| MAX-ISO-POLY-3              | P=0.270N   | P=0.078   | (e)       | (e)       |
| HISTCONT SAME RTE           | P=0.418    | P=0.076   | (e)       | (e)       |
| HISTCONT ALL RTES           | P=0.203    | P<0.001** | (e)       | (e)       |
| CURR VS HC SAME RTE         | P=1.000    |           |           |           |
| CURR VS HC ALL RTES         | P=1.000    |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Females     |           |           |           |
|--------------------------|-------------|-----------|-----------|-----------|
|                          | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Ovary</b>             |             |           |           |           |
| <b>Cystadenoma</b>       |             |           |           |           |
| <b>TUMOR RATES</b>       |             |           |           |           |
| OVERALL (a)              | 2/50 (4%)   | 1/50 (2%) | 0/48 (0%) | 0/50 (0%) |
| POLY-3 RATE (b)          | 2/45.40     | 1/45.68   | 0/45.10   | 0/43.61   |
| POLY-3 PERCENT (g)       | 4.4%        | 2.2%      | 0%        | 0%        |
| TERMINAL (d)             | 1/39 (3%)   | 1/37 (3%) | 0/37 (0%) | 0/33 (0%) |
| FIRST INCIDENCE          | 705         | 731 (T)   | ---       | ---       |
| HC TUMORS SAME ROUTE     | 8/149 (5%)  |           |           |           |
| HC TUMORS ALL ROUTES     | 35/640 (6%) |           |           |           |
| <b>STATISTICAL TESTS</b> |             |           |           |           |
| POLY 3                   | P=0.189N    | P=0.498N  | P=0.239N  | P=0.246N  |
| POLY 1.5                 | P=0.188N    | P=0.495N  | P=0.240N  | P=0.242N  |
| POLY 6                   | P=0.190N    | P=0.504N  | P=0.239N  | P=0.253N  |
| COCH-ARM / FISHERS       | P=0.184N    | P=0.500N  | P=0.258N  | P=0.247N  |
| MAX-ISO-POLY-3           | P=0.093N    | P=0.279N  | P=0.078N  | P=0.085N  |
| HISTCONT SAME RTE        | (h)         | (h)       | (h)       | (h)       |
| HISTCONT ALL RTES        | (h)         | (h)       | (h)       | (h)       |
| CURR VS HC SAME RTE      | P=0.599     |           |           |           |
| CURR VS HC ALL RTES      | P=0.646     |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Females      |            |            |            |
|---|--------------|------------|------------|------------|
|   | Control      | 10 mg/m3   | 30 mg/m3   | 100 mg/m3  |
| <b>Pituitary Gland: Pars Distalis or Unspecified Site Adenoma</b> |              |            |            |            |
| <b>TUMOR RATES</b>  |              |            |            |            |
| OVERALL (a)   | 5/50 (10%)   | 4/50 (8%)  | 6/49 (12%) | 9/50 (18%) |
| POLY-3 RATE (b)   | 5/45.30      | 4/45.68    | 6/45.42    | 9/44.35    |
| POLY-3 PERCENT (g)  | 11%          | 8.8%       | 13.2%      | 20.3%      |
| TERMINAL (d)  | 5/39 (13%)   | 4/37 (11%) | 5/37 (14%) | 5/33 (15%) |
| FIRST INCIDENCE   | 731 (T)      | 731 (T)    | 681        | 634        |
| HC TUMORS SAME ROUTE  | 21/145 (15%) |            |            |            |
| HC TUMORS ALL ROUTES  | 50/638 (8%)  |            |            |            |
| <b>STATISTICAL TESTS</b>  |              |            |            |            |
| POLY 3  | P=0.076      | P=0.495N   | P=0.502    | P=0.180    |
| POLY 1.5  | P=0.080      | P=0.491N   | P=0.500    | P=0.187    |
| POLY 6  | P=0.073      | P=0.505N   | P=0.501    | P=0.170    |
| COCH-ARM / FISHERS  | P=0.087      | P=0.500N   | P=0.486    | P=0.194    |
| MAX-ISO-POLY-3  | P=0.123      | P=0.358N   | P=0.376    | P=0.116    |
| HISTCONT SAME RTE   | P=0.281      | P=1.000    | P=1.000    | P=0.313    |
| HISTCONT ALL RTES   | P=0.037*     | P=1.000    | P=0.241    | P=0.026*   |
| CURR VS HC SAME RTE   | P=0.352      |            |            |            |
| CURR VS HC ALL RTES   | P=0.615      |            |            |            |



Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Females    |           |           |           |
|---|------------|-----------|-----------|-----------|
|   | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Pituitary Gland: Pars Intermedia Adenoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>                              |            |           |           |           |
| OVERALL (a)                                     | 0/50 (0%)  | 0/50 (0%) | 2/49 (4%) | 0/50 (0%) |
| POLY-3 RATE (b)                                 | 0/45.30    | 0/45.68   | 2/45.23   | 0/43.61   |
| POLY-3 PERCENT (g)                              | 0%         | 0%        | 4.4%      | 0%        |
| TERMINAL (d)                                    | 0/39 (0%)  | 0/37 (0%) | 2/37 (5%) | 0/33 (0%) |
| FIRST INCIDENCE                                 | ---        | ---       | 731 (T)   | ---       |
| HC TUMORS SAME ROUTE                            | 3/145 (2%) |           |           |           |
| HC TUMORS ALL ROUTES                            | 6/638 (1%) |           |           |           |
| <b>STATISTICAL TESTS</b>                        |            |           |           |           |
| POLY 3  | P=0.693N   | (e)       | P=0.237   | (e)       |
| POLY 1.5  | P=0.687N   | (e)       | P=0.237   | (e)       |
| POLY 6  | P=0.700N   | (e)       | P=0.236   | (e)       |
| COCH-ARM / FISHERS                              | P=0.679N   | (e)       | P=0.242   | (e)       |
| MAX-ISO-POLY-3                                  | P=0.262    | (e)       | P=0.077   | (e)       |
| HISTCONT SAME RTE                               | P=0.683    | (e)       | P=0.396   | (e)       |
| HISTCONT ALL RTES                               | P=0.417    | (e)       | P=0.044*  | (e)       |
| CURR VS HC SAME RTE                             | P=0.254    |           |           |           |
| CURR VS HC ALL RTES                             | P=0.490    |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE   | Females     |           |           |           |
|--|-------------|-----------|-----------|-----------|
|  | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Skin</b>  |             |           |           |           |
| Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma |             |           |           |           |
| <b>TUMOR RATES</b>   | #           | #         | #         | #         |
| OVERALL (a)  | 0/50 (0%)   | 1/50 (2%) | 1/50 (2%) | 1/50 (2%) |
| POLY-3 RATE (b)  | 0/45.30     | 1/46.03   | 1/46.59   | 1/43.68   |
| POLY-3 PERCENT (g)   | 0%          | 2.2%      | 2.2%      | 2.3%      |
| TERMINAL (d)   | 0/39 (0%)   | 0/37 (0%) | 0/37 (0%) | 0/33 (0%) |
| FIRST INCIDENCE  | ---         | 635       | 502       | 713       |
| HC TUMORS SAME ROUTE   | 13/150 (9%) |           |           |           |
| HC TUMORS ALL ROUTES   | 36/650 (6%) |           |           |           |
| <b>STATISTICAL TESTS</b>   |             |           |           |           |
| POLY 3   | (n)         | (n)       | (n)       | (n)       |
| POLY 1.5   | (n)         | (n)       | (n)       | (n)       |
| POLY 6   | (n)         | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS   | (n)         | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3   | (n)         | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE  | (n)         | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES  | (n)         | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE  | (n)         |           |           |           |
| CURR VS HC ALL RTES  | (n)         |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Females    |           |           |           |
|--------------------------|------------|-----------|-----------|-----------|
|                          | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Skin</b>              |            |           |           |           |
| <b>Hemangiosarcoma</b>   |            |           |           |           |
| <b>TUMOR RATES</b>       | #          | #         | #         | #         |
| OVERALL (a)              | 2/50 (4%)  | 0/50 (0%) | 0/50 (0%) | 0/50 (0%) |
| POLY-3 RATE (b)          | 2/45.30    | 0/45.68   | 0/45.92   | 0/43.61   |
| POLY-3 PERCENT (g)       | 4.4%       | 0%        | 0%        | 0%        |
| TERMINAL (d)             | 2/39 (5%)  | 0/37 (0%) | 0/37 (0%) | 0/33 (0%) |
| FIRST INCIDENCE          | 731 (T)    | ---       | ---       | ---       |
| HC TUMORS SAME ROUTE     | 1/150 (1%) |           |           |           |
| HC TUMORS ALL ROUTES     | 9/650 (1%) |           |           |           |
| <b>STATISTICAL TESTS</b> |            |           |           |           |
| POLY 3                   | P=0.262N   | P=0.235N  | P=0.234N  | P=0.246N  |
| POLY 1.5                 | P=0.263N   | P=0.234N  | P=0.234N  | P=0.241N  |
| POLY 6                   | P=0.260N   | P=0.239N  | P=0.236N  | P=0.252N  |
| COCH-ARM / FISHERS       | P=0.260N   | P=0.247N  | P=0.247N  | P=0.247N  |
| MAX-ISO-POLY-3           | P=0.042N*  | P=0.076N  | P=0.076N  | P=0.084N  |
| HISTCONT SAME RTE        | (h)        | (h)       | (h)       | (h)       |
| HISTCONT ALL RTES        | (h)        | (h)       | (h)       | (h)       |
| CURR VS HC SAME RTE      | P=0.105    |           |           |           |
| CURR VS HC ALL RTES      | P=0.156    |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Females     |           |           |           |
|--------------------------|-------------|-----------|-----------|-----------|
|                          | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Spleen</b>            |             |           |           |           |
| <b>Hemangiosarcoma</b>   |             |           |           |           |
| <b>TUMOR RATES</b>       |             |           |           |           |
| OVERALL (a)              | 1/50 (2%)   | 1/50 (2%) | 0/50 (0%) | 0/49 (0%) |
| POLY-3 RATE (b)          | 1/45.30     | 1/45.68   | 0/45.92   | 0/42.92   |
| POLY-3 PERCENT (g)       | 2.2%        | 2.2%      | 0%        | 0%        |
| TERMINAL (d)             | 1/39 (3%)   | 1/37 (3%) | 0/37 (0%) | 0/33 (0%) |
| FIRST INCIDENCE          | 731 (T)     | 731 (T)   | ---       | ---       |
| HC TUMORS SAME ROUTE     | 4/150 (3%)  |           |           |           |
| HC TUMORS ALL ROUTES     | 11/640 (2%) |           |           |           |
| <b>STATISTICAL TESTS</b> |             |           |           |           |
| POLY 3                   | (n)         | (n)       | (n)       | (n)       |
| POLY 1.5                 | (n)         | (n)       | (n)       | (n)       |
| POLY 6                   | (n)         | (n)       | (n)       | (n)       |
| COCH-ARM / FISHERS       | (n)         | (n)       | (n)       | (n)       |
| MAX-ISO-POLY-3           | (n)         | (n)       | (n)       | (n)       |
| HISTCONT SAME RTE        | (n)         | (n)       | (n)       | (n)       |
| HISTCONT ALL RTES        | (n)         | (n)       | (n)       | (n)       |
| CURR VS HC SAME RTE      | (n)         |           |           |           |
| CURR VS HC ALL RTES      | (n)         |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE  | Females    |           |           |           |
|---|------------|-----------|-----------|-----------|
|   | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Thyroid Gland: Follicular Cell Carcinoma</b> |            |           |           |           |
| <b>TUMOR RATES</b>                              |            |           |           |           |
| OVERALL (a)                                     | 0/50 (0%)  | 0/48 (0%) | 0/50 (0%) | 3/50 (6%) |
| POLY-3 RATE (b)                                 | 0/45.30    | 0/44.18   | 0/45.92   | 3/43.68   |
| POLY-3 PERCENT (g)                              | 0%         | 0%        | 0%        | 6.9%      |
| TERMINAL (d)                                    | 0/39 (0%)  | 0/36 (0%) | 0/37 (0%) | 2/33 (6%) |
| FIRST INCIDENCE                                 | ---        | ---       | ---       | 712       |
| HC TUMORS SAME ROUTE                            | 1/149 (1%) |           |           |           |
| HC TUMORS ALL ROUTES                            | 2/643 (0%) |           |           |           |
| <b>STATISTICAL TESTS</b>                        |            |           |           |           |
| POLY 3  | P=0.008**  | (e)       | (e)       | P=0.112   |
| POLY 1.5  | P=0.008**  | (e)       | (e)       | P=0.116   |
| POLY 6  | P=0.007**  | (e)       | (e)       | P=0.107   |
| COCH-ARM / FISHERS                              | P=0.009**  | (e)       | (e)       | P=0.121   |
| MAX-ISO-POLY-3                                  | P=0.010**  | (e)       | (e)       | P=0.038*  |
| HISTCONT SAME RTE                               | P=0.049*   | (e)       | (e)       | P=0.066   |
| HISTCONT ALL RTEs                               | P<0.001**  | (e)       | (e)       | P<0.001** |
| CURR VS HC SAME RTE                             | P=0.375    |           |           |           |
| CURR VS HC ALL RTEs                             | P=0.474    |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Females     |           |           |           |
|--------------------------|-------------|-----------|-----------|-----------|
|                          | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>Uterus</b>            |             |           |           |           |
| <b>Polyp Stromal</b>     |             |           |           |           |
| <b>TUMOR RATES</b>       | #           | #         | #         | #         |
| OVERALL (a)              | 0/50 (0%)   | 3/50 (6%) | 2/50 (4%) | 0/50 (0%) |
| POLY-3 RATE (b)          | 0/45.30     | 3/45.68   | 2/46.43   | 0/43.61   |
| POLY-3 PERCENT (g)       | 0%          | 6.6%      | 4.3%      | 0%        |
| TERMINAL (d)             | 0/39 (0%)   | 3/37 (8%) | 1/37 (3%) | 0/33 (0%) |
| FIRST INCIDENCE          | ---         | 731 (T)   | 576       | ---       |
| HC TUMORS SAME ROUTE     | 2/150 (1%)  |           |           |           |
| HC TUMORS ALL ROUTES     | 14/650 (2%) |           |           |           |
| <b>STATISTICAL TESTS</b> |             |           |           |           |
| POLY 3                   | P=0.293N    | P=0.120   | P=0.243   | (e)       |
| POLY 1.5                 | P=0.286N    | P=0.121   | P=0.242   | (e)       |
| POLY 6                   | P=0.305N    | P=0.117   | P=0.242   | (e)       |
| COCH-ARM / FISHERS       | P=0.280N    | P=0.121   | P=0.247   | (e)       |
| MAX-ISO-POLY-3           | P=0.245     | P=0.039*  | P=0.081   | (e)       |
| HISTCONT SAME RTE        | P=0.414     | P=0.083   | P=0.216   | (e)       |
| HISTCONT ALL RTES        | P=0.526     | P=0.045*  | P=0.319   | (e)       |
| CURR VS HC SAME RTE      | P=0.257     |           |           |           |
| CURR VS HC ALL RTES      | P=0.275     |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Females    |           |           |           |
|--------------------------|------------|-----------|-----------|-----------|
|                          | Control    | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>All Organs</b>        |            |           |           |           |
| <b>Hemangioma</b>        |            |           |           |           |
| <b>TUMOR RATES</b>       | #          | #         | #         | #         |
| OVERALL (a)              | 0/50 (0%)  | 2/50 (4%) | 0/50 (0%) | 0/50 (0%) |
| POLY-3 RATE (b)          | 0/45.30    | 2/45.68   | 0/45.92   | 0/43.61   |
| POLY-3 PERCENT (g)       | 0%         | 4.4%      | 0%        | 0%        |
| TERMINAL (d)             | 0/39 (0%)  | 2/37 (5%) | 0/37 (0%) | 0/33 (0%) |
| FIRST INCIDENCE          | ---        | 731 (T)   | ---       | ---       |
| HC TUMORS SAME ROUTE     | 0/150 (0%) |           |           |           |
| HC TUMORS ALL ROUTES     | 3/650 (1%) |           |           |           |
| <b>STATISTICAL TESTS</b> |            |           |           |           |
| POLY 3                   | P=0.391N   | P=0.239   | (e)       | (e)       |
| POLY 1.5                 | P=0.387N   | P=0.241   | (e)       | (e)       |
| POLY 6                   | P=0.397N   | P=0.235   | (e)       | (e)       |
| COCH-ARM / FISHERS       | P=0.387N   | P=0.247   | (e)       | (e)       |
| MAX-ISO-POLY-3           | P=0.270N   | P=0.078   | (e)       | (e)       |
| HISTCONT SAME RTE        | P=0.418    | P=0.076   | (e)       | (e)       |
| HISTCONT ALL RTES        | P=0.439    | P=0.005** | (e)       | (e)       |
| CURR VS HC SAME RTE      | P=1.000    |           |           |           |
| CURR VS HC ALL RTES      | P=0.487    |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Females     |           |           |           |
|--------------------------|-------------|-----------|-----------|-----------|
|                          | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>All Organs</b>        |             |           |           |           |
| <b>Hemangiosarcoma</b>   |             |           |           |           |
| <b>TUMOR RATES</b>       | #           | #         | #         | #         |
| OVERALL (a)              | 3/50 (6%)   | 2/50 (4%) | 1/50 (2%) | 3/50 (6%) |
| POLY-3 RATE (b)          | 3/45.30     | 2/45.68   | 1/46.43   | 3/43.73   |
| POLY-3 PERCENT (g)       | 6.6%        | 4.4%      | 2.2%      | 6.9%      |
| TERMINAL (d)             | 3/39 (8%)   | 2/37 (5%) | 0/37 (0%) | 2/33 (6%) |
| FIRST INCIDENCE          | 731 (T)     | 731 (T)   | 576       | 699       |
| HC TUMORS SAME ROUTE     | 11/150 (7%) |           |           |           |
| HC TUMORS ALL ROUTES     | 32/650 (5%) |           |           |           |
| <b>STATISTICAL TESTS</b> |             |           |           |           |
| POLY 3                   | P=0.483     | P=0.496N  | P=0.297N  | P=0.646   |
| POLY 1.5                 | P=0.490     | P=0.493N  | P=0.297N  | P=0.655   |
| POLY 6                   | P=0.475     | P=0.504N  | P=0.298N  | P=0.634   |
| COCH-ARM / FISHERS       | P=0.501     | P=0.500N  | P=0.309N  | P=0.661N  |
| MAX-ISO-POLY-3           | P=0.480     | P=0.321N  | P=0.151N  | P=0.482   |
| HISTCONT SAME RTE        | (h)         | (h)       | (h)       | (h)       |
| HISTCONT ALL RTEs        | P=0.592     | P=1.000   | P=1.000   | P=0.481   |
| CURR VS HC SAME RTE      | P=0.680     |           |           |           |
| CURR VS HC ALL RTEs      | P=0.754     |           |           |           |



Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                                 | Females     |            |           |           |
|--------------------------------------|-------------|------------|-----------|-----------|
|                                      | Control     | 10 mg/m3   | 30 mg/m3  | 100 mg/m3 |
| <b>All Organs</b>                    |             |            |           |           |
| <b>Hemangiosarcoma or Hemangioma</b> |             |            |           |           |
| <b>TUMOR RATES</b>                   | #           | #          | #         | #         |
| OVERALL (a)                          | 3/50 (6%)   | 4/50 (8%)  | 1/50 (2%) | 3/50 (6%) |
| POLY-3 RATE (b)                      | 3/45.30     | 4/45.68    | 1/46.43   | 3/43.73   |
| POLY-3 PERCENT (g)                   | 6.6%        | 8.8%       | 2.2%      | 6.9%      |
| TERMINAL (d)                         | 3/39 (8%)   | 4/37 (11%) | 0/37 (0%) | 2/33 (6%) |
| FIRST INCIDENCE                      | 731 (T)     | 731 (T)    | 576       | 699       |
| HC TUMORS SAME ROUTE                 | 11/150 (7%) |            |           |           |
| HC TUMORS ALL ROUTES                 | 35/650 (5%) |            |           |           |
| <b>STATISTICAL TESTS</b>             |             |            |           |           |
| POLY 3                               | P=0.576N    | P=0.505    | P=0.297N  | P=0.646   |
| POLY 1.5                             | P=0.569N    | P=0.508    | P=0.297N  | P=0.655   |
| POLY 6                               | P=0.585N    | P=0.496    | P=0.298N  | P=0.634   |
| COCH-ARM / FISHERS                   | P=0.559N    | P=0.500    | P=0.309N  | P=0.661N  |
| MAX-ISO-POLY-3                       | P=0.429N    | P=0.352    | P=0.151N  | P=0.482   |
| HISTCONT SAME RTE                    | P=1.000     | P=1.000    | P=1.000   | P=1.000   |
| HISTCONT ALL RTES                    | P=0.682     | P=0.311    | P=1.000   | P=1.000   |
| CURR VS HC SAME RTE                  | P=0.680     |            |           |           |
| CURR VS HC ALL RTES                  | P=0.866     |            |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                       | Females     |           |           |           |
|----------------------------|-------------|-----------|-----------|-----------|
|                            | Control     | 10 mg/m3  | 30 mg/m3  | 100 mg/m3 |
| <b>All Organs</b>          |             |           |           |           |
| <b>Histiocytic Sarcoma</b> |             |           |           |           |
| <b>TUMOR RATES</b>         | #           | #         | #         | #         |
| OVERALL (a)                | 2/50 (4%)   | 1/50 (2%) | 1/50 (2%) | 1/50 (2%) |
| POLY-3 RATE (b)            | 2/45.71     | 1/46.35   | 1/45.92   | 1/43.61   |
| POLY-3 PERCENT (g)         | 4.4%        | 2.2%      | 2.2%      | 2.3%      |
| TERMINAL (d)               | 1/39 (3%)   | 0/37 (0%) | 1/37 (3%) | 1/33 (3%) |
| FIRST INCIDENCE            | 613         | 508       | 731 (T)   | 731 (T)   |
| HC TUMORS SAME ROUTE       | 4/150 (3%)  |           |           |           |
| HC TUMORS ALL ROUTES       | 14/650 (2%) |           |           |           |
| <b>STATISTICAL TESTS</b>   |             |           |           |           |
| POLY 3                     | P=0.515N    | P=0.495N  | P=0.498N  | P=0.516N  |
| POLY 1.5                   | P=0.509N    | P=0.494N  | P=0.496N  | P=0.508N  |
| POLY 6                     | P=0.521N    | P=0.501N  | P=0.504N  | P=0.529N  |
| COCH-ARM / FISHERS         | P=0.499N    | P=0.500N  | P=0.500N  | P=0.500N  |
| MAX-ISO-POLY-3             | P=0.441N    | P=0.278N  | P=0.280N  | P=0.298N  |
| HISTCONT SAME RTE          | (h)         | (h)       | (h)       | (h)       |
| HISTCONT ALL RTES          | (h)         | (h)       | (h)       | (h)       |
| CURR VS HC SAME RTE        | P=0.674     |           |           |           |
| CURR VS HC ALL RTES        | P=0.415     |           |           |           |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE   | Females       |             |             |             |
|--|---------------|-------------|-------------|-------------|
|  | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>All Organs</b>  |               |             |             |             |
| <b>Malignant Lymphoma: Histiocytic, Lymphocytic, Mixed, NOS, or Undifferentiated Cell Type</b> |               |             |             |             |
| <b>TUMOR RATES</b>   | #             | #           | #           | #           |
| OVERALL (a)  | 18/50 (36%)   | 18/50 (36%) | 17/50 (34%) | 20/50 (40%) |
| POLY-3 RATE (b)  | 18/45.40      | 18/46.09    | 17/47.51    | 20/45.79    |
| POLY-3 PERCENT (g)   | 39.7%         | 39.1%       | 35.8%       | 43.7%       |
| TERMINAL (d)   | 17/39 (44%)   | 16/37 (43%) | 12/37 (32%) | 13/33 (39%) |
| FIRST INCIDENCE  | 705           | 655         | 460         | 536         |
| HC TUMORS SAME ROUTE   | 37/150 (25%)  |             |             |             |
| HC TUMORS ALL ROUTES   | 157/650 (24%) |             |             |             |
| <b>STATISTICAL TESTS</b>   |               |             |             |             |
| POLY 3   | P=0.348       | P=0.562N    | P=0.433N    | P=0.429     |
| POLY 1.5   | P=0.348       | P=0.557N    | P=0.449N    | P=0.428     |
| POLY 6   | P=0.354       | P=0.580N    | P=0.421N    | P=0.430     |
| COCH-ARM / FISHERS   | P=0.354       | P=0.582N    | P=0.500N    | P=0.418     |
| MAX-ISO-POLY-3   | P=0.474       | P=0.476N    | P=0.352N    | P=0.347     |
| HISTCONT SAME RTE  | P=0.115       | P=0.142     | P=0.214     | P=0.084     |
| HISTCONT ALL RTES  | P=0.038*      | P=0.071     | P=0.136     | P=0.025*    |
| CURR VS HC SAME RTE  | P=0.193       |             |             |             |
| CURR VS HC ALL RTES  | P=0.060       |             |             |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Females       |             |             |             |
|--------------------------|---------------|-------------|-------------|-------------|
|                          | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>All Organs</b>        |               |             |             |             |
| <b>Benign Tumors</b>     |               |             |             |             |
| <b>TUMOR RATES</b>       | #             | #           | #           | #           |
| OVERALL (a)              | 26/50 (52%)   | 30/50 (60%) | 28/50 (56%) | 23/50 (46%) |
| POLY-3 RATE (b)          | 26/48.10      | 30/47.18    | 28/47.35    | 23/45.10    |
| POLY-3 PERCENT (g)       | 54.1%         | 63.6%       | 59.1%       | 51%         |
| TERMINAL (d)             | 20/39 (51%)   | 26/37 (70%) | 22/37 (60%) | 15/33 (46%) |
| FIRST INCIDENCE          | 345           | 583         | 576         | 634         |
| HC TUMORS SAME ROUTE     | 71/150 (47%)  |             |             |             |
| HC TUMORS ALL ROUTES     | 366/650 (56%) |             |             |             |
| <b>STATISTICAL TESTS</b> |               |             |             |             |
| POLY 3                   | P=0.256N      | P=0.228     | P=0.384     | P=0.465N    |
| POLY 1.5                 | P=0.219N      | P=0.257     | P=0.408     | P=0.414N    |
| POLY 6                   | P=0.292N      | P=0.189     | P=0.357     | P=0.517N    |
| COCH-ARM / FISHERS       | P=0.163N      | P=0.273     | P=0.421     | P=0.345N    |
| MAX-ISO-POLY-3           | P=0.367N      | P=0.172     | P=0.309     | P=0.385N    |
| HISTCONT SAME RTE        | P=0.383       | P=0.062     | P=0.147     | P=1.000     |
| HISTCONT ALL RTES        | P=1.000       | P=0.438     | P=1.000     | P=1.000     |
| CURR VS HC SAME RTE      | P=0.866       |             |             |             |
| CURR VS HC ALL RTES      | P=0.380       |             |             |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                     | Females       |             |             |             |
|--------------------------|---------------|-------------|-------------|-------------|
|                          | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>All Organs</b>        |               |             |             |             |
| <b>Malignant Tumors</b>  |               |             |             |             |
| <b>TUMOR RATES</b>       | #             | #           | #           | #           |
| OVERALL (a)              | 30/50 (60%)   | 31/50 (62%) | 28/50 (56%) | 34/50 (68%) |
| POLY-3 RATE (b)          | 30/46.87      | 31/48.54    | 28/49.14    | 34/46.94    |
| POLY-3 PERCENT (g)       | 64%           | 63.9%       | 57%         | 72.4%       |
| TERMINAL (d)             | 26/39 (67%)   | 22/37 (60%) | 19/37 (51%) | 22/33 (67%) |
| FIRST INCIDENCE          | 527           | 508         | 460         | 536         |
| HC TUMORS SAME ROUTE     | 83/150 (55%)  |             |             |             |
| HC TUMORS ALL ROUTES     | 341/650 (53%) |             |             |             |
| <b>STATISTICAL TESTS</b> |               |             |             |             |
| POLY 3                   | P=0.175       | P=0.579N    | P=0.310N    | P=0.254     |
| POLY 1.5                 | P=0.187       | P=0.575     | P=0.335N    | P=0.260     |
| POLY 6                   | P=0.173       | P=0.577N    | P=0.291N    | P=0.254     |
| COCH-ARM / FISHERS       | P=0.219       | P=0.500     | P=0.420N    | P=0.266     |
| MAX-ISO-POLY-3           | P=0.221       | P=0.493N    | P=0.245N    | P=0.188     |
| HISTCONT SAME RTE        | P=0.154       | P=0.346     | P=1.000     | P=0.113     |
| HISTCONT ALL RTES        | P=0.198       | P=0.276     | P=0.480     | P=0.112     |
| CURR VS HC SAME RTE      | P=0.619       |             |             |             |
| CURR VS HC ALL RTES      | P=0.305       |             |             |             |

Experiment Number: 20515 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
 Metal working fluids (CIMSTAR 3800)  
 CAS Number: CIMSTAR3800

Date Report Requested: 03/08/2013  
 Time Report Requested: 14:13:47  
 First Dose M/F: 05/05/08 / 05/05/08  
 Lab: BNW

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN MICE(B6C3F1)  
 TERMINAL SACRIFICE AT 105 WEEKS**

| DOSE                               | Females       |             |             |             |
|------------------------------------|---------------|-------------|-------------|-------------|
|                                    | Control       | 10 mg/m3    | 30 mg/m3    | 100 mg/m3   |
| <b>All Organs</b>                  |               |             |             |             |
| <b>Malignant and Benign Tumors</b> |               |             |             |             |
| <b>TUMOR RATES</b>                 | #             | #           | #           | #           |
| OVERALL (a)                        | 41/50 (82%)   | 42/50 (84%) | 43/50 (86%) | 40/50 (80%) |
| POLY-3 RATE (b)                    | 41/48.51      | 42/49.20    | 43/49.54    | 40/47.10    |
| POLY-3 PERCENT (g)                 | 84.5%         | 85.4%       | 86.8%       | 84.9%       |
| TERMINAL (d)                       | 34/39 (87%)   | 31/37 (84%) | 31/37 (84%) | 27/33 (82%) |
| FIRST INCIDENCE                    | 345           | 508         | 460         | 536         |
| HC TUMORS SAME ROUTE               | 123/150 (82%) |             |             |             |
| HC TUMORS ALL ROUTES               | 515/650 (79%) |             |             |             |
| <b>STATISTICAL TESTS</b>           |               |             |             |             |
| POLY 3                             | P=0.569N      | P=0.567     | P=0.486     | P=0.592     |
| POLY 1.5                           | P=0.507N      | P=0.564     | P=0.470     | P=0.585N    |
| POLY 6                             | P=0.545       | P=0.566     | P=0.505     | P=0.568     |
| COCH-ARM / FISHERS                 | P=0.378N      | P=0.500     | P=0.393     | P=0.500N    |
| MAX-ISO-POLY-3                     | P=0.656       | P=0.451     | P=0.372     | P=0.476     |
| HISTCONT SAME RTE                  | P=1.000       | P=1.000     | P=1.000     | P=1.000     |
| HISTCONT ALL RTES                  | P=0.617       | P=0.412     | P=0.343     | P=0.438     |
| CURR VS HC SAME RTE                | P=0.725       |             |             |             |
| CURR VS HC ALL RTES                | P=0.747       |             |             |             |

**Experiment Number:** 20515 - 04  
**Test Type:** CHRONIC  
**Route:** RESPIRATORY EXPOSURE WHOLE BODY  
**Species/Strain:** MICE/B6C3F1

**P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS**  
Metal working fluids (CIMSTAR 3800)  
**CAS Number:** CIMSTAR3800

**Date Report Requested:** 03/08/2013  
**Time Report Requested:** 14:13:47  
**First Dose M/F:** 05/05/08 / 05/05/08  
**Lab:** BNW

## LEGEND

- (a) Number of tumor-bearing animals/number of animals examined at site.
- (b) 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.
- (h) Historical Controls statistic is not calculated when the HC Poly-3 rate is higher than the Poly-3 rates for all dose groups.
- (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 ( $P \leq 0.05$ ).
- \*\* To the right of any statistical result, indicates significance at ( $P \leq 0.01$ ).
- N Indicates a negative trend for all tests  
The Cochran-Armitage and Fishers exact tests compare directly the overall incidence rates.

\*\*\* END OF REPORT \*\*\*