

**TDMS No.** 2007 - 06

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS  
ABRIDGED) (a)**

**Date Report Requested:** 04/13/2009

**Test Type:** CHRONIC

Kava kava extract

**Time Report Requested:** 10:57:30

**Route:** GAVAGE

**CAS Number:** 9000-38-8

**First Dose M/F:** 08/24/04 / 08/23/04

**Species/Strain:** MICE/B6C3F1

**Lab:** BAT

F\_M3

**C Number:** C20007  
**Lock Date:** 05/10/2007  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 2.1.0

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First Dose M/F: 08/24/04 / 08/23/04

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE MALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG
<b>Disposition Summary</b>				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	3	10	10	7
Natural Death	13	7	5	7
Survivors				
Moribund Sacrifice			1	
Natural Death	1			
Terminal Sacrifice	33	33	34	36
Animals Examined Microscopically	50	50	50	50

## ALIMENTARY SYSTEM

Gallbladder	(49)	(50)	(49)	(47)
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Adenoma	1 (2%)			
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Adenoma	1 (2%)	1 (2%)		1 (2%)
Carcinoma	1 (2%)			
Liver	(50)	(50)	(50)	(50)
Hemangioma		1 (2%)		
Hemangiosarcoma	5 (10%)			1 (2%)
Hemangiosarcoma, Metastatic, Testes			1 (2%)	
Hepatoblastoma		4 (8%)	7 (14%)	9 (18%)
Hepatoblastoma, Multiple			2 (4%)	3 (6%)
Hepatocellular Adenoma	14 (28%)	13 (26%)	10 (20%)	12 (24%)
Hepatocellular Adenoma, Multiple	13 (26%)	19 (38%)	19 (38%)	23 (46%)
Hepatocellular Carcinoma	16 (32%)	15 (30%)	19 (38%)	15 (30%)
Hepatocellular Carcinoma, Multiple	4 (8%)	3 (6%)	7 (14%)	5 (10%)
Hepatocholangiocarcinoma	4 (8%)			1 (2%)
Osteosarcoma, Metastatic, Skin	1 (2%)			
Mesentery	(3)	(6)	(2)	(3)
Pancreas	(50)	(50)	(50)	(50)
Salivary Glands	(50)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(50)

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

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CAS Number: 9000-38-8

First Dose M/F: 08/24/04 / 08/23/04

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE MALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG
Squamous Cell Carcinoma	1 (2%)			
Squamous Cell Papilloma	8 (16%)	2 (4%)		2 (4%)
Squamous Cell Papilloma, Multiple		1 (2%)		
Stomach, Glandular	(50)	(50)	(50)	(50)
Hepatoblastoma, Metastatic, Liver				1 (2%)
Tooth	(33)	(32)	(27)	(21)
<b>CARDIOVASCULAR SYSTEM</b>				
Heart	(50)	(50)	(50)	(50)
Hepatocholangiocarcinoma, Metastatic, Liver	2 (4%)			
Osteosarcoma, Metastatic, Skin	1 (2%)			
Rhabdomyosarcoma			1 (2%)	
<b>ENDOCRINE SYSTEM</b>				
Adrenal Cortex	(50)	(50)	(50)	(50)
Adenoma		1 (2%)		
Hepatocholangiocarcinoma, Metastatic, Liver	1 (2%)			
Adrenal Medulla	(50)	(50)	(50)	(50)
Pheochromocytoma Benign			2 (4%)	
Islets, Pancreatic	(50)	(50)	(50)	(50)
Adenoma				1 (2%)
Parathyroid Gland	(47)	(44)	(46)	(44)
Pituitary Gland	(49)	(50)	(50)	(50)
Pars Distalis, Adenoma			1 (2%)	
Pars Intermedia, Adenoma	1 (2%)			
Thyroid Gland	(50)	(50)	(49)	(50)
Follicular Cell, Adenoma				2 (4%)
<b>GENERAL BODY SYSTEM</b>				
Peritoneum	(0)	(0)	(0)	(2)
<b>GENITAL SYSTEM</b>				

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

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Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE MALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG
Coagulating Gland	(0)	(1)	(1)	(0)
Epididymis	(50)	(50)	(50)	(50)
Penis	(0)	(1)	(0)	(0)
Preputial Gland	(50)	(50)	(50)	(50)
Prostate	(50)	(50)	(50)	(50)
Seminal Vesicle	(50)	(50)	(50)	(50)
Testes	(50)	(50)	(50)	(50)
Hemangiosarcoma			1 (2%)	
Interstitial Cell, Adenoma	1 (2%)			
<b>HEMATOPOIETIC SYSTEM</b>				
Bone Marrow	(50)	(50)	(50)	(50)
Hemangioma	1 (2%)			
Hemangiosarcoma	2 (4%)			
Lymph Node	(0)	(1)	(3)	(3)
Pancreatic, Hepatoblastoma, Metastatic, Liver		1 (100%)		
Lymph Node, Mandibular	(50)	(50)	(50)	(49)
Lymph Node, Mesenteric	(50)	(50)	(50)	(49)
Spleen	(50)	(50)	(49)	(50)
Hemangiosarcoma	2 (4%)	1 (2%)	2 (4%)	
Thymus	(48)	(47)	(47)	(49)
Hemangiosarcoma, Metastatic, Spleen		1 (2%)		
Hepatocholangiocarcinoma, Metastatic, Liver	1 (2%)			
<b>INTEGUMENTARY SYSTEM</b>				
Skin	(50)	(50)	(50)	(50)
Subcutaneous Tissue, Fibrosarcoma				1 (2%)
Subcutaneous Tissue, Granular Cell Tumor Benign	1 (2%)			
Subcutaneous Tissue, Hemangiosarcoma	1 (2%)	1 (2%)	1 (2%)	
Subcutaneous Tissue, Osteosarcoma	1 (2%)			
<b>MUSCULOSKELETAL SYSTEM</b>				

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

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CAS Number: 9000-38-8

First Dose M/F: 08/24/04 / 08/23/04

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE MALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG
Bone	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung		1 (2%)		
Skeletal Muscle	(2)	(0)	(1)	(0)
Hemangiosarcoma	1 (50%)			
Hepatocholangiocarcinoma, Metastatic, Liver	1 (50%)			
Rhabdomyosarcoma, Metastatic, Heart			1 (100%)	
<b>NERVOUS SYSTEM</b>				
Brain	(50)	(50)	(50)	(50)
<b>RESPIRATORY SYSTEM</b>				
Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	9 (18%)	6 (12%)	7 (14%)	7 (14%)
Alveolar/Bronchiolar Adenoma, Multiple		1 (2%)	1 (2%)	2 (4%)
Alveolar/Bronchiolar Carcinoma	2 (4%)	4 (8%)	6 (12%)	1 (2%)
Alveolar/Bronchiolar Carcinoma, Multiple		2 (4%)		
Carcinoma, Metastatic, Harderian Gland		1 (2%)		1 (2%)
Hemangiosarcoma, Metastatic, Liver	1 (2%)			
Hemangiosarcoma, Metastatic, Testes			1 (2%)	
Hepatoblastoma, Metastatic, Liver		1 (2%)	1 (2%)	1 (2%)
Hepatocellular Carcinoma, Metastatic, Liver	5 (10%)	7 (14%)	7 (14%)	10 (20%)
Hepatocholangiocarcinoma, Metastatic, Liver	2 (4%)			
Osteosarcoma, Metastatic, Skin	1 (2%)			
Rhabdomyosarcoma, Metastatic, Heart			1 (2%)	
Nose	(50)	(50)	(50)	(50)
Trachea	(50)	(50)	(50)	(50)
<b>SPECIAL SENSES SYSTEM</b>				
Eye	(50)	(50)	(50)	(50)
Harderian Gland	(50)	(50)	(50)	(50)
Adenoma	5 (10%)	5 (10%)	3 (6%)	6 (12%)
Carcinoma		1 (2%)	1 (2%)	1 (2%)

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

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Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE MALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG
<b>URINARY SYSTEM</b>				
Kidney	(50)	(50)	(50)	(50)
Hepatocholangiocarcinoma, Metastatic, Liver	1 (2%)			
Capsule, Hemangioma	1 (2%)			
Renal Tubule, Adenoma	1 (2%)	3 (6%)		
Urethra	(2)	(4)	(0)	(1)
Urinary Bladder	(50)	(50)	(50)	(50)
Hepatoblastoma, Metastatic, Liver				1 (2%)
<b>SYSTEMIC LESIONS</b>				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma		1 (2%)	1 (2%)	1 (2%)
Lymphoma Malignant	2 (4%)	3 (6%)	1 (2%)	6 (12%)

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

\* Number of animals with any tissue examined microscopically

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Species/Strain: MICE/B6C3F1

Lab: BAT

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B6C3F1 MICE MALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG
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**Tumor Summary for Males**

<b>Total Animals with Primary Neoplasms (b)</b>	47	46	47	47
<b>Total Primary Neoplasms</b>	99	88	92	100
<b>Total Animals with Benign Neoplasms</b>	34	38	35	37
<b>Total Benign Neoplasms</b>	57	53	43	56
<b>Total Animals with Malignant Neoplasms</b>	32	27	36	32
<b>Total Malignant Neoplasms</b>	42	35	49	44
<b>Total Animals with Metastatic Neoplasms</b>	9	10	9	13
<b>Total Metastatic Neoplasms</b>	17	12	12	14
<b>Total Animals with Malignant Neoplasms Uncertain Primary Site</b>				
<b>Total Animals with Neoplasms Uncertain-Benign or Malignant</b>				
<b>Total Uncertain Neoplasms</b>				

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

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

b - Primary tumors: all tumors except metastatic tumors

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First Dose M/F: 08/24/04 / 08/23/04

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE FEMALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG
<b>Disposition Summary</b>				
Animals Initially in Study	50	50	50	50
Early Deaths				
Accidently Killed	1			1
Moribund Sacrifice	4	4	1	7
Natural Death	7	12	4	5
Survivors				
Terminal Sacrifice	38	34	45	37
Animals Examined Microscopically	50	50	50	50
<b>ALIMENTARY SYSTEM</b>				
Esophagus	(50)	(50)	(50)	(50)
Gallbladder	(50)	(48)	(49)	(50)
Liposarcoma, Metastatic, Skin		1 (2%)		
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Adenoma	1 (2%)			
Liposarcoma, Metastatic, Skin		1 (2%)		
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Adenoma	1 (2%)			
Liver	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Uncertain Primary Site			1 (2%)	
Hemangioma				1 (2%)
Hemangiosarcoma	1 (2%)	1 (2%)	1 (2%)	
Hepatoblastoma			1 (2%)	
Hepatocellular Adenoma	8 (16%)	7 (14%)	8 (16%)	4 (8%)
Hepatocellular Adenoma, Multiple		4 (8%)	6 (12%)	1 (2%)
Hepatocellular Carcinoma	2 (4%)	12 (24%)	7 (14%)	8 (16%)
Hepatocellular Carcinoma, Multiple	1 (2%)	1 (2%)	1 (2%)	
Liposarcoma, Metastatic, Skin		1 (2%)		
Sarcoma	1 (2%)			
Mesentery	(8)	(10)	(5)	(6)
Pancreas	(49)	(50)	(50)	(50)
Liposarcoma, Metastatic, Skin		1 (2%)		

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



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Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE FEMALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG
Salivary Glands	(49)	(49)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(50)
Squamous Cell Carcinoma			2 (4%)	
Squamous Cell Papilloma	3 (6%)	3 (6%)	2 (4%)	
Stomach, Glandular	(50)	(50)	(50)	(50)
Adenoma	1 (2%)			
Tooth	(1)	(1)	(2)	(2)
<b>CARDIOVASCULAR SYSTEM</b>				
Blood Vessel	(50)	(50)	(50)	(50)
Heart	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung	1 (2%)			
Fibrous Histiocytoma, Metastatic, Skin				1 (2%)
<b>ENDOCRINE SYSTEM</b>				
Adrenal Cortex	(50)	(50)	(50)	(50)
Adenoma		1 (2%)		
Adrenal Medulla	(50)	(50)	(50)	(50)
Pheochromocytoma Benign		1 (2%)		1 (2%)
Islets, Pancreatic	(50)	(50)	(50)	(50)
Adenoma	1 (2%)	1 (2%)		
Carcinoma			1 (2%)	
Parathyroid Gland	(48)	(44)	(48)	(48)
Pituitary Gland	(50)	(50)	(49)	(50)
Pars Distalis, Adenoma	2 (4%)	1 (2%)	1 (2%)	
Pars Intermedia, Adenoma	1 (2%)			
Thyroid Gland	(50)	(50)	(50)	(50)
<b>GENERAL BODY SYSTEM</b>				
Tissue NOS	(0)	(0)	(0)	(1)
<b>GENITAL SYSTEM</b>				
Clitoral Gland	(49)	(48)	(50)	(50)

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

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Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE FEMALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG
Ovary	(49)	(50)	(50)	(50)
Cystadenoma	5 (10%)	9 (18%)	9 (18%)	4 (8%)
Granulosa Cell Tumor Benign			1 (2%)	
Hemangioma		3 (6%)	1 (2%)	
Hemangiosarcoma				1 (2%)
Luteoma	1 (2%)			
Teratoma Benign		1 (2%)		
Uterus	(50)	(50)	(50)	(50)
Hemangioma				1 (2%)
Leiomyosarcoma				1 (2%)
Polyp Stromal	2 (4%)			2 (4%)
Vagina	(0)	(0)	(0)	(1)
<b>HEMATOPOIETIC SYSTEM</b>				
Bone Marrow	(50)	(50)	(50)	(50)
Hemangiosarcoma		2 (4%)		
Lymph Node	(3)	(3)	(0)	(0)
Lymph Node, Mandibular	(48)	(49)	(50)	(50)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Spleen	(49)	(48)	(50)	(49)
Hemangiosarcoma			1 (2%)	
Liposarcoma, Metastatic, Skin		1 (2%)		
Mast Cell Tumor Malignant	1 (2%)			
Thymus	(50)	(50)	(49)	(47)
Fibrous Histiocytoma, Metastatic, Skin				1 (2%)
Rhabdomyosarcoma, Metastatic, Skeletal Muscle	1 (2%)			
<b>INTEGUMENTARY SYSTEM</b>				
Mammary Gland	(50)	(49)	(50)	(50)
Adenoma		1 (2%)	1 (2%)	
Skin	(50)	(50)	(50)	(50)
Fibrosarcoma		1 (2%)		
Fibrous Histiocytoma				1 (2%)
Subcutaneous Tissue, Fibrous Histiocytoma			1 (2%)	
Subcutaneous Tissue, Hemangioma			1 (2%)	

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Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE FEMALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG
Subcutaneous Tissue, Liposarcoma		1 (2%)		
Subcutaneous Tissue, Schwannoma		1 (2%)		
Malignant				
<b>MUSCULOSKELETAL SYSTEM</b>				
Bone	(50)	(50)	(50)	(50)
Osteosarcoma		2 (4%)		1 (2%)
Skeletal Muscle	(3)	(1)	(0)	(0)
Liposarcoma, Metastatic, Skin		1 (100%)		
Rhabdomyosarcoma	3 (100%)			
<b>NERVOUS SYSTEM</b>				
Brain	(50)	(50)	(50)	(50)
Peripheral Nerve	(1)	(0)	(0)	(1)
Spinal Cord	(1)	(0)	(0)	(1)
Sarcoma, Metastatic, Liver	1 (100%)			
<b>RESPIRATORY SYSTEM</b>				
Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	1 (2%)	4 (8%)	5 (10%)	2 (4%)
Alveolar/Bronchiolar Adenoma, Multiple	1 (2%)			
Alveolar/Bronchiolar Carcinoma	1 (2%)	1 (2%)	3 (6%)	2 (4%)
Alveolar/Bronchiolar Carcinoma, Multiple	1 (2%)			
Fibrous Histiocytoma, Metastatic, Skin				1 (2%)
Hepatocellular Carcinoma, Metastatic, Liver	1 (2%)	4 (8%)	2 (4%)	1 (2%)
Osteosarcoma, Metastatic, Bone				1 (2%)
Rhabdomyosarcoma, Metastatic, Skeletal Muscle	1 (2%)			
Nose	(50)	(50)	(50)	(50)
Trachea	(50)	(50)	(50)	(50)
<b>SPECIAL SENSES SYSTEM</b>				
Eye	(50)	(50)	(50)	(50)

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Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE FEMALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG
Iris, Melanoma Benign			1 (2%)	
Harderian Gland	(50)	(49)	(50)	(50)
Adenoma	5 (10%)	5 (10%)	2 (4%)	5 (10%)
Bilateral, Adenoma				1 (2%)
<b>URINARY SYSTEM</b>				
Kidney	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung	1 (2%)			
Hemangioma			1 (2%)	
Urinary Bladder	(50)	(48)	(50)	(50)
<b>SYSTEMIC LESIONS</b>				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma	3 (6%)			2 (4%)
Lymphoma Malignant	6 (12%)	7 (14%)	1 (2%)	6 (12%)

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

\* Number of animals with any tissue examined microscopically

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Lab: BAT

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B6C3F1 MICE FEMALE	0 G/KG	0.25 G/KG	0.5 G/KG	1.0 G/KG
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**Tumor Summary for Females**

<b>Total Animals with Primary Neoplasms (b)</b>	39	38	35	30
<b>Total Primary Neoplasms</b>	53	70	58	44
<b>Total Animals with Benign Neoplasms</b>	26	26	27	19
<b>Total Benign Neoplasms</b>	33	41	39	22
<b>Total Animals with Malignant Neoplasms</b>	19	24	17	18
<b>Total Malignant Neoplasms</b>	20	29	19	22
<b>Total Animals with Metastatic Neoplasms</b>	4	5	3	3
<b>Total Metastatic Neoplasms</b>	6	10	3	5
<b>Total Animals with Malignant Neoplasms Uncertain Primary Site</b>			1	
<b>Total Animals with Neoplasms Uncertain-Benign or Malignant</b>				
<b>Total Uncertain Neoplasms</b>				

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

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

b - Primary tumors: all tumors except metastatic tumors