

**TDMS No.** 20005 - 06  
**Test Type:** CHRONIC  
**Route:** GAVAGE  
**Species/Strain:** MICE/B6C3F1

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

Ginseng  
**CAS Number:** 50647-08-0

**Date Report Requested:** 08/27/2008  
**Time Report Requested:** 15:02:16  
**First Dose M/F:** 02/10/04 / 02/09/04  
**Lab:** BAT

F1\_M3

**C Number:** C20005  
**Lock Date:** 10/10/2006  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 2.0.0

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| B6C3F1 MICE MALE                 | 0 MG/KG | 1250 MG/KG | 2500 MG/KG | 5000 MG/KG |
|----------------------------------|---------|------------|------------|------------|
| <b>Disposition Summary</b>       |         |            |            |            |
| Animals Initially in Study       | 50      | 50         | 50         | 50         |
| Early Deaths                     |         |            |            |            |
| Accidently Killed                |         |            |            | 1          |
| Moribund Sacrifice               | 12      | 10         | 8          | 8          |
| Natural Death                    | 6       | 7          | 4          | 8          |
| Survivors                        |         |            |            |            |
| Moribund Sacrifice               |         | 1          |            |            |
| Natural Death                    |         |            |            | 1          |
| Terminal Sacrifice               | 32      | 32         | 38         | 32         |
| Animals Examined Microscopically | 50      | 50         | 50         | 50         |

ALIMENTARY SYSTEM

|  |          |          |          |          |
|--|----------|----------|----------|----------|
| Esophagus                                      | (50)     | (50)     | (50)     | (50)     |
| Arteriole, Periesophageal Tissue, Inflammation |          | 1 (2%)   |          |          |
| Periesophageal Tissue, Inflammation            |          |          | 1 (2%)   |          |
| Gallbladder                                    | (49)     | (50)     | (49)     | (50)     |
| Cyst   | 1 (2%)   |          | 1 (2%)   |          |
| Inflammation                                   |          |          |          | 2 (4%)   |
| Intestine Large, Cecum                         | (50)     | (50)     | (50)     | (50)     |
| Inflammation                                   |          | 1 (2%)   |          |          |
| Intestine Large, Colon                         | (50)     | (50)     | (50)     | (50)     |
| Serosa, Inflammation                           | 1 (2%)   |          |          |          |
| Intestine Small, Duodenum                      | (50)     | (50)     | (50)     | (50)     |
| Intestine Small, Ileum                         | (50)     | (50)     | (50)     | (50)     |
| Inflammation                                   |          |          | 1 (2%)   | 1 (2%)   |
| Serosa, Inflammation                           | 1 (2%)   |          |          |          |
| Intestine Small, Jejunum                       | (50)     | (50)     | (50)     | (50)     |
| Inflammation                                   |          |          | 1 (2%)   |          |
| Peyer's Patch, Hyperplasia                     |          |          |          | 2 (4%)   |
| Serosa, Inflammation                           | 1 (2%)   |          |          |          |
| Liver  | (50)     | (50)     | (50)     | (50)     |
| Amyloid Deposition                             | 1 (2%)   |          |          |          |
| Angiectasis                                    | 1 (2%)   | 1 (2%)   |          |          |
| Basophilic Focus                               | 3 (6%)   | 3 (6%)   | 4 (8%)   | 1 (2%)   |
| Clear Cell Focus                               | 11 (22%) | 21 (42%) | 21 (42%) | 16 (32%) |
| Eosinophilic Focus                             | 17 (34%) | 16 (32%) | 18 (36%) | 21 (42%) |
| Fibrosis                                       | 1 (2%)   |          |          |          |
| Hyperplasia, Regenerative                      | 1 (2%)   |          |          |          |
| Infarct  |          |          |          | 1 (2%)   |

