

**Experiment Number:** 20005-03  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/F 344/N

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH  
AVERAGE SEVERITY GRADES[b]**

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

**Date Report Requested:** 10/17/2014  
**Time Report Requested:** 13:00:43  
**First Dose M/F:** NA / NA  
**Lab:** BAT

<b>C Number:</b>	C20005
<b>Lock Date:</b>	10/28/2003
<b>Cage Range:</b>	All
<b>Date Range:</b>	All
<b>Reasons For Removal:</b>	All
<b>Removal Date Range:</b>	All
<b>Treatment Groups:</b>	All
<b>Study Gender:</b>	Both
<b>PWG Approval Date</b>	NONE

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Test Compound: Ginseng

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat MALE	0	MG/KG	1000	MG/KG	2000	MG/KG	3000	MG/KG	4000	MG/KG	5000	MG/KG
<b>Disposition Summary</b>												
Animals Initially In Study	10		10		10		10		10		10	
Early Deaths												
Survivors												
Terminal Sacrifice	10		10		10		10		10		10	
Animals Examined Microscopically	10		1						2		10	
<b>ALIMENTARY SYSTEM</b>												
Esophagus	(10)		(0)		(0)		(0)		(0)		(10)	
Intestine Large, Cecum	(10)		(0)		(0)		(0)		(0)		(10)	
Intestine Large, Colon	(10)		(0)		(0)		(0)		(0)		(10)	
Intestine Large, Rectum	(10)		(0)		(0)		(0)		(0)		(10)	
Intestine Small, Duodenum	(10)		(0)		(0)		(0)		(0)		(10)	
Intestine Small, Ileum	(10)		(0)		(0)		(0)		(0)		(10)	
Intestine Small, Jejunum	(10)		(0)		(0)		(0)		(0)		(10)	
Liver	(10)		(1)		(0)		(0)		(2)		(10)	
Bile Duct, Hyperplasia	1 [1.0]											
Hematopoietic Cell Proliferation	1 [1.0]								1 [1.0]		2 [1.0]	
Hepatodiaphragmatic Nodule	1		1						2			
Inflammation, Chronic Active	9 [1.0]		1 [1.0]								8 [1.0]	
Inflammation, Chronic Active, Focal	1 [1.0]											
Pancreas	(10)		(0)		(0)		(0)		(0)		(10)	
Atrophy	1 [1.0]											
Infiltration Cellular, Mononuclear CI	4 [1.0]										5 [1.0]	
Inflammation	1 [1.0]										1 [1.0]	
Salivary Glands	(10)		(0)		(0)		(0)		(0)		(10)	
Stomach, Forestomach	(10)		(0)		(0)		(0)		(0)		(10)	
Stomach, Glandular	(10)		(0)		(0)		(0)		(0)		(10)	
Glands, Ectasia	2 [1.0]										3 [1.0]	

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat MALE	0	MG/KG	1000	MG/KG	2000	MG/KG	3000	MG/KG	4000	MG/KG	5000	MG/KG
Infiltration Cellular, Mononuclear CI Inflammation	6	[1.0]									7	[1.0]
											1	[1.0]
<b>CARDIOVASCULAR SYSTEM</b>												
Blood Vessel Inflammation	(10)		(0)		(0)		(0)		(0)		(10)	
											1	[1.0]
Heart Cardiomyopathy	(10)		(0)		(0)		(0)		(0)		(10)	
	10	[1.1]									10	[1.0]
<b>ENDOCRINE SYSTEM</b>												
Adrenal Cortex	(10)		(0)		(0)		(0)		(0)		(10)	
Adrenal Medulla	(10)		(0)		(0)		(0)		(0)		(10)	
Parathyroid Gland	(8)		(0)		(0)		(0)		(0)		(9)	
Pituitary Gland	(10)		(0)		(0)		(0)		(0)		(10)	
Thyroid Gland	(10)		(0)		(0)		(0)		(0)		(10)	
<b>GENERAL BODY SYSTEM</b>												
None												
<b>GENITAL SYSTEM</b>												
Epididymis Atrophy Inflammation	(10)		(0)		(0)		(0)		(0)		(10)	
											1	[2.0]
											1	[1.0]
Preputial Gland	(10)		(0)		(0)		(0)		(0)		(10)	
Prostate Atrophy Inflammation	(10)		(0)		(0)		(0)		(0)		(10)	
											1	[2.0]
	1	[2.0]										
Seminal Vesicle Atrophy	(10)		(0)		(0)		(0)		(0)		(10)	
											1	[2.0]
Testes Germinal Epith, Degeneration	(10)		(0)		(0)		(0)		(0)		(10)	
											1	[4.0]

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat MALE	0	MG/KG	1000	MG/KG	2000	MG/KG	3000	MG/KG	4000	MG/KG	5000	MG/KG
Inflammation	1	[1.0]										
<b>HEMATOPOIETIC SYSTEM</b>												
Bone Marrow	(10)		(0)		(0)		(0)		(0)		(10)	
Lymph Node, Mesenteric	(10)		(0)		(0)		(0)		(0)		(10)	
Spleen	(10)		(0)		(0)		(0)		(0)		(10)	
Hematopoietic Cell Proliferation	10	[1.0]									10	[1.0]
Pigmentation, Hemosiderin	2	[1.0]									2	[1.0]
Thymus	(10)		(0)		(0)		(0)		(0)		(10)	
<b>INTEGUMENTARY SYSTEM</b>												
Mammary Gland	(10)		(0)		(0)		(0)		(0)		(10)	
Skin	(10)		(0)		(0)		(0)		(0)		(10)	
<b>MUSCULOSKELETAL SYSTEM</b>												
Bone	(10)		(0)		(0)		(0)		(0)		(10)	
<b>NERVOUS SYSTEM</b>												
Brain	(10)		(0)		(0)		(0)		(0)		(10)	
<b>RESPIRATORY SYSTEM</b>												
Lung	(10)		(0)		(0)		(0)		(0)		(10)	
Inflammation, Chronic Active	8	[1.0]									10	[1.1]
Nose	(10)		(0)		(0)		(0)		(0)		(10)	
Respirat Epith, Inflammation											1	[1.0]
Trachea	(10)		(0)		(0)		(0)		(0)		(10)	
<b>SPECIAL SENSES SYSTEM</b>												
Eye	(10)		(0)		(0)		(0)		(0)		(10)	
Harderian Gland	(10)		(0)		(0)		(0)		(0)		(10)	
Infiltration Cellular, Mononuclear CI											1	[1.0]
Inflammation, Suppurative	6	[1.8]									3	[1.3]

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

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Species/Strain: Rat/F 344/N

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First Dose M/F: NA / NA

Lab: BAT

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<b>F 344/N Rat MALE</b>	<b>0</b>	<b>MG/KG</b>	<b>1000</b>	<b>MG/KG</b>	<b>2000</b>	<b>MG/KG</b>	<b>3000</b>	<b>MG/KG</b>	<b>4000</b>	<b>MG/KG</b>	<b>5000</b>	<b>MG/KG</b>
URINARY SYSTEM												
Kidney	(10)		(0)		(0)		(0)		(0)		(10)	
Mineralization	5 [1.0]										7 [1.0]	
Nephropathy	8 [1.0]										9 [1.0]	
Urinary Bladder	(10)		(0)		(0)		(0)		(0)		(10)	

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

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

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Species/Strain: Rat/F 344/N

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Lab: BAT

F 344/N Rat FEMALE	0	MG/KG	1000	MG/KG	2000	MG/KG	3000	MG/KG	4000	MG/KG	5000	MG/KG
<b>Disposition Summary</b>												
Animals Initially In Study	10		10		10		10		10		10	
Early Deaths												
Survivors												
Terminal Sacrifice	10		10		10		10		10		10	
Animals Examined Microscopically	10		3		1		3		2		10	
<b>ALIMENTARY SYSTEM</b>												
Esophagus	(10)		(0)		(0)		(1)		(0)		(10)	
Periesoph Tiss, Hemorrhage							1 [3.0]					
Intestine Large, Cecum	(10)		(0)		(0)		(0)		(0)		(10)	
Intestine Large, Colon	(10)		(0)		(0)		(0)		(0)		(10)	
Intestine Large, Rectum	(10)		(0)		(0)		(0)		(0)		(10)	
Intestine Small, Duodenum	(10)		(0)		(0)		(0)		(0)		(10)	
Intestine Small, Ileum	(10)		(0)		(0)		(0)		(0)		(10)	
Intestine Small, Jejunum	(10)		(0)		(0)		(0)		(0)		(10)	
Liver	(10)		(1)		(1)		(2)		(1)		(10)	
Fibrosis, Focal			1 [1.0]									
Hepatodiaphragmatic Nodule	1		1 [1.0]		1		2		1		1	
Inflammation, Chronic Active	7 [1.0]								1 [1.0]		10 [1.0]	
Inflammation, Granulomatous											1 [1.0]	
Necrosis, Focal			1 [1.0]									
Pancreas	(10)		(0)		(0)		(0)		(0)		(10)	
Atrophy	1 [1.0]											
Infiltration Cellular, Mononuclear Cl	5 [1.0]										4 [1.0]	
Inflammation	1 [1.0]											
Salivary Glands	(10)		(0)		(0)		(0)		(0)		(10)	
Stomach, Forestomach	(10)		(0)		(0)		(0)		(0)		(10)	
Epithelium, Hyperplasia, Squamous											1 [1.0]	

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat FEMALE	0	MG/KG	1000	MG/KG	2000	MG/KG	3000	MG/KG	4000	MG/KG	5000	MG/KG
Stomach, Glandular	(10)		(0)		(0)		(0)		(0)		(10)	
Epithelium, Inflammation, Granulomatous											1 [1.0]	
Infiltration Cellular, Mononuclear CI	6 [1.0]										2 [1.0]	
<b>CARDIOVASCULAR SYSTEM</b>												
Blood Vessel	(10)		(0)		(0)		(0)		(0)		(10)	
Adventitia, Pigmentation, Hemosiderin	1 [1.0]											
Inflammation, Chronic	1 [1.0]											
Heart	(10)		(0)		(0)		(0)		(0)		(10)	
Cardiomyopathy	7 [1.0]										7 [1.0]	
<b>ENDOCRINE SYSTEM</b>												
Adrenal Cortex	(10)		(0)		(0)		(0)		(0)		(10)	
Adrenal Medulla	(10)		(0)		(0)		(0)		(0)		(10)	
Parathyroid Gland	(9)		(0)		(0)		(0)		(0)		(9)	
Pituitary Gland	(10)		(0)		(0)		(0)		(0)		(10)	
Thyroid Gland	(10)		(0)		(0)		(0)		(0)		(10)	
Degeneration	1 [1.0]											
Inflammation, Chronic Active	1 [1.0]											
Pigmentation, Hemosiderin	1 [1.0]											
<b>GENERAL BODY SYSTEM</b>												
None												
<b>GENITAL SYSTEM</b>												
Clitoral Gland	(10)		(0)		(0)		(0)		(0)		(10)	
Ovary	(10)		(2)		(0)		(1)		(1)		(10)	
Cyst							1					
Uterus	(10)		(0)		(0)		(1)		(0)		(10)	
Endometrium, Hyperplasia, Cystic							1 [2.0]				2 [2.0]	
<b>HEMATOPOIETIC SYSTEM</b>												

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat FEMALE	0	MG/KG	1000	MG/KG	2000	MG/KG	3000	MG/KG	4000	MG/KG	5000	MG/KG
Bone Marrow	(10)		(0)		(0)		(0)		(0)		(10)	
Lymph Node	(0)		(0)		(0)		(0)		(0)		(1)	
Deep Cervical, Hyperplasia, Lymphoid											1 [1.0]	
Lymph Node, Mesenteric	(10)		(0)		(0)		(0)		(0)		(10)	
Pigmentation, Hemosiderin	1 [1.0]										1 [1.0]	
Spleen	(10)		(0)		(0)		(0)		(0)		(10)	
Hematopoietic Cell Proliferation	9 [1.0]										9 [1.0]	
Pigmentation, Hemosiderin	9 [1.0]										9 [1.0]	
Thymus	(10)		(0)		(0)		(0)		(0)		(10)	
Atrophy											1 [1.0]	
<b>INTEGUMENTARY SYSTEM</b>												
Mammary Gland	(10)		(0)		(0)		(0)		(0)		(10)	
Skin	(10)		(0)		(0)		(0)		(0)		(10)	
<b>MUSCULOSKELETAL SYSTEM</b>												
Bone	(10)		(0)		(0)		(0)		(0)		(10)	
<b>NERVOUS SYSTEM</b>												
Brain	(10)		(0)		(0)		(0)		(0)		(10)	
<b>RESPIRATORY SYSTEM</b>												
Lung	(10)		(0)		(0)		(0)		(0)		(10)	
Bronchiole, Hyperplasia											1 [1.0]	
Inflammation, Chronic Active	8 [1.1]										8 [1.0]	
Nose	(10)		(0)		(0)		(0)		(0)		(10)	
Cyst											1	
Olfactory Epi, Inflammation	1 [1.0]											
Trachea	(10)		(0)		(0)		(0)		(0)		(10)	
<b>SPECIAL SENSES SYSTEM</b>												
Eye	(10)		(0)		(0)		(0)		(0)		(10)	

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<b>F 344/N Rat FEMALE</b>	<b>0</b>	<b>MG/KG</b>	<b>1000</b>	<b>MG/KG</b>	<b>2000</b>	<b>MG/KG</b>	<b>3000</b>	<b>MG/KG</b>	<b>4000</b>	<b>MG/KG</b>	<b>5000</b>	<b>MG/KG</b>
Sclera, Inflammation, Chronic Active											1 [1.0]	
Harderian Gland	(10)		(0)		(0)		(0)		(0)		(10)	
Infiltration Cellular, Mononuclear CI	1 [1.0]										1 [1.0]	
Inflammation, Suppurative	3 [1.3]										7 [1.7]	
<b>URINARY SYSTEM</b>												
Kidney	(10)		(0)		(0)		(0)		(0)		(10)	
Mineralization	7 [1.0]										9 [1.1]	
Nephropathy	2 [1.0]										3 [1.0]	
Urinary Bladder	(10)		(0)		(0)		(0)		(0)		(10)	

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

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

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)