

**Experiment Number:** 20007-03

**Test Type:** 90-DAY

**Route:** Gavage

**Species/Strain:** Rat/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

**Test Compound:** Kava kava extract

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

**Date Report Requested:** 10/17/2014

**Time Report Requested:** 21:45:58

**First Dose M/F:** NA / NA

**Lab:** BAT

**C Number:** C20007

**Lock Date:** 05/24/2004

**Cage Range:** All

**Date Range:** All

**Reasons For Removal:** All

**Removal Date Range:** All

**Treatment Groups:** All

**Study Gender:** Both

**PWG Approval Date** NONE

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 First Dose M/F: NA / NA  
 Lab: BAT

F 344/N Rat Male 0      G/KG	DAY ON TEST	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		9	9	9	9	9	9	9	9	9
		3	3	3	3	3	3	3	3	3
		0	0	0	0	0	0	0	0	0
ANIMAL ID		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	1
		1	2	3	4	5	6	7	8	9

\*TOTALS

**Alimentary System**

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

**Cardiovascular System**

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10

**Endocrine System**

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	10

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

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**Date Report Requested:** 10/17/2014  
**Time Report Requested:** 21:45:58  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**F 344/N Rat Male**  
**0 G/KG**

DAY ON TEST	0 0 0 0 0 0 0 0 0 0										
	0 0 0 0 0 0 0 0 0 0										
ANIMAL ID	9 9 9 9 9 9 9 9 9 9										
	3 3 3 3 3 3 3 3 3 3										
		<b>*TOTALS</b>									

Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

**General Body System**

NONE

**Genital System**

Epididymis	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10
Prostate	+	+	+	+	+	+	+	+	+	+	10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10

**Hematopoietic System**

Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	M	M	M	M	M	M	M	M	M	M	0
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10

**Integumentary System**

Mammary Gland	+	+	M	+	M	+	+	+	M	+	7
Skin	+	+	+	+	+	+	+	+	+	+	10

**Musculoskeletal System**

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Lab: BAT

F 344/N Rat Male  
0 G/KG

DAY ON TEST	0 0 0 0 0 0 0 0 0 0									
	0 0 0 0 0 0 0 0 0 0									
ANIMAL ID	9 9 9 9 9 9 9 9 9 9									
	3 3 3 3 3 3 3 3 3 3									

\*TOTALS

Bone	+	+	+	+	+	+	+	+	+	+	+	10
<b>Nervous System</b>												
Brain	+	+	+	+	+	+	+	+	+	+	+	10
<b>Respiratory System</b>												
Lung	+	+	+	+	+	+	+	+	+	+	+	10
Nose	+	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	+	10
<b>Special Senses System</b>												
Eye	+	+	+	+	+	+	+	+	+	+	+	10
Harderian Gland	+	+	+	+	+	+	+	+	+	+	+	10
<b>Urinary System</b>												
Kidney	+	+	+	+	+	+	+	+	+	+	+	10
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	10
<b>SYSTEMIC LESIONS</b>												
Multiple Organ	+	+	+	+	+	+	+	+	+	+	+	10

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CAS Number: 9000-38-8

Date Report Requested: 10/17/2014

Time Report Requested: 21:45:58

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
0.125 G/KG

DAY ON TEST										
	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	2
	1	2	3	4	5	6	7	8	9	0

\*TOTALS

Alimentary System

Liver

+ + + + + + + + + + 10

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

Bone Marrow

+ + + + + + + + + + 10

Spleen

+ + + + + + + + + + 10

Thymus

+ + + + + + + + + + 10

Integumentary System

NONE

Musculoskeletal System

NONE

\* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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Route: Gavage

Species/Strain: Rat/F 344/N

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Date Report Requested: 10/17/2014

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
0.125 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
|             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

Nervous System

NONE

Respiratory System

NONE

Special Senses System

NONE

Urinary System

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + +

10

\* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

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CAS Number: 9000-38-8

Date Report Requested: 10/17/2014

Time Report Requested: 21:45:58

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
0.25 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 2 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 3 | 1 | 2 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

Alimentary System

|                           |   |    |
|---------------------------|---|----|
| Esophagus                 | + | 1  |
| Intestine Large, Cecum    | + | 1  |
| Intestine Large, Colon    | + | 1  |
| Intestine Large, Rectum   | + | 1  |
| Intestine Small, Duodenum | + | 1  |
| Intestine Small, Ileum    | + | 1  |
| Intestine Small, Jejunum  | + | 1  |
| Liver                     | + | 10 |
| Pancreas                  | + | 1  |
| Salivary Glands           | + | 1  |
| Stomach, Forestomach      | + | 1  |
| Stomach, Glandular        | + | 1  |

Cardiovascular System

|              |   |   |
|--------------|---|---|
| Blood Vessel | + | 1 |
| Heart        | + | 1 |

Endocrine System

|                    |   |   |
|--------------------|---|---|
| Adrenal Cortex     | + | 1 |
| Adrenal Medulla    | + | 1 |
| Islets, Pancreatic | + | 1 |
| Parathyroid Gland  | + | 1 |

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+ ..Tissue examined microscopically

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**First Dose M/F:** NA / NA  
**Lab:** BAT

**F 344/N Rat Male  
0.25 G/KG**

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
|             | 3 | 1 | 2 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

|                 |   |   |
|-----------------|---|---|
| Pituitary Gland | + | 1 |
| Thyroid Gland   | + | 1 |

**General Body System**

NONE

**Genital System**

|                 |   |   |
|-----------------|---|---|
| Epididymis      | + | 1 |
| Preputial Gland | + | 1 |
| Prostate        | + | 1 |
| Seminal Vesicle | + | 1 |
| Testes          | + | 1 |

**Hematopoietic System**

|                        |   |   |   |   |   |   |   |   |   |   |    |
|------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow            | + | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Mandibular | M |   |   |   |   |   |   |   |   |   | 0  |
| Lymph Node, Mesenteric | + |   |   |   |   |   |   |   |   |   | 1  |
| Spleen                 | + | + | + | + | + | + | + | + | + | + | 10 |
| Thymus                 | + | + | + | + | + | + | + | + | + | + | 10 |

**Integumentary System**

|               |   |   |
|---------------|---|---|
| Mammary Gland | + | 1 |
| Skin          | + | 1 |

**Musculoskeletal System**

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
0.25 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2           | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 2           | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
|             | 3 | 1 | 2 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

|                              |   |    |
|------------------------------|---|----|
| Bone                         | + | 1  |
| <b>Nervous System</b>        |   |    |
| Brain                        | + | 1  |
| <b>Respiratory System</b>    |   |    |
| Lung                         | + | 1  |
| Nose                         | + | 1  |
| Trachea                      | + | 1  |
| <b>Special Senses System</b> |   |    |
| Eye                          | + | 1  |
| Harderian Gland              | + | 1  |
| <b>Urinary System</b>        |   |    |
| Kidney                       | + | 1  |
| Urinary Bladder              | + | 1  |
| <b>SYSTEMIC LESIONS</b>      |   |    |
| Multiple Organ               | + | 10 |

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+ ..Tissue examined microscopically

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I ..Insufficient tissue

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Date Report Requested: 10/17/2014

Time Report Requested: 21:45:58

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
0.5 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

Alimentary System

Liver

+ + + + + + + + + + 10

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

Bone Marrow

+ + + + + + + + + + 10

Spleen

+ + + + + + + + + + 10

Thymus

+ + + + + + + + + + 10

Integumentary System

NONE

Musculoskeletal System

NONE

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
0.5 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

Nervous System

NONE

Respiratory System

NONE

Special Senses System

NONE

Urinary System

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + +

10

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
1.0 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
|             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

Alimentary System

Liver

+ + + + + + + + + + 10

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

Bone Marrow

+ + + + + + + + + + 10

Spleen

+ + + + + + + + + + 10

Thymus

+ + + + + + + + + + 10

Integumentary System

NONE

Musculoskeletal System

NONE

\* ..Total animals with tissue examined microscopically; Total animals with tumor

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
1.0 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
|             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

Nervous System

NONE

Respiratory System

NONE

Special Senses System

NONE

Urinary System

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + +

10

\* ..Total animals with tissue examined microscopically; Total animals with tumor

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**Date Report Requested:** 10/17/2014  
**Time Report Requested:** 21:45:58  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**F 344/N Rat Male  
2.0 G/KG**

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
|             | 0 | 3 | 5 | 1 | 2 | 4 | 6 | 7 | 8 | 9 |

\*TOTALS

**Alimentary System**

|                           |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver                     | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | 10 |

**Cardiovascular System**

|              |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | 10 |
| Heart        | + | + | + | + | + | + | + | + | + | + | 10 |

**Endocrine System**

|                    |   |   |   |   |   |   |   |   |   |   |    |
|--------------------|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex     | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla    | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland  | + | + | + | + | + | + | + | + | M | + | 9  |

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

**Experiment Number:** 20007-03  
**Test Type:** 90-DAY  
**Route:** Gavage  
**Species/Strain:** Rat/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

**Test Compound:** Kava kava extract  
**CAS Number:** 9000-38-8

**Date Report Requested:** 10/17/2014  
**Time Report Requested:** 21:45:59  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**F 344/N Rat Male  
2.0 G/KG**

| DAY ON TEST | 0 0 0 0 0 0 0 0 0 0 |  |  |  |  |  |  |  |  |  |
|-------------|---------------------|--|--|--|--|--|--|--|--|--|
|             | 0 0 0 0 0 0 0 0 0 0 |  |  |  |  |  |  |  |  |  |
| ANIMAL ID   | 0 8 8 9 9 9 9 9 9 9 |  |  |  |  |  |  |  |  |  |
|             | 5 0 0 3 3 3 3 3 3 3 |  |  |  |  |  |  |  |  |  |
|             | *TOTALS             |  |  |  |  |  |  |  |  |  |

|                 |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|----|
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | 10 |
| Thyroid Gland   | + | + | + | + | + | + | + | + | + | + | 10 |

**General Body System**

NONE

**Genital System**

|                 |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|----|
| Epididymis      | + | + | + | + | + | + | + | + | + | + | 10 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | 10 |
| Prostate        | + | + | + | + | + | + | + | + | + | + | 10 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | 10 |
| Testes          | + | + | + | + | + | + | + | + | + | + | 10 |

**Hematopoietic System**

|                        |   |   |   |   |   |   |   |   |   |   |    |
|------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow            | + | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Mandibular | M | M | M | M | M | M | M | M | M | M | 0  |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | 10 |
| Spleen                 | + | + | + | + | + | + | + | + | + | + | 10 |
| Thymus                 | + | + | + | + | + | + | + | + | + | + | 10 |

**Integumentary System**

|               |   |   |   |   |   |   |   |   |   |   |    |
|---------------|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | M | + | + | + | + | + | + | + | + | + | 9  |
| Skin          | + | + | + | + | + | + | + | + | + | + | 10 |

**Musculoskeletal System**

\* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

Experiment Number: 20007-03

Test Type: 90-DAY

Route: Gavage

Species/Strain: Rat/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Kava kava extract

CAS Number: 9000-38-8

Date Report Requested: 10/17/2014

Time Report Requested: 21:45:59

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
2.0 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5           | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6           | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 0           | 3 | 5 | 1 | 2 | 4 | 6 | 7 | 8 | 9 |   |

\*TOTALS

|                              |   |   |   |   |   |   |   |   |   |   |    |
|------------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Bone                         | + | + | + | + | + | + | + | + | + | + | 10 |
| <b>Nervous System</b>        |   |   |   |   |   |   |   |   |   |   |    |
| Brain                        | + | + | + | + | + | + | + | + | + | + | 10 |
| <b>Respiratory System</b>    |   |   |   |   |   |   |   |   |   |   |    |
| Lung                         | + | + | + | + | + | + | + | + | + | + | 10 |
| Nose                         | + | + | + | + | + | + | + | + | + | + | 10 |
| Trachea                      | + | + | + | + | + | + | + | + | + | + | 10 |
| <b>Special Senses System</b> |   |   |   |   |   |   |   |   |   |   |    |
| Eye                          | + | + | + | + | + | + | + | + | + | + | 10 |
| Harderian Gland              | + | + | + | + | + | + | + | + | + | + | 10 |
| <b>Urinary System</b>        |   |   |   |   |   |   |   |   |   |   |    |
| Kidney                       | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder              | + | + | + | + | + | + | + | + | + | + | 10 |
| <b>SYSTEMIC LESIONS</b>      |   |   |   |   |   |   |   |   |   |   |    |
| Multiple Organ               | + | + | + | + | + | + | + | + | + | + | 10 |

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

\* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

Experiment Number: 20007-03  
 Test Type: 90-DAY  
 Route: Gavage  
 Species/Strain: Rat/F 344/N

### P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Kava kava extract  
 CAS Number: 9000-38-8

Date Report Requested: 10/17/2014  
 Time Report Requested: 21:45:59  
 First Dose M/F: NA / NA  
 Lab: BAT

| F 344/N Rat Female<br>0      G/KG | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|
|                                   |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                   |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                   |             | 1 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|                                   |             | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| ANIMAL ID                         |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                   |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                   |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                   |             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 |
|                                   |             | 5 | 1 | 2 | 3 | 4 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

#### Alimentary System

|                           |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver                     | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Mesentery                 |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | + | 10 |

#### Cardiovascular System

|              |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Heart        | + | + | + | + | + | + | + | + | + | + | + | 10 |

#### Endocrine System

|                    |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex     | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla    | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | 10 |

\* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

Experiment Number: 20007-03  
 Test Type: 90-DAY  
 Route: Gavage  
 Species/Strain: Rat/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Kava kava extract  
 CAS Number: 9000-38-8

Date Report Requested: 10/17/2014  
 Time Report Requested: 21:45:59  
 First Dose M/F: NA / NA  
 Lab: BAT

**F 344/N Rat Female**  
**0 G/KG**

| DAY ON TEST                   |                |   |   |   |   |   |   |   |   |   |
|-------------------------------|----------------|---|---|---|---|---|---|---|---|---|
|                               | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID                     | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                               | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                               | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                               | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                               | 6              | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 |
|                               | 5              | 1 | 2 | 3 | 4 | 6 | 7 | 8 | 9 | 0 |
|                               | <b>*TOTALS</b> |   |   |   |   |   |   |   |   |   |
| Parathyroid Gland             | +              | + | + | + | + | + | + | + | + | + |
| Pituitary Gland               | +              | + | + | + | + | + | + | + | + | + |
| Thyroid Gland                 | +              | + | + | + | + | + | + | + | + | + |
| <b>General Body System</b>    |                |   |   |   |   |   |   |   |   |   |
| NONE                          |                |   |   |   |   |   |   |   |   |   |
| <b>Genital System</b>         |                |   |   |   |   |   |   |   |   |   |
| Clitoral Gland                | +              | + | + | + | + | + | + | + | + | + |
| Ovary                         | +              | + | + | + | + | + | + | + | + | + |
| Uterus                        | +              | + | + | + | + | + | + | + | + | + |
| <b>Hematopoietic System</b>   |                |   |   |   |   |   |   |   |   |   |
| Bone Marrow                   | +              | + | + | + | + | + | + | + | + | + |
| Lymph Node, Mandibular        | M              | M | M | M | M | M | M | M | M | M |
| Lymph Node, Mesenteric        | +              | + | + | + | + | + | + | + | + | + |
| Spleen                        | +              | + | + | + | + | + | + | + | + | + |
| Thymus                        | +              | + | + | + | + | + | + | + | + | + |
| <b>Integumentary System</b>   |                |   |   |   |   |   |   |   |   |   |
| Mammary Gland                 | +              | + | + | + | + | + | + | + | + | + |
| Skin                          | +              | + | + | + | + | + | + | + | + | + |
| <b>Musculoskeletal System</b> |                |   |   |   |   |   |   |   |   |   |
| Bone                          | +              | + | + | + | + | + | + | + | + | + |

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20007-03

Test Type: 90-DAY

Route: Gavage

Species/Strain: Rat/F 344/N

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Kava kava extract

CAS Number: 9000-38-8

Date Report Requested: 10/17/2014

Time Report Requested: 21:45:59

First Dose M/F: NA / NA

Lab: BAT

**F 344/N Rat Female  
0 G/KG**

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 |
|             | 5 | 1 | 2 | 3 | 4 | 6 | 7 | 8 | 9 | 0 |

**\*TOTALS****Nervous System**

Brain + + + + + + + + + + 10

**Respiratory System**

Lung + + + + + + + + + + 10

Nose + + + + + + + + + + 10

Trachea + + + + + + + + + + 10

**Special Senses System**

Eye + + + + + + + + + + 10

Harderian Gland + + + + + + + + + + 10

**Urinary System**

Kidney + + + + + + + + + + 10

Urinary Bladder + + + + + + + + + + 10

**SYSTEMIC LESIONS**

Multiple Organ + + + + + + + + + + 10

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

**Experiment Number:** 20007-03  
**Test Type:** 90-DAY  
**Route:** Gavage  
**Species/Strain:** Rat/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

**Test Compound:** Kava kava extract  
**CAS Number:** 9000-38-8

**Date Report Requested:** 10/17/2014  
**Time Report Requested:** 21:45:59  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**F 344/N Rat Female  
0.125 G/KG**

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 |
|             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

**Alimentary System**

Liver + + + + + + + + + + 10

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

Bone Marrow + + + + + + + + + + 10

Spleen + + + + + + + + + + 10

Thymus + + + + + + + + + + 10

**Integumentary System**

NONE

**Musculoskeletal System**

NONE

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

**Experiment Number:** 20007-03

**Test Type:** 90-DAY

**Route:** Gavage

**Species/Strain:** Rat/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

**Test Compound:** Kava kava extract

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

**Date Report Requested:** 10/17/2014

**Time Report Requested:** 21:45:59

**First Dose M/F:** NA / NA

**Lab:** BAT

**F 344/N Rat Female  
0.125 G/KG**

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 |
|             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

**Nervous System**

NONE

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

NONE

**SYSTEMIC LESIONS**

Multiple Organ

+ + + + + + + + + +

10

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20007-03

Test Type: 90-DAY

Route: Gavage

Species/Strain: Rat/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Kava kava extract

CAS Number: 9000-38-8

Date Report Requested: 10/17/2014

Time Report Requested: 21:45:59

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
0.25 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 |
|             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

Alimentary System

Liver

+ + + + + + + + + + 10

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

Bone Marrow

+ + + + + + + + + + 10

Spleen

+ + + + + + + + + + 10

Thymus

+ + + + + + + + + + 10

Integumentary System

NONE

Musculoskeletal System

NONE

\* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

Experiment Number: 20007-03

Test Type: 90-DAY

Route: Gavage

Species/Strain: Rat/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Kava kava extract

CAS Number: 9000-38-8

Date Report Requested: 10/17/2014

Time Report Requested: 21:45:59

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
0.25 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 |
|             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

Nervous System

NONE

Respiratory System

NONE

Special Senses System

NONE

Urinary System

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + +

10

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20007-03  
 Test Type: 90-DAY  
 Route: GAVAGE  
 Species/Strain: Rat/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Kava kava extract  
 CAS Number: 9000-38-8

Date Report Requested: 10/17/2014  
 Time Report Requested: 21:45:59  
 First Dose M/F: NA / NA  
 Lab: BAT

**F 344/N Rat Female**  
**0.5 G/KG**

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
|             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

**Alimentary System**

|           |   |   |   |   |   |   |   |   |   |   |    |
|-----------|---|---|---|---|---|---|---|---|---|---|----|
| Liver     | + | + | + | + | + | + | + | + | + | + | 10 |
| Mesentery |   |   |   |   |   |   | + |   |   |   | 1  |

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

|             |   |   |   |   |   |   |   |   |   |   |    |
|-------------|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | 10 |
| Spleen      | + | + | + | + | + | + | + | + | + | + | 10 |
| Thymus      | + | + | + | + | + | + | + | + | + | + | 10 |

**Integumentary System**

NONE

**Musculoskeletal System**

\* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

Experiment Number: 20007-03

Test Type: 90-DAY

Route: Gavage

Species/Strain: Rat/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Kava kava extract

CAS Number: 9000-38-8

Date Report Requested: 10/17/2014

Time Report Requested: 21:45:59

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
0.5 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
|             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

NONE

**Nervous System**

NONE

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

NONE

**SYSTEMIC LESIONS**

Multiple Organ

+ + + + + + + + + + +

10

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20007-03  
 Test Type: 90-DAY  
 Route: Gavage  
 Species/Strain: Rat/F 344/N

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Test Compound: Kava kava extract  
 CAS Number: 9000-38-8

Date Report Requested: 10/17/2014  
 Time Report Requested: 21:45:59  
 First Dose M/F: NA / NA  
 Lab: BAT

| <b>F 344/N Rat Female<br/>1.0 G/KG</b> | DAY ON TEST | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|--|-------------|----------------|---|---|---|---|---|---|---|---|
|  |             | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |             | 3              | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|  |             | 2              | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|  |             | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID                              |             | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |             | 1              | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|  |             | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|  |             | 4              | 1 | 2 | 3 | 5 | 6 | 7 | 8 | 9 |
|  |             | <b>*TOTALS</b> |   |   |   |   |   |   |   |   |

**Alimentary System**

|                           |   |    |
|---------------------------|---|----|
| Esophagus                 | + | 1  |
| Intestine Large, Cecum    | + | 1  |
| Intestine Large, Colon    | + | 1  |
| Intestine Large, Rectum   | + | 1  |
| Intestine Small, Duodenum | + | 1  |
| Intestine Small, Ileum    | + | 1  |
| Intestine Small, Jejunum  | + | 1  |
| Liver                     | + | 10 |
| Pancreas                  | + | 1  |
| Salivary Glands           | + | 1  |
| Stomach, Forestomach      | + | 1  |
| Stomach, Glandular        | + | 1  |

**Cardiovascular System**

|              |   |   |
|--------------|---|---|
| Blood Vessel | + | 1 |
| Heart        | + | 1 |

**Endocrine System**

|                    |   |   |
|--------------------|---|---|
| Adrenal Cortex     | + | 1 |
| Adrenal Medulla    | + | 1 |
| Islets, Pancreatic | + | 1 |
| Parathyroid Gland  | + | 1 |

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20007-03

Test Type: 90-DAY

Route: Gavage

Species/Strain: Rat/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Kava kava extract

CAS Number: 9000-38-8

Date Report Requested: 10/17/2014

Time Report Requested: 21:45:59

First Dose M/F: NA / NA

Lab: BAT

**F 344/N Rat Female  
1.0 G/KG**

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 3 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|             | 4 | 1 | 2 | 3 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

|                 |   |   |
|-----------------|---|---|
| Pituitary Gland | + | 1 |
| Thyroid Gland   | + | 1 |

**General Body System**

NONE

**Genital System**

|                |   |   |
|----------------|---|---|
| Clitoral Gland | + | 1 |
| Ovary          | + | 1 |
| Uterus         | + | 1 |

**Hematopoietic System**

|                        |   |   |   |   |   |   |   |   |   |   |    |
|------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow            | + | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Mandibular | M |   |   |   |   |   |   |   |   |   | 0  |
| Lymph Node, Mesenteric | + |   |   |   |   |   |   |   |   |   | 1  |
| Spleen                 | + | + | + | + | + | + | + | + | + | + | 10 |
| Thymus                 | + | + | + | + | + | + | + | + | + | + | 10 |

**Integumentary System**

|               |   |   |
|---------------|---|---|
| Mammary Gland | + | 1 |
| Skin          | + | 1 |

**Musculoskeletal System**

|      |   |   |
|------|---|---|
| Bone | + | 1 |
|------|---|---|

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20007-03

Test Type: 90-DAY

Route: Gavage

Species/Strain: Rat/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Kava kava extract

CAS Number: 9000-38-8

Date Report Requested: 10/17/2014

Time Report Requested: 21:45:59

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
1.0 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 3 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|             | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|             | 4 | 1 | 2 | 3 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

Nervous System

Brain + 1

Respiratory System

Lung + 1

Nose + 1

Trachea + 1

Special Senses System

Eye + 1

Harderian Gland + 1

Urinary System

Kidney + 1

Urinary Bladder + 1

SYSTEMIC LESIONS

Multiple Organ + + + + + + + + + + 10

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20007-03  
 Test Type: 90-DAY  
 Route: Gavage  
 Species/Strain: Rat/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Test Compound: Kava kava extract  
 CAS Number: 9000-38-8

Date Report Requested: 10/17/2014  
 Time Report Requested: 21:45:59  
 First Dose M/F: NA / NA  
 Lab: BAT

| F 344/N Rat Female<br>2.0 G/KG | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|--------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|
|                                |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                |             | 0 | 0 | 0 | 4 | 9 | 9 | 9 | 9 | 9 | 9 |
|                                |             | 2 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 |
|                                | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                |             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|                                |             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
|                                |             | 7 | 3 | 8 | 6 | 1 | 2 | 4 | 5 | 9 | 0 |

\*TOTALS

**Alimentary System**

|                           |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver                     | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | 10 |

**Cardiovascular System**

|              |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | 10 |
| Heart        | + | + | + | + | + | + | + | + | + | + | 10 |

**Endocrine System**

|                    |   |   |   |   |   |   |   |   |   |   |    |
|--------------------|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex     | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla    | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland  | + | + | + | + | + | + | + | + | + | + | 10 |

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20007-03  
 Test Type: 90-DAY  
 Route: GAVAGE  
 Species/Strain: Rat/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Kava kava extract  
 CAS Number: 9000-38-8

Date Report Requested: 10/17/2014  
 Time Report Requested: 21:45:59  
 First Dose M/F: NA / NA  
 Lab: BAT

**F 344/N Rat Female  
 2.0 G/KG**

| DAY ON TEST                   |                |   |   |   |   |   |   |   |   |   |
|-------------------------------|----------------|---|---|---|---|---|---|---|---|---|
|                               | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID                     | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                               | 0              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                               | 1              | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|                               | 1              | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
|                               | 7              | 3 | 8 | 6 | 1 | 2 | 4 | 5 | 9 | 0 |
|                               | <b>*TOTALS</b> |   |   |   |   |   |   |   |   |   |
| Pituitary Gland               | +              | + | + | + | + | + | + | + | + | + |
| Thyroid Gland                 | +              | + | + | + | + | + | + | + | + | + |
| <b>General Body System</b>    |                |   |   |   |   |   |   |   |   |   |
| NONE                          |                |   |   |   |   |   |   |   |   |   |
| <b>Genital System</b>         |                |   |   |   |   |   |   |   |   |   |
| Clitoral Gland                | +              | + | + | + | + | + | + | + | + | + |
| Ovary                         | +              | + | + | + | + | + | + | + | + | + |
| Uterus                        | +              | + | + | + | + | + | + | + | + | + |
| <b>Hematopoietic System</b>   |                |   |   |   |   |   |   |   |   |   |
| Bone Marrow                   | +              | + | + | + | + | + | + | + | + | + |
| Lymph Node, Mandibular        | M              | M | M | M | M | M | M | M | M | M |
| Lymph Node, Mesenteric        | +              | + | + | + | + | + | + | + | + | + |
| Spleen                        | +              | + | + | + | + | + | + | + | + | + |
| Thymus                        | +              | + | + | + | + | + | + | + | + | + |
| <b>Integumentary System</b>   |                |   |   |   |   |   |   |   |   |   |
| Mammary Gland                 | +              | + | + | + | + | + | + | + | + | + |
| Skin                          | +              | + | + | + | + | + | + | + | + | + |
| <b>Musculoskeletal System</b> |                |   |   |   |   |   |   |   |   |   |
| Bone                          | +              | + | + | + | + | + | + | + | + | + |

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 20007-03

Test Type: 90-DAY

Route: Gavage

Species/Strain: Rat/F 344/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Kava kava extract

CAS Number: 9000-38-8

Date Report Requested: 10/17/2014

Time Report Requested: 21:45:59

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
2.0 G/KG

| DAY ON TEST |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|
|             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2           | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 7           | 3 | 8 | 6 | 1 | 2 | 4 | 5 | 9 | 0 |   |

\*TOTALS

Nervous System

|                 |   |   |   |   |   |   |   |   |   |   |   |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|
| Brain           | + | + | + | + | + | + | + | + | + | + | 9 |
| Brain, Cerebrum | + |   |   |   |   |   |   |   |   |   | 1 |

Respiratory System

|         |   |   |   |   |   |   |   |   |   |   |    |
|---------|---|---|---|---|---|---|---|---|---|---|----|
| Lung    | + | + | + | + | + | + | + | + | + | + | 10 |
| Nose    | + | + | + | + | + | + | + | + | + | + | 10 |
| Trachea | + | + | + | + | + | + | + | + | + | + | 10 |

Special Senses System

|                 |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|----|
| Eye             | + | + | + | + | + | + | + | + | + | + | 10 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | 10 |

Urinary System

|                 |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|----|
| Kidney          | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | 10 |

SYSTEMIC LESIONS

|                |   |   |   |   |   |   |   |   |   |   |    |
|----------------|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | 10 |
|----------------|---|---|---|---|---|---|---|---|---|---|----|

\*\* END OF REPORT \*\*

\* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue