

Experiment Number: 20605 - 01
Test Type: 14-WEEK
Route: GAVAGE
Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Gum guggul extract
CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012
Time Report Requested: 13:56:15
First Dose M/F: 07/23/09 / 07/24/09
Lab: BAT

F1_Rev.1_HSD

NTP Study Number: C20605
Lock Date: 11/04/2010
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 2.6.0.0_007
PWG Approval Date: 05/11/2012

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

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		
HARLAN SPRAGUE DAWLEY RATS	9	9	9	9	9	9	9	9	9	9		
MALE	2	2	2	2	2	2	2	2	2	2		
0 mg/kg	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	1		
	1	2	3	4	5	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
Clear Cell Focus			X						X			2
Hepatodiaphragmatic Nodule					X							1
Infiltration Cellular, Mixed Cell	1		1	1	1			1	1	1		8 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+		10
Salivary Glands	+	+	+	+	+	+	+	+	+	+		10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+		10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+		10

CARDIOVASCULAR SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
HARLAN SPRAGUE DAWLEY RATS MALE	2	2	2	2	2	2	2	2	2	2	
0 mg/kg											
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	1
	1	2	3	4	5	6	7	8	9	0	
											* TOTALS
Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10
Cardiomyopathy		1						1	1	1	4 1.0
ENDOCRINE SYSTEM											
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Hypertrophy, Focal			1								1 1.0
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	10
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10
Cyst			X								1
GENERAL BODY SYSTEM											
NONE											
GENITAL SYSTEM											
Epididymis	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID		
	9	9	9	9	9	9	9	9	9	9			
HARLAN SPRAGUE DAWLEY RATS MALE	2	2	2	2	2	2	2	2	2	2			
0 mg/kg	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	1			
	1	2	3	4	5	6	7	8	9	0			* TOTALS
Inflammation, Chronic Active										2			1 2.0
Prostate	+	+	+	+	+	+	+	+	+	+			10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+			10
Testes	+	+	+	+	+	+	+	+	+	+			10
HEMATOPOIETIC SYSTEM													
Bone Marrow	+	+	+	+	+	+	+	+	+	+			10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+			10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+			10
Spleen	+	+	+	+	+	+	+	+	+	+			10
Thymus	+	+	+	+	+	+	+	+	+	+			10
INTEGUMENTARY SYSTEM													
Mammary Gland	+	+	+	+	+	+	+	+	+	+			10
Skin	+	+	+	+	+	+	+	+	+	+			10
MUSCULOSKELETAL SYSTEM													
Bone	+	+	+	+	+	+	+	+	+	+			10
NERVOUS SYSTEM													

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
HARLAN SPRAGUE DAWLEY RATS MALE	2	2	2	2	2	2	2	2	2	2	
0 mg/kg											
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	1
	1	2	3	4	5	6	7	8	9	0	
* TOTALS											
Brain	+	+	+	+	+	+	+	+	+	+	10
RESPIRATORY SYSTEM											
Lung Inflammation, Chronic	+	+	+	+	+	+	+	+	+	+	10
								1			1 1.0
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10
SPECIAL SENSES SYSTEM											
Eye	+	+	+	+	+	+	+	+	+	+	10
URINARY SYSTEM											
Kidney Infarct	+	+	+	+	+	+	+	+	+	+	10
		2									1 2.0
Nephropathy	1	1	1		1	1		1			6 1.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 62.5 mg/kg	DAY ON TEST	0	0	0	0	0	0	0	0	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
		9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		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	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	2
		1	2	3	4	5	6	7	8	9	0								
* TOTALS																			

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland Cyst	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
																			1

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue

M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 62.5 mg/kg	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	* TOTALS
		0	0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	9	
		2	2	2	2	2	2	2	2	2	2	
	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	
		1	1	1	1	1	1	1	1	1	2	
		1	2	3	4	5	6	7	8	9	0	

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 125 mg/kg	DAY ON TEST	0	0	0	0	0	0	0	0	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
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		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
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
		1	2	3	4	5	6	7	8	9	0								
* TOTALS																			

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

Adrenal Cortex

+ + + + + + + + + +

10

Thyroid Gland
Cyst

+ + + + + + + + + +
X X

10

2

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Testes

I

0

HEMATOPOIETIC SYSTEM

Lymph Node, Mandibular
Hyperplasia, Lymphoid

+
3

1

1 3.0

INTEGUMENTARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 125 mg/kg	DAY ON TEST	0	0	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	9
		2	2	2	2	2	2	2	2	2	2
	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	3	3
		1	2	3	4	5	6	7	8	9	0
		* TOTALS									