| B6C3F1 MICE MALE                               | 0 MG/KG  | 1250 MG/KG | 2500 MG/KG | 5000 MG/KG |
|--|----------|------------|------------|------------|
| Infiltration Cellular, Lymphocyte              |          |            | 1 (2%)     |            |
| Inflammation                                   | 8 (16%)  | 4 (8%)     | 7 (14%)    | 3 (6%)     |
| Mixed Cell Focus                               | 8 (16%)  | 6 (12%)    | 5 (10%)    | 5 (10%)    |
| Tension Lipidosis                              | 2 (4%)   | 3 (6%)     | 3 (6%)     | 1 (2%)     |
| Thrombosis                                     |          |            | 1 (2%)     |            |
| Bile Duct, Inflammation                        |          |            |            | 1 (2%)     |
| Hepatocyte, Atypia Cellular                    | 1 (2%)   | 1 (2%)     |            |            |
| Hepatocyte, Necrosis                           | 3 (6%)   | 4 (8%)     | 4 (8%)     | 1 (2%)     |
| Hepatocyte, Vacuolization Cytoplasmic, Diffuse | 12 (24%) | 15 (30%)   | 11 (22%)   | 17 (34%)   |
| Kupffer Cell, Pigmentation, Hemosiderin        |          | 1 (2%)     |            |            |
| Mesentery                                      | (3)      | (4)        | (6)        | (0)        |
| Necrosis                                       | 2 (67%)  | 2 (50%)    | 4 (67%)    |            |
| Artery, Inflammation                           |          | 1 (25%)    |            |            |
| Pancreas                                       | (50)     | (50)       | (50)       | (50)       |
| Basophilic Focus                               | 1 (2%)   | 1 (2%)     | 1 (2%)     |            |
| Infiltration Cellular, Lipocyte                | 1 (2%)   |            |            |            |
| Salivary Glands                                | (50)     | (50)       | (50)       | (50)       |
| Infiltration Cellular, Mononuclear Cell        |          |            | 1 (2%)     |            |
| Stomach, Forestomach                           | (50)     | (50)       | (50)       | (50)       |
| Erosion  |          |            | 1 (2%)     |            |
| Inflammation                                   | 1 (2%)   |            | 2 (4%)     |            |
| Ulcer  | 2 (4%)   | 1 (2%)     | 5 (10%)    | 1 (2%)     |
| Epithelium, Diverticulum                       | 1 (2%)   |            |            |            |
| Epithelium, Hyperplasia                        | 5 (10%)  | 4 (8%)     | 3 (6%)     | 2 (4%)     |
| Epithelium, Hyperplasia, Focal                 |          | 1 (2%)     |            |            |
| Stomach, Glandular                             | (50)     | (50)       | (50)       | (50)       |
| Inflammation                                   |          |            | 1 (2%)     |            |
| Ulcer  | 1 (2%)   |            | 1 (2%)     |            |
| Epithelium, Mineralization                     |          | 1 (2%)     | 1 (2%)     | 1 (2%)     |
| Tooth  | (13)     | (15)       | (9)        | (13)       |
| Dysplasia                                      | 11 (85%) | 11 (73%)   | 8 (89%)    | 10 (77%)   |

## CARDIOVASCULAR SYSTEM

|                        |          |          |          |          |
|------------------------|----------|----------|----------|----------|
| Blood Vessel           | (50)     | (48)     | (50)     | (50)     |
| Inflammation           |          | 1 (2%)   |          |          |
| Heart                  | (50)     | (50)     | (50)     | (50)     |
| Cardiomyopathy         | 42 (84%) | 43 (86%) | 45 (90%) | 41 (82%) |
| Hemorrhage             |          | 1 (2%)   |          |          |
| Inflammation           |          | 2 (4%)   |          |          |
| Mineralization         | 1 (2%)   |          | 1 (2%)   |          |
| Artery, Inflammation   |          | 3 (6%)   |          |          |
| Artery, Mineralization |          | 1 (2%)   |          |          |
| Ventricle, Thrombosis  |          |          |          | 1 (2%)   |

| B6C3F1 MICE MALE                | 0 MG/KG  | 1250 MG/KG | 2500 MG/KG | 5000 MG/KG |
|---------------------------------|----------|------------|------------|------------|
| <b>ENDOCRINE SYSTEM</b>         |          |            |            |            |
| Adrenal Cortex                  | (50)     | (50)       | (50)       | (50)       |
| Hyperplasia                     | 10 (20%) | 16 (32%)   | 16 (32%)   | 6 (12%)    |
| Hypertrophy                     | 28 (56%) | 24 (48%)   | 31 (62%)   | 35 (70%)   |
| Subcapsular, Hyperplasia, Focal | 1 (2%)   |            |            |            |
| Adrenal Medulla                 | (50)     | (50)       | (50)       | (50)       |
| Hyperplasia                     | 2 (4%)   |            | 1 (2%)     |            |
| Islets, Pancreatic              | (50)     | (50)       | (50)       | (50)       |
| Hyperplasia                     | 38 (76%) | 38 (76%)   | 38 (76%)   | 40 (80%)   |
| Parathyroid Gland               | (49)     | (48)       | (45)       | (48)       |
| Cyst                            |          |            | 1 (2%)     |            |
| Pituitary Gland                 | (50)     | (50)       | (50)       | (50)       |
| Pars Distalis, Cyst             | 2 (4%)   | 1 (2%)     | 1 (2%)     | 5 (10%)    |
| Pars Distalis, Hyperplasia      | 3 (6%)   | 4 (8%)     | 2 (4%)     | 3 (6%)     |
| Pars Intermedia, Hyperplasia    | 1 (2%)   |            |            |            |
| Thyroid Gland                   | (50)     | (50)       | (50)       | (50)       |
| Follicle, Cyst                  | 1 (2%)   |            | 2 (4%)     |            |
| <b>GENERAL BODY SYSTEM</b>      |          |            |            |            |
| None                            |          |            |            |            |
| <b>GENITAL SYSTEM</b>           |          |            |            |            |
| Epididymis                      | (50)     | (50)       | (50)       | (50)       |
| Granuloma Sperm                 | 2 (4%)   | 4 (8%)     | 1 (2%)     | 1 (2%)     |
| Inflammation                    | 2 (4%)   | 4 (8%)     | 6 (12%)    | 2 (4%)     |
| Preputial Gland                 | (50)     | (50)       | (50)       | (50)       |
| Inflammation                    | 5 (10%)  | 6 (12%)    | 4 (8%)     | 8 (16%)    |
| Duct, Ectasia                   | 9 (18%)  | 7 (14%)    | 6 (12%)    | 12 (24%)   |
| Prostate                        | (50)     | (50)       | (50)       | (50)       |
| Inflammation                    | 3 (6%)   |            | 2 (4%)     |            |
| Epithelium, Hyperplasia         |          |            |            | 1 (2%)     |
| Seminal Vesicle                 | (50)     | (50)       | (50)       | (50)       |
| Dilatation                      |          |            | 1 (2%)     |            |
| Inflammation                    |          |            |            | 1 (2%)     |
| Testes                          | (50)     | (50)       | (50)       | (50)       |
| Mineralization                  | 3 (6%)   |            |            |            |
| Germinal Epithelium, Atrophy    | 2 (4%)   | 4 (8%)     | 5 (10%)    | 4 (8%)     |
| Interstitial Cell, Hyperplasia  |          | 1 (2%)     |            |            |

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| B6C3F1 MICE MALE                   | 0 MG/KG | 1250 MG/KG | 2500 MG/KG | 5000 MG/KG |
|------------------------------------|---------|------------|------------|------------|
| <b>HEMATOPOIETIC SYSTEM</b>        |         |            |            |            |
| Bone Marrow                        | (50)    | (50)       | (50)       | (50)       |
| Hyperplasia                        | 1 (2%)  |            | 1 (2%)     |            |
| Lymph Node                         | (2)     | (2)        | (2)        | (1)        |
| Inguinal, Hyperplasia, Plasma Cell |         |            |            | 1 (100%)   |
| Lymph Node, Mandibular             | (50)    | (50)       | (50)       | (50)       |
| Hyperplasia, Plasma Cell           | 1 (2%)  |            |            |            |
| Lymph Node, Mesenteric             | (50)    | (49)       | (50)       | (50)       |
| Hemorrhage                         |         | 1 (2%)     |            |            |
| Hyperplasia, Lymphoid              | 1 (2%)  |            |            | 1 (2%)     |
| Hyperplasia, Plasma Cell           | 1 (2%)  |            | 1 (2%)     |            |
| Necrosis                           |         | 1 (2%)     |            |            |
| Artery, Inflammation               |         | 1 (2%)     |            |            |
| Spleen                             | (50)    | (50)       | (50)       | (50)       |
| Hematopoietic Cell Proliferation   | 2 (4%)  | 5 (10%)    | 7 (14%)    | 6 (12%)    |
| Hyperplasia, Lymphoid              | 7 (14%) | 11 (22%)   | 11 (22%)   | 4 (8%)     |
| Lymphoid Follicle, Atrophy         | 5 (10%) | 7 (14%)    | 1 (2%)     | 4 (8%)     |
| Red Pulp, Atrophy                  | 1 (2%)  |            |            |            |
| Vein, Inflammation                 |         | 1 (2%)     |            |            |
| Thymus                             | (47)    | (50)       | (50)       | (49)       |
| Cyst                               |         |            | 1 (2%)     |            |
| Inflammation                       |         | 1 (2%)     |            |            |
| Arteriole, Inflammation            |         | 1 (2%)     |            |            |
| <b>INTEGUMENTARY SYSTEM</b>        |         |            |            |            |
| Skin                               | (50)    | (50)       | (50)       | (50)       |
| Inflammation                       |         | 1 (2%)     |            | 2 (4%)     |
| Ulcer                              | 2 (4%)  | 1 (2%)     | 1 (2%)     | 2 (4%)     |
| Subcutaneous Tissue, Edema         |         | 1 (2%)     |            |            |
| <b>MUSCULOSKELETAL SYSTEM</b>      |         |            |            |            |
| Skeletal Muscle                    | (1)     | (1)        | (0)        | (0)        |
| <b>NERVOUS SYSTEM</b>              |         |            |            |            |
| Brain                              | (50)    | (50)       | (50)       | (50)       |
| Hemorrhage                         |         | 1 (2%)     |            |            |
| Hippocampus, Neuron, Necrosis      |         |            | 1 (2%)     |            |

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

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| B6C3F1 MICE MALE                            | 0 MG/KG  | 1250 MG/KG | 2500 MG/KG | 5000 MG/KG |
|---|----------|------------|------------|------------|
| Meninges, Hemorrhage                        |          |            |            | 1 (2%)     |
| <b>RESPIRATORY SYSTEM</b>                   |          |            |            |            |
| Lung  | (50)     | (50)       | (50)       | (50)       |
| Hemorrhage                                  | 1 (2%)   |            | 2 (4%)     |            |
| Inflammation                                | 4 (8%)   | 2 (4%)     | 2 (4%)     | 1 (2%)     |
| Pigmentation, Hemosiderin                   |          |            |            | 1 (2%)     |
| Thrombosis                                  | 1 (2%)   |            | 2 (4%)     | 1 (2%)     |
| Alveolar Epithelium, Hyperplasia            | 3 (6%)   | 1 (2%)     | 6 (12%)    |            |
| Alveolus, Infiltration Cellular, Histiocyte |          |            |            | 1 (2%)     |
| Arteriole, Inflammation                     | 1 (2%)   |            |            |            |
| Nose  | (50)     | (49)       | (49)       | (50)       |
| Inflammation                                | 6 (12%)  | 5 (10%)    | 7 (14%)    | 6 (12%)    |
| Polyp, Inflammatory                         |          | 3 (6%)     |            |            |
| Trachea                                     | (50)     | (50)       | (50)       | (50)       |
| <b>SPECIAL SENSES SYSTEM</b>                |          |            |            |            |
| Eye   | (50)     | (50)       | (50)       | (50)       |
| Cornea, Inflammation                        | 3 (6%)   | 3 (6%)     | 1 (2%)     | 3 (6%)     |
| Optic Nerve, Atrophy                        | 1 (2%)   |            |            |            |
| Retina, Dysplasia                           | 1 (2%)   |            |            | 1 (2%)     |
| Retina, Hemorrhage                          |          | 1 (2%)     |            |            |
| Harderian Gland                             | (50)     | (50)       | (50)       | (50)       |
| Hyperplasia                                 |          | 2 (4%)     | 1 (2%)     | 1 (2%)     |
| Inflammation                                |          |            | 1 (2%)     |            |
| <b>URINARY SYSTEM</b>                       |          |            |            |            |
| Kidney                                      | (50)     | (50)       | (50)       | (50)       |
| Cyst  | 9 (18%)  | 6 (12%)    | 7 (14%)    | 7 (14%)    |
| Hydronephrosis                              | 2 (4%)   | 2 (4%)     | 3 (6%)     | 3 (6%)     |
| Infarct                                     | 1 (2%)   |            | 1 (2%)     | 4 (8%)     |
| Inflammation                                | 2 (4%)   | 2 (4%)     | 1 (2%)     | 1 (2%)     |
| Metaplasia, Osseous                         |          |            | 2 (4%)     |            |
| Mineralization                              |          |            | 2 (4%)     |            |
| Nephropathy                                 | 48 (96%) | 47 (94%)   | 48 (96%)   | 47 (94%)   |
| Arteriole, Inflammation                     |          | 1 (2%)     |            |            |
| Artery, Inflammation                        |          | 2 (4%)     | 1 (2%)     |            |
| Papilla, Necrosis                           | 1 (2%)   |            |            |            |
| Pelvis, Inflammation                        |          | 1 (2%)     |            | 1 (2%)     |
| Renal Tubule, Hyperplasia                   |          | 2 (4%)     | 2 (4%)     |            |

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

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| B6C3F1 MICE MALE                     | 0 MG/KG | 1250 MG/KG | 2500 MG/KG | 5000 MG/KG |
|--------------------------------------|---------|------------|------------|------------|
| Vein, Inflammation                   |         |            | 1 (2%)     |            |
| Urinary Bladder                      | (50)    | (50)       | (50)       | (50)       |
| Inflammation                         | 1 (2%)  |            | 1 (2%)     |            |
| Transitional Epithelium, Hyperplasia | 1 (2%)  |            |            |            |

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\*\*\* END OF MALE \*\*\*

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| B6C3F1 MICE FEMALE               | 0 MG/KG | 1250 MG/KG | 2500 MG/KG | 5000 MG/KG |
|----------------------------------|---------|------------|------------|------------|
| <b>Disposition Summary</b>       |         |            |            |            |
| Animals Initially in Study       | 50      | 50         | 50         | 50         |
| Early Deaths                     |         |            |            |            |
| Dosing Accident                  |         |            | 1          | 4          |
| Moribund Sacrifice               | 7       | 11         | 10         | 8          |
| Natural Death                    | 5       | 8          | 5          | 6          |
| Survivors                        |         |            |            |            |
| Terminal Sacrifice               | 38      | 31         | 34         | 32         |
| Animals Examined Microscopically | 50      | 50         | 50         | 50         |

ALIMENTARY SYSTEM

|  |          |          |          |          |
|--|----------|----------|----------|----------|
| Esophagus                                      | (50)     | (50)     | (50)     | (50)     |
| Perforation                                    |          |          | 2 (4%)   |          |
| Muscularis, Degeneration                       | 1 (2%)   |          |          |          |
| Periesophageal Tissue, Inflammation            |          |          | 3 (6%)   | 1 (2%)   |
| Gallbladder                                    | (49)     | (50)     | (50)     | (50)     |
| Cyst   |          | 2 (4%)   | 1 (2%)   | 1 (2%)   |
| Intestine Large, Cecum                         | (50)     | (50)     | (50)     | (50)     |
| Intestine Large, Colon                         | (50)     | (50)     | (50)     | (50)     |
| Intestine Large, Rectum                        | (50)     | (50)     | (50)     | (50)     |
| Intestine Small, Duodenum                      | (49)     | (50)     | (50)     | (50)     |
| Intestine Small, Jejunum                       | (50)     | (50)     | (50)     | (50)     |
| Liver  | (50)     | (50)     | (50)     | (50)     |
| Angiectasis                                    | 2 (4%)   |          | 2 (4%)   |          |
| Basophilic Focus                               | 1 (2%)   |          |          | 2 (4%)   |
| Clear Cell Focus                               | 4 (8%)   | 3 (6%)   | 2 (4%)   | 2 (4%)   |
| Eosinophilic Focus                             | 15 (30%) | 14 (28%) | 3 (6%)   | 9 (18%)  |
| Hyperplasia, Regenerative                      |          | 1 (2%)   |          |          |
| Infiltration Cellular, Lymphocyte              |          |          | 1 (2%)   |          |
| Inflammation                                   | 14 (28%) | 11 (22%) | 10 (20%) | 14 (28%) |
| Mixed Cell Focus                               | 2 (4%)   | 5 (10%)  | 2 (4%)   | 2 (4%)   |
| Tension Lipidosis                              | 2 (4%)   | 5 (10%)  | 4 (8%)   | 8 (16%)  |
| Thrombosis                                     |          |          | 1 (2%)   | 1 (2%)   |
| Hepatocyte, Atypia Cellular                    |          | 1 (2%)   |          |          |
| Hepatocyte, Necrosis                           | 4 (8%)   | 2 (4%)   |          | 1 (2%)   |
| Hepatocyte, Vacuolization Cytoplasmic, Diffuse | 8 (16%)  | 10 (20%) | 10 (20%) | 5 (10%)  |
| Mesentery                                      | (8)      | (9)      | (7)      | (4)      |
| Inflammation                                   |          |          | 1 (14%)  |          |
| Necrosis                                       | 8 (100%) | 8 (89%)  | 5 (71%)  | 4 (100%) |
| Fat, Necrosis                                  |          |          | 1 (14%)  |          |

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



| B6C3F1 MICE FEMALE                      | 0 MG/KG  | 1250 MG/KG | 2500 MG/KG | 5000 MG/KG |
|---|----------|------------|------------|------------|
| Pancreas                                | (50)     | (50)       | (50)       | (50)       |
| Basophilic Focus                        |          | 2 (4%)     |            |            |
| Hemorrhage                              |          | 1 (2%)     |            |            |
| Infiltration Cellular, Lipocyte         |          | 3 (6%)     |            |            |
| Inflammation                            |          | 2 (4%)     |            |            |
| Acinus, Hyperplasia                     | 4 (8%)   | 1 (2%)     | 1 (2%)     |            |
| Artery, Inflammation                    |          |            | 1 (2%)     |            |
| Duct, Cyst                              | 1 (2%)   |            |            |            |
| Salivary Glands                         | (50)     | (50)       | (50)       | (50)       |
| Stomach, Forestomach                    | (50)     | (50)       | (50)       | (50)       |
| Infiltration Cellular, Mast Cell        |          |            | 1 (2%)     |            |
| Inflammation                            |          | 1 (2%)     | 1 (2%)     |            |
| Ulcer                                   |          |            | 1 (2%)     |            |
| Epithelium, Hyperplasia                 | 2 (4%)   | 2 (4%)     | 3 (6%)     | 4 (8%)     |
| Epithelium, Hyperplasia, Focal          |          | 1 (2%)     | 2 (4%)     |            |
| Stomach, Glandular                      | (50)     | (50)       | (50)       | (50)       |
| Erosion                                 |          | 1 (2%)     | 1 (2%)     |            |
| Ulcer                                   |          |            | 1 (2%)     |            |
| Epithelium, Mineralization              | 1 (2%)   | 1 (2%)     |            |            |
| <b>CARDIOVASCULAR SYSTEM</b>            |          |            |            |            |
| Blood Vessel                            | (50)     | (50)       | (50)       | (50)       |
| Inflammation                            | 1 (2%)   |            | 1 (2%)     | 1 (2%)     |
| Mineralization                          |          | 1 (2%)     |            |            |
| Media, Hyperplasia                      | 1 (2%)   |            |            |            |
| Heart                                   | (50)     | (50)       | (50)       | (50)       |
| Cardiomyopathy                          | 35 (70%) | 40 (80%)   | 38 (76%)   | 31 (62%)   |
| Inflammation                            |          | 2 (4%)     | 3 (6%)     | 1 (2%)     |
| Mineralization                          |          | 2 (4%)     |            |            |
| Artery, Inflammation                    |          |            |            | 2 (4%)     |
| Atrium, Thrombosis                      |          | 1 (2%)     |            |            |
| Epicardium, Hyperplasia                 |          | 1 (2%)     |            |            |
| Myocardium, Hyperplasia, Reticulum Cell | 1 (2%)   |            |            |            |
| Valve, Thrombosis                       |          | 2 (4%)     |            |            |
| Ventricle, Thrombosis                   | 1 (2%)   |            |            | 1 (2%)     |
| <b>ENDOCRINE SYSTEM</b>                 |          |            |            |            |
| Adrenal Cortex                          | (50)     | (50)       | (50)       | (50)       |
| Hyperplasia                             | 8 (16%)  | 1 (2%)     | 3 (6%)     | 6 (12%)    |
| Hypertrophy                             | 39 (78%) | 40 (80%)   | 39 (78%)   | 39 (78%)   |
| Adrenal Medulla                         | (50)     | (50)       | (50)       | (50)       |
| Amyloid Deposition                      |          | 1 (2%)     |            |            |

| B6C3F1 MICE FEMALE         | 0 MG/KG  | 1250 MG/KG | 2500 MG/KG | 5000 MG/KG |
|----------------------------|----------|------------|------------|------------|
| Hyperplasia                | 3 (6%)   | 3 (6%)     | 6 (12%)    | 2 (4%)     |
| Islets, Pancreatic         | (50)     | (50)       | (50)       | (50)       |
| Hyperplasia                | 16 (32%) | 15 (30%)   | 17 (34%)   | 15 (30%)   |
| Parathyroid Gland          | (41)     | (44)       | (39)       | (43)       |
| Hyperplasia                |          |            |            | 1 (2%)     |
| Pituitary Gland            | (50)     | (50)       | (50)       | (49)       |
| Pars Distalis, Cyst        |          | 2 (4%)     |            |            |
| Pars Distalis, Hyperplasia | 18 (36%) | 18 (36%)   | 19 (38%)   | 18 (37%)   |
| Thyroid Gland              | (49)     | (50)       | (50)       | (50)       |
| Inflammation               |          |            |            | 1 (2%)     |
| C-cell, Hyperplasia        |          |            | 1 (2%)     |            |
| Follicle, Cyst             |          | 1 (2%)     | 2 (4%)     | 1 (2%)     |

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

|                                  |          |          |          |          |
|----------------------------------|----------|----------|----------|----------|
| Clitoral Gland                   | (50)     | (50)     | (49)     | (50)     |
| Inflammation                     |          |          |          | 1 (2%)   |
| Ovary                            | (50)     | (50)     | (50)     | (50)     |
| Cyst                             | 4 (8%)   | 7 (14%)  | 6 (12%)  | 2 (4%)   |
| Hemorrhage                       |          | 1 (2%)   | 2 (4%)   | 1 (2%)   |
| Inflammation                     | 2 (4%)   |          | 2 (4%)   |          |
| Thrombosis                       | 1 (2%)   |          |          |          |
| Uterus                           | (50)     | (50)     | (50)     | (50)     |
| Angiectasis                      |          | 1 (2%)   |          | 1 (2%)   |
| Atrophy                          |          | 1 (2%)   |          |          |
| Hemorrhage                       | 1 (2%)   |          |          | 1 (2%)   |
| Hydrometra                       |          |          | 1 (2%)   |          |
| Inflammation                     | 2 (4%)   | 2 (4%)   | 2 (4%)   |          |
| Thrombosis                       |          |          | 1 (2%)   |          |
| Endometrium, Decidual Reaction   |          |          | 1 (2%)   |          |
| Endometrium, Hyperplasia, Cystic | 47 (94%) | 40 (80%) | 35 (70%) | 43 (86%) |
| Myometrium, Atypia Cellular      | 1 (2%)   |          |          |          |

HEMATOPOIETIC SYSTEM

|               |        |        |        |        |
|---------------|--------|--------|--------|--------|
| Bone Marrow   | (50)   | (50)   | (49)   | (50)   |
| Angiectasis   | 1 (2%) |        |        |        |
| Hyperplasia   |        |        | 1 (2%) | 2 (4%) |
| Myelofibrosis |        | 4 (8%) | 2 (4%) | 3 (6%) |

| B6C3F1 MICE FEMALE                | 0 MG/KG  | 1250 MG/KG | 2500 MG/KG | 5000 MG/KG |
|-----------------------------------|----------|------------|------------|------------|
| Lymph Node                        | (4)      | (4)        | (6)        | (6)        |
| Hyperplasia                       |          |            | 1 (17%)    |            |
| Iliac, Hemorrhage                 |          |            | 1 (17%)    |            |
| Lumbar, Hyperplasia, Plasma Cell  | 1 (25%)  |            |            |            |
| Renal, Degeneration, Cystic       |          |            |            | 1 (17%)    |
| Renal, Hemorrhage                 |          | 2 (50%)    | 1 (17%)    |            |
| Lymph Node, Mandibular            | (50)     | (49)       | (50)       | (50)       |
| Amyloid Deposition                |          |            |            | 1 (2%)     |
| Hyperplasia                       |          |            | 1 (2%)     | 1 (2%)     |
| Hyperplasia, Lymphoid             |          |            | 1 (2%)     |            |
| Infiltration Cellular, Histiocyte |          |            | 2 (4%)     |            |
| Lymph Node, Mesenteric            | (49)     | (50)       | (50)       | (50)       |
| Degeneration, Cystic              |          | 1 (2%)     |            |            |
| Hemorrhage                        |          | 1 (2%)     |            |            |
| Hyperplasia, Lymphoid             |          | 1 (2%)     |            |            |
| Infiltration Cellular, Histiocyte |          |            | 2 (4%)     |            |
| Inflammation                      |          |            | 2 (4%)     | 1 (2%)     |
| Spleen                            | (50)     | (50)       | (49)       | (50)       |
| Amyloid Deposition                |          |            | 1 (2%)     |            |
| Atrophy                           |          |            |            | 1 (2%)     |
| Hematopoietic Cell Proliferation  | 4 (8%)   | 2 (4%)     | 2 (4%)     | 2 (4%)     |
| Hyperplasia, Lymphoid             | 22 (44%) | 23 (46%)   | 24 (49%)   | 12 (24%)   |
| Hyperplasia, Plasma Cell          |          |            | 1 (2%)     |            |
| Infarct                           | 1 (2%)   |            |            |            |
| Lymphoid Follicle, Atrophy        | 2 (4%)   | 1 (2%)     | 4 (8%)     | 3 (6%)     |
| Thymus                            | (48)     | (49)       | (49)       | (49)       |
| Cyst                              | 1 (2%)   |            |            |            |
| Hyperplasia, Lymphoid             |          |            |            | 1 (2%)     |
| Infiltration Cellular, Mast Cell  |          |            | 1 (2%)     |            |
| Inflammation                      |          |            | 1 (2%)     |            |
| <b>INTEGUMENTARY SYSTEM</b>       |          |            |            |            |
| Mammary Gland                     | (50)     | (50)       | (50)       | (50)       |
| Hyperplasia, Focal                |          | 2 (4%)     | 3 (6%)     | 2 (4%)     |
| Inflammation                      | 1 (2%)   |            |            |            |
| Skin                              | (50)     | (50)       | (50)       | (50)       |
| Inflammation                      | 1 (2%)   |            | 1 (2%)     |            |
| Ulcer                             | 1 (2%)   | 1 (2%)     |            |            |
| Subcutaneous Tissue, Fibrosis     | 2 (4%)   | 4 (8%)     | 1 (2%)     | 1 (2%)     |
| <b>MUSCULOSKELETAL SYSTEM</b>     |          |            |            |            |
| Bone                              | (50)     | (50)       | (50)       | (50)       |

TDMS No. 20005 - 06  
 Test Type: CHRONIC  
 Route: GAVAGE  
 Species/Strain: MICE/B6C3F1

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

Ginseng  
 CAS Number: 50647-08-0

Date Report Requested: 08/27/2008  
 Time Report Requested: 15:02:16  
 First Dose M/F: 02/10/04 / 02/09/04  
 Lab: BAT

| B6C3F1 MICE FEMALE                          | 0 MG/KG  | 1250 MG/KG | 2500 MG/KG | 5000 MG/KG |
|---|----------|------------|------------|------------|
| Myelofibrosis                               |          |            |            | 1 (2%)     |
| <b>NERVOUS SYSTEM</b>                       |          |            |            |            |
| Brain                                       | (50)     | (50)       | (50)       | (50)       |
| Hydrocephalus                               |          | 2 (4%)     | 1 (2%)     |            |
| Inflammation                                |          | 1 (2%)     |            |            |
| Artery, Inflammation                        |          |            | 1 (2%)     |            |
| Meninges, Inflammation                      |          |            | 1 (2%)     |            |
| Spinal Cord                                 | (0)      | (1)        | (1)        | (1)        |
| Degeneration                                |          |            |            | 1 (100%)   |
| <b>RESPIRATORY SYSTEM</b>                   |          |            |            |            |
| Lung  | (50)     | (50)       | (50)       | (50)       |
| Congestion                                  |          |            |            | 3 (6%)     |
| Hemorrhage                                  |          | 1 (2%)     | 1 (2%)     |            |
| Inflammation                                | 2 (4%)   | 6 (12%)    | 2 (4%)     | 6 (12%)    |
| Thrombosis                                  |          |            | 2 (4%)     |            |
| Alveolar Epithelium, Hyperplasia            | 2 (4%)   | 3 (6%)     | 2 (4%)     | 1 (2%)     |
| Alveolus, Infiltration Cellular, Histiocyte |          |            | 2 (4%)     |            |
| Nose  | (50)     | (50)       | (50)       | (49)       |
| Inflammation                                | 1 (2%)   |            | 4 (8%)     | 3 (6%)     |
| <b>SPECIAL SENSES SYSTEM</b>                |          |            |            |            |
| Eye   | (49)     | (50)       | (50)       | (50)       |
| Developmental Malformation                  | 1 (2%)   |            |            |            |
| Cornea, Inflammation                        | 2 (4%)   | 1 (2%)     | 3 (6%)     |            |
| Optic Nerve, Degeneration                   |          |            |            | 1 (2%)     |
| Harderian Gland                             | (49)     | (50)       | (50)       | (50)       |
| Hyperplasia                                 | 2 (4%)   | 1 (2%)     | 1 (2%)     |            |
| <b>URINARY SYSTEM</b>                       |          |            |            |            |
| Kidney                                      | (50)     | (50)       | (50)       | (50)       |
| Cyst  |          | 1 (2%)     |            |            |
| Infarct                                     |          | 2 (4%)     |            | 6 (12%)    |
| Inflammation                                | 7 (14%)  | 2 (4%)     |            | 1 (2%)     |
| Metaplasia, Osseous                         |          | 3 (6%)     | 2 (4%)     |            |
| Mineralization                              |          | 1 (2%)     |            |            |
| Nephropathy                                 | 39 (78%) | 39 (78%)   | 38 (76%)   | 33 (66%)   |

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

TDMS No. 20005 - 06

Test Type: CHRONIC

Route: GAVAGE

Species/Strain: MICE/B6C3F1

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

Ginseng

CAS Number: 50647-08-0

Date Report Requested: 08/27/2008

Time Report Requested: 15:02:16

First Dose M/F: 02/10/04 / 02/09/04

Lab: BAT

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| B6C3F1 MICE FEMALE      | 0 MG/KG | 1250 MG/KG | 2500 MG/KG | 5000 MG/KG |
|-------------------------|---------|------------|------------|------------|
| Arteriole, Inflammation |         |            |            | 1 (2%)     |
| Artery, Inflammation    |         | 1 (2%)     | 1 (2%)     |            |
| Urinary Bladder         | (49)    | (50)       | (50)       | (50)       |
| Inflammation            |         |            |            | 1 (2%)     |

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