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 250 mg/kg	DAY ON TEST	0	0	0	0	0	0	0	0	0	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
		9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		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
		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4
		1	2	3	4	5	6	7	8	3	8	9	4	0						
* TOTALS																				

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10		
Vacuolization Cytoplasmic, Diffuse																				1	1	1.0
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10		
Cyst																				X	X	2

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 250 mg/kg	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	* TOTALS
		0	0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	9	
		2	2	2	2	2	2	2	2	2	2	
	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	
		3	3	3	3	3	3	3	3	3	4	
		1	2	3	4	5	6	7	8	9	0	

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 500 mg/kg	DAY ON TEST	0	0	0	0	0	0	0	0	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
		9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		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
		4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5
		1	2	3	4	5	6	7	8	8	9	9	9	9	9	9	9	0	0
* TOTALS																			

ALIMENTARY SYSTEM

Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Mixed Cell	1	1	1	1	1	1			1	1	1								9 1.0
Hepatocyte, Hypertrophy, Diffuse									2										1 2.0

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Cyst			X		X		X												3

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	HARLAN SPRAGUE DAWLEY RATS MALE	0	0	0	0	0	0	0	0	0
1000 mg/kg	9	9	9	9	9	9	9	9	9	9
ANIMAL ID	2	2	2	2	2	2	2	2	2	2
	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
	5	5	5	5	5	5	5	5	5	6
	1	2	3	4	5	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
Clear Cell Focus			X								1
Hematopoietic Cell Proliferation		1									1 1.0
Infiltration Cellular, Mixed Cell	1	2		1	1		1	1	1		8 1.1
Centrilobular, Necrosis, Acute		2									1 2.0
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID	
	9	9	9	9	9	9	9	9	9	9		
HARLAN SPRAGUE DAWLEY RATS MALE	2	2	2	2	2	2	2	2	2	2		
1000 mg/kg	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		
	5	5	5	5	5	5	5	5	5	6		
	1	2	3	4	5	6	7	8	9	0		
* TOTALS												

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10	
Heart	+	+	+	+	+	+	+	+	+	+	10	
Cardiomyopathy			1				1					2 1.0

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10	
Hypertrophy, Focal										2		1 2.0
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10	
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10	
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	10	
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10	
Pars Distalis, Hypertrophy, Diffuse					1							1 1.0
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10	
Cyst							X		X			2

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 1000 mg/kg	DAY ON TEST										* TOTALS
	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	
ANIMAL ID	0 0 0 5 1	0 0 0 5 2	0 0 0 5 3	0 0 0 5 4	0 0 0 5 5	0 0 0 5 6	0 0 0 5 7	0 0 0 5 8	0 0 0 5 9	0 0 0 6 0	
	Epididymis	+	+	+	+	+	+	+	+	+	+
Preputial Gland Inflammation, Chronic Active	+	+	+	+	+	+	+	+	+	+	10 3 1.3
Prostate	+	+	+	+	+	+	+	+	+	+	10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10
HEMATOPOIETIC SYSTEM											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric Hyperplasia, Lymphoid	+	+	+	+	+	+	+	+	+	+	10 1 2.0
Spleen Hematopoietic Cell Proliferation	+	+	+	+	+	+	+	+	+	+	10 1 1.0
Thymus	+	+	+	+	+	+	+	+	+	+	10
INTEGUMENTARY SYSTEM											
Mammary Gland	+	+	+	+	+	+	+	+	+	+	10
Skin	+	+	+	+	+	+	+	+	+	+	10

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
 M .. Missing tissue
 A .. Autolysis precludes evaluation
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS MALE 1000 mg/kg	DAY ON TEST	0	0	0	0	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
		9	9	9	9	9	9	9	9	9	9	9	9	9	9
		2	2	2	2	2	2	2	2	2	2	2	2	2	2
		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	0	0
		5	5	5	5	5	5	5	5	5	5	5	5	6	6
		1	2	3	4	5	6	7	8	9	0				
* TOTALS															

MUSCULOSKELETAL SYSTEM

Bone	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

NERVOUS SYSTEM

Brain	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

RESPIRATORY SYSTEM

Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
---------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

SPECIAL SENSES SYSTEM

Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
-----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

Nephropathy	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10 1.0
-------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--------

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

*** END OF MALE DATA ***

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	HARLAN SPRAGUE DAWLEY RATS FEMALE	0	0	0	0	0	0	0	0	0
0 mg/kg	9	9	5	9	9	9	9	9	9	9
ANIMAL ID	2	2	2	2	2	2	2	2	2	2
	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
	1	2	3	4	5	6	7	8	9	0
* TOTALS										

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon Parasite Metazoan	+	+	+	+	+	+	+	+	+	+	10 1
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Mixed Cell Hepatocyte, Atrophy	1			1	1	1	1	1	1	1	8 1.0 1 2.0
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

CARDIOVASCULAR SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID	
	9	9	5	9	9	9	9	9	9	9		
HARLAN SPRAGUE DAWLEY RATS FEMALE	2	2	2	2	2	2	2	2	2	2		
0 mg/kg	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		
	1	2	3	4	5	6	7	8	9	0		
											* TOTALS	

Blood Vessel	+	+	+	+	+	+	+	+	+	+		10
Heart	+	+	+	+	+	+	+	+	+	+		10
Epicardium, Inflammation, Suppurative			3									1 3.0

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+		10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+		10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+		10
Parathyroid Gland	+	+	+	+	M	+	+	+	+	+		9
Pituitary Gland	+	+	+	+	+	+	+	+	+	+		10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+		10
Cyst	X											1

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Clitoral Gland	+	+	+	+	+	+	+	+	+	+		10
Inflammation, Chronic Active	1	2			1							3 1.3
Ovary	+	+	+	+	+	+	+	+	+	+		10

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID		
	9	9	5	9	9	9	9	9	9	9		0	0
HARLAN SPRAGUE DAWLEY RATS FEMALE	2	2	2	2	2	2	2	2	2	2	0	0	
0 mg/kg	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	
	1	2	3	4	5	6	7	8	9	0			
												* TOTALS	
Uterus	+	+	+	+	+	+	+	+	+	+			10
HEMATOPOIETIC SYSTEM													
Bone Marrow	+	+	+	+	+	+	+	+	+	+			10
Hyperplasia			3										1 3.0
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+			10
Atrophy			2										1 2.0
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+			10
Atrophy			3										1 3.0
Spleen	+	+	+	+	+	+	+	+	+	+			10
Atrophy			2										1 2.0
Thymus	+	+	+	+	+	+	+	+	+	+			10
Atrophy, Diffuse			4										1 4.0
Mediastinum, Inflammation, Suppurative			3										1 3.0
INTEGUMENTARY SYSTEM													
Mammary Gland	+	+	+	+	+	+	+	+	+	+			10
Skin	+	+	+	+	+	+	+	+	+	+			10
MUSCULOSKELETAL SYSTEM													
Bone	+	+	+	+	+	+	+	+	+	+			10

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 62.5 mg/kg	DAY ON TEST	0	0	0	0	0	0	0	0	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
		9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
		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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	8
		1	2	3	4	5	6	7	8	9	0								
* TOTALS																			

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+									10
Cyst				X	X	X	X	X	X											4

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically M .. Missing tissue
X .. Lesion present A .. Autolysis precludes evaluation
I .. Insufficient tissue BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 62.5 mg/kg	DAY ON TEST	0	0	0	0	0	0	0	0	0	* TOTALS
		0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	
		2	2	2	2	2	2	2	2	2	
	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	
		7	7	7	7	7	7	7	7	8	
		1	2	3	4	5	6	7	8	9	
										0	

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID	
	9	9	5	9	9	9	9	9	9	9		
HARLAN SPRAGUE DAWLEY RATS FEMALE	2	2	6	2	2	2	2	2	2	2		
125 mg/kg	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	8	9		
											* TOTALS	

Heart + 1

ENDOCRINE SYSTEM

Adrenal Cortex + 1

Adrenal Medulla + 1

Islets, Pancreatic + 1

Parathyroid Gland + 1

Pituitary Gland + 1

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

Cyst X X 2

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Clitoral Gland + 1

Ovary + 1

Uterus + 1

HEMATOPOIETIC SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue
 X .. Lesion present A .. Autolysis precludes evaluation
 I .. Insufficient tissue BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 125 mg/kg	DAY ON TEST										ANIMAL ID				
	0 9 2	0 9 2	0 5 6	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2	0 9 2					
	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				
	8	8	8	8	8	8	8	8	8	8	8				
	1	2	3	4	5	6	7	8	9	0					
															* TOTALS
Bone Marrow												+			1
Lymph Node															1
Renal, Hyperplasia														2	1 2.0
Renal, Pigmentation														1	1 1.0
Lymph Node, Mandibular												+			1
Lymph Node, Mesenteric												+			1
Spleen												+			1
Hyperplasia, Lymphoid														2	1 2.0
Thymus												+			1
Atrophy, Diffuse														2	1 2.0
INTEGUMENTARY SYSTEM															
Mammary Gland												+			1
Skin												+			1
MUSCULOSKELETAL SYSTEM															
Bone												+			1
NERVOUS SYSTEM															
Brain												+			1

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

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

* TOTALS

Brain, Cerebrum

+

1

RESPIRATORY SYSTEM

Lung

+

1

Pleura, Inflammation, Suppurative

4

1 4.0

Nose

+

1

Trachea

+

1

SPECIAL SENSES SYSTEM

Eye

+

1

URINARY SYSTEM

Kidney

+

1

Urinary Bladder

+

1

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 250 mg/kg	DAY ON TEST	0	0	0	0	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
		9	9	9	9	9	9	9	9	9	9	9	9	9	9
		2	2	2	2	2	2	2	2	2	2	2	2	2	2
		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	1	0	0
		9	9	9	9	9	9	9	9	9	9	9	9	0	0
		1	2	3	4	5	6	7	8	9	9	9	0	0	0
														* TOTALS	

ALIMENTARY SYSTEM

Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Infiltration Cellular, Mixed Cell	1	1	1	1		1	1	1	1	1	1				9 1.0

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Cyst	X				X		X								3

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 250 mg/kg	DAY ON TEST	0	0	0	0	0	0	0	0	0	* TOTALS
		0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	
		2	2	2	2	2	2	2	2	2	
	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	1	
		9	9	9	9	9	9	9	9	0	
		1	2	3	4	5	6	7	8	9	
		0	0	0	0	0	0	0	0	0	

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID	
	9	9	9	9	9	9	9	9	5	9		
HARLAN SPRAGUE DAWLEY RATS FEMALE	2	2	2	2	2	2	2	2	7	2		
500 mg/kg	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		
	1	2	3	4	5	6	7	8	9	0		
												* TOTALS

Blood Vessel												+	1
Heart												+	1

ENDOCRINE SYSTEM

Adrenal Cortex												+	1											
Adrenal Medulla												+	1											
Islets, Pancreatic												+	1											
Parathyroid Gland												M	0											
Pituitary Gland												+	1											
Thyroid Gland											+	+	+	+	+	+	+	+	+	+	10			
Cyst																						X	X	2

GENERAL BODY SYSTEM

NONE													
------	--	--	--	--	--	--	--	--	--	--	--	--	--

GENITAL SYSTEM

Clitoral Gland												+	1
Ovary												+	1
Uterus												+	1

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
I .. Insufficient tissue
M .. Missing tissue
A .. Autolysis precludes evaluation
BLANK .. Not examined microscopically
1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
HARLAN SPRAGUE DAWLEY RATS	9	9	9	9	9	9	9	9	9	5	9
FEMALE	2	2	2	2	2	2	2	2	7	2	
500 mg/kg											
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	
	0	0	0	0	0	0	0	0	0	1	
	1	2	3	4	5	6	7	8	9	0	
											* TOTALS
Pleura, Inflammation, Suppurative									3		1 3.0
Nose									+		1
Trachea									+		1
SPECIAL SENSES SYSTEM											
Eye									+		1
URINARY SYSTEM											
Kidney									+		1
Urinary Bladder									+		1

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 1000 mg/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	
		2	2	2	2	2	2	2	2	2	
	ANIMAL ID	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	2	
		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
Infiltration Cellular, Mixed Cell	1	1				1	1	1	1	6 1.0
Pancreas	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	10

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	10
--------------	---	---	---	---	---	---	---	---	---	-----------

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAWLEY RATS FEMALE 1000 mg/kg	DAY ON TEST	0	0	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	9	
		2	2	2	2	2	2	2	2	2		
	ANIMAL ID	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	2		
		1	2	3	4	5	6	7	8	9	0	* TOTALS

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
Pigmentation, Hemosiderin						2					1 2.0

INTEGUMENTARY SYSTEM

Mammary Gland	+	+	+	+	+	+	+	+	+	+	10
Skin	+	+	+	+	+	+	+	+	+	+	10

MUSCULOSKELETAL SYSTEM

Bone	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	-----------

NERVOUS SYSTEM

Brain	+	+	+	+	+	+	+	+	+	+	10
-------	---	---	---	---	---	---	---	---	---	---	-----------

RESPIRATORY SYSTEM

Lung	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	-----------

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 20605 - 01

Test Type: 14-WEEK

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum guggul extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 08/08/2012

Time Report Requested: 13:56:15

First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
HARLAN SPRAGUE DAWLEY RATS FEMALE	2	2	2	2	2	2	2	2	2	2	
1000 mg/kg											
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	1	
	1	2	3	4	5	6	7	8	9	0	
* TOTALS											
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10
SPECIAL SENSES SYSTEM											
Eye	+	+	+	+	+	+	+	+	+	+	10
URINARY SYSTEM											
Kidney	+	+	+	+	+	+	+	+	+	+	10
Nephropathy			1		1		1				3 1.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10

*** END OF REPORT ***

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked