

**Experiment Number:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:24  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**C Number:** C61994C  
**Lock Date:** Not Entered.  
**Cage Range:** All  
**Date Range:** All  
**Reasons For Removal:** All  
**Removal Date Range:** All  
**Treatment Groups:** All  
**Study Gender:** Both  
**PWG Approval Date:** 04/29/1994

**Experiment Number:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SEN CAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
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**First Dose M/F:** NA / NA  
**Lab:** BAT

<b>SEN CAR Mouse Male</b>	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	0	0	0
<b>VEHICLE CONTROL</b>		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	2	6	6	6	6	6	6	6	6	6	6
		2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4
	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	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	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	2	2	2	2	2	2	2	3
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	0	

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin

Skin, SOA-No Mass

Acanthosis

**Musculoskeletal System**

NONE

	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
		+																								
		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

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 Lab: BAT

SENAR Mouse Male VEHICLE CONTROL	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	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	3	3	3	3	3	3	3	3	3	3	3	3
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	ANIMAL ID	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	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	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	

**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

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Experiment Number: 05117-06  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/SENCAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
Time Report Requested: 20:21:24  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

**SENCAR Mouse Male**  
**VEHICLE CONTROL**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin 29

Skin, SOA-No Mass 1

Acanthosis 1 1.0

**Musculoskeletal System**

NONE

**Nervous System**

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X ..Lesion present

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M ..Missing tissue

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**CAS Number:** INIT/PROM

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**Time Report Requested:** 20:21:24  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SEN CAR Mouse Male**  
**VEHICLE CONTROL**

ANIMAL ID

\*TOTALS

NONE

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

NONE

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<b>DAY ON TEST</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SENCAR Mouse Male</b>	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	3		
<b>MNNG 100/ACETONE</b>	6	6	6	6	6	6	6	6	6	2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	8	6	6	6	
<b>ANIMAL ID</b>	2	2	2	2	2	2	2	2	2	7	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	8	4	4	4		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	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	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	6	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	0	0		

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Skin, SOA-Mass													+	+							+													
Acanthosis													3	2																				
Skin, SOA-No Mass											+									+		+							+			+		+
Acanthosis											1										1		1		1				1			1		1

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ ..Tissue examined microscopically  
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Date Report Requested: 10/18/2014  
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 First Dose M/F: NA / NA  
 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	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	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	
		6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	8	6		
		2	2	2	2	2	2	2	2	7	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	8	4		
SENCAR Mouse Male MNNG 100/ACETONE	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		0	0	0	0	0	0	0	0	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	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	6	0		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	0	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

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**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
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**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
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**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG 100/ACETONE**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin	21		
Skin, SOA-Mass	3		
Acanthosis	2	2.5	
Skin, SOA-No Mass	6		
Acanthosis	6	1.0	

**Musculoskeletal System**

NONE

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

+ ..Tissue examined microscopically

X ..Lesion present

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**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG 100/ACETONE**

ANIMAL ID

\*TOTALS

**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:

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Experiment Number: 05117-06

Test Type: INIT/PROMOT

Route: SKIN APPLICATION

Species/Strain: Mouse/SEN CAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)

CAS Number: INIT/PROM

Date Report Requested: 10/18/2014

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First Dose M/F: NA / NA

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	0	0	0	0	0	0			
SEN CAR Mouse Male MNNG 500/ACETONE	2	3	2	3	3	3	3	3	2	3	3	3	3	3	3	2	2	1	2	0	3	3	1	3	2	1	3	3	2		
	8	6	5	6	6	6	6	6	0	4	6	6	6	6	6	2	4	9	5	4	6	6	8	3	4	5	6	6	1		
	3	2	9	2	2	2	2	2	9	8	3	3	3	3	4	2	4	0	1	4	4	4	1	1	5	9	4	4	7		
	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		0	0	0	0	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	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9		
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin																														
Inflammation, Chronic Active																														
Ulcer																														
Skin, Control																														
Acanthosis																														
Inflammation, Chronic Active																														

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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**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	0	0	0	0	0	0	0	0	0
<b>SENCAR Mouse Male</b>	2	3	2	3	3	3	3	3	2	3	3	3	3	3	3	2	2	1	2	0	3	3	1	3	2	1	3	3	2
<b>MNNG 500/ACETONE</b>	8	6	5	6	6	6	6	6	0	4	6	6	6	6	6	2	4	9	5	4	6	6	8	3	4	5	6	6	1
	3	2	9	2	2	2	2	9	8	3	3	3	3	3	4	2	4	0	1	4	4	4	1	1	5	9	4	4	7
<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	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	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
Skin, SOA-Mass	+	+	+		+				+	+				+	+				+						+	+			+
Skin, SOA-No Mass	+	+						+	+			+	+	+		+	+	+	+	+	+	+	+		+				+
Acanthosis	1	1						1				1	4	4			1			2	1	1	1	2				2	
Hair Follicle, Cyst	X																												X
Inflammation, Chronic Active	1							1					3	3		3	3	3	4		1	1	1	1	4		3		1
Ulcer									4				4			3	4	4	4					4		3			
<b>Musculoskeletal System</b>																													
NONE																													
<b>Nervous System</b>																													
NONE																													
<b>Respiratory System</b>																													
NONE																													
<b>Special Senses System</b>																													
NONE																													
<b>Urinary System</b>																													
NONE																													

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

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**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG 500/ACETONE**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin	11		
Inflammation, Chronic Active	4	3.3	
Ulcer	4	4.0	
Skin, Control	4		
Acanthosis	4	2.3	
Inflammation, Chronic Active	3	1.0	
Skin, SOA-Mass	12		

\* ..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

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**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:25  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG 500/ACETONE**

ANIMAL ID

**\*TOTALS**

Skin, SOA-No Mass	19	
Acanthosis	13	1.7
Hair Follicle, Cyst	2	
Inflammation, Chronic Active	15	2.2
Ulcer	8	3.8

**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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCA

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:25  
 First Dose M/F: NA / NA  
 Lab: BAT

SENCA Mouse Male MNNG1000/ACETONE	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	0	0	0	0	0			
	0	2	1	1	2	1	3	0	1	1	1	3	1	1	3	1	2	2	2	3	1	3	2	2	1	2	3	3	1	3	
ANIMAL ID																															
	7	5	5	6	6	9	5	3	1	8	2	6	8	3	6	3	8	1	0	6	7	6	1	9	9	5	6	6	6	6	
	9	0	5	8	8	7	6	7	4	4	2	2	1	1	2	1	1	3	3	5	3	7	2	7	9	4	4	9	4		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1	1	1	1	
	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4	5	6	7	8	9	0

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+						
Alopecia	X											X				X								
Inflammation, Chronic Active			3	3	4	3	3	3	3			3				3	3	3	3	4		3		
Ulcer			4	4	4	3	4	4	3			4				3	3	4	4			4		
Skin, Control	+					+												+		+		+		
Acanthosis									1											1		3		1

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

Experiment Number: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:25  
 First Dose M/F: NA / NA  
 Lab: BAT

SENCAR Mouse Male MNNG1000/ACETONE	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	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			
Inflammation, Chronic Active	3								1																							
Ulcer	4																															
Skin, SOA-Mass Acanthosis		+				+	+	+			+	+																				
Skin, SOA-No Mass Acanthosis	+		+	+					+		+	+	+																			
Hair Follicle, Cyst				1							2	4	1																			
Inflammation, Chronic Active	3					3				3		2	4	1			4							3	3		3	3	1	1	2	3
Ulcer	4				3					4																					3	4
<b>Musculoskeletal System</b>																																
NONE																																
<b>Nervous System</b>																																
NONE																																
<b>Respiratory System</b>																																
NONE																																
<b>Special Senses System</b>																																
NONE																																
<b>Urinary System</b>																																
NONE																																

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

**Experiment Number:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:25  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG1000/ACETONE**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin	19	
Alopecia	3	
Inflammation, Chronic Active	14	3.1
Ulcer	13	3.7
Skin, Control	5	
Acanthosis	4	1.5
Inflammation, Chronic Active	5	1.6

\* ..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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:25  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG1000/ACETONE**

ANIMAL ID	<u>*TOTALS</u>	
Ulcer	1	4.0
Skin, SOA-Mass	18	
Acanthosis	2	3.5
Skin, SOA-No Mass	19	
Acanthosis	9	1.8
Hair Follicle, Cyst	2	
Inflammation, Chronic Active	17	2.6
Ulcer	11	3.6

**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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SEN CAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:25  
 First Dose M/F: NA / NA  
 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	0	0	0	0	0	0	0	0	0	
SEN CAR Mouse Male	2	2	3	2	2	2	3	3	3	2	3	3	2	2	1	3	2	3	1	1	2	2	2	2	3	3	3	2	2	
MNNG100/COMPLETE	8	8	0	8	6	0	6	1	6	6	9	0	4	6	4	7	0	5	2	3	7	5	5	7	4	6	1	1	5	5
	8	6	3	8	1	6	2	4	3	3	6	3	1	6	5	4	3	2	7	7	4	9	9	3	5	4	6	4	2	9
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	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	1	1	1	1	1	1	1	1	
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	8	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin																													
Inflammation, Chronic Active		+			+				+												+					+			
Ulcer		3			3				3												3					3			
Skin, Control		4			4				4												4					4			
Acanthosis	+		+	+	+			+	+	+			+	+	+	+	+	+	+	+		+			+	+	+	+	+
Inflammation, Chronic Active	1		1	1	1				2	1			1	2	2	2	2	2	2	3	1		2		3	1	2	1	2
	1		1	1	2			3		1			1		1	1	1	1	2	2	1			1			1	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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:26  
 First Dose M/F: NA / NA  
 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	0	0	0	0	0	0	0	0	0	0
<b>SENCAR Mouse Male</b>		2	2	3	2	2	2	3	3	3	3	2	3	3	2	2	1	3	2	3	1	1	2	2	2	2	3	3	3	2	2
	<b>MNNG100/COMPLETE</b>	8	8	0	8	6	0	6	1	6	6	9	0	4	6	4	7	0	5	2	3	7	5	5	7	4	6	1	1	5	5
		8	6	3	8	1	6	2	4	3	3	6	3	1	6	5	4	3	2	7	7	4	9	9	3	5	4	6	4	2	9
	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	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	1	1	1	1	1	1	1	1	1
		5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	8
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0
	Ulcer	4																													
	Skin, SOA-Mass	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Skin, SOA-No Mass	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	Acanthosis	3	2	3	1	2		3	2	2	3		3	3	1	2	2	1	2	3	3	1	2	2		4	1		3	2	
	Inflammation, Chronic Active	2	3	3	1	3		3	4	3	2		2	1		3	1	1	1	3	2	1	1	1	4	4		3	3	2	3
	Subcut Tiss, Infiltration Cellular, Mixed Cell	3																													
	Ulcer		4	3		4	4	4		4		4			3				3	4				4	4		3	3		4	
	<b>Musculoskeletal System</b>																														
	NONE																														
	<b>Nervous System</b>																														
	NONE																														
	<b>Respiratory System</b>																														
	NONE																														
	<b>Special Senses System</b>																														
	NONE																														
	<b>Urinary System</b>																														
	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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:26  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG100/COMPLETE**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin	5		
Inflammation, Chronic Active	5	3.0	
Ulcer	5	4.0	
Skin, Control	22		
Acanthosis	21	1.7	
Inflammation, Chronic Active	17	1.3	
Ulcer	1	4.0	

\* ..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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:26  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG100/COMPLETE**

ANIMAL ID	*TOTALS	
Skin, SOA-Mass	28	
Skin, SOA-No Mass	30	
Acanthosis	25	2.2
Inflammation, Chronic Active	26	2.3
Subcut Tiss, Infiltration Cellular, Mixed Cell	1	3.0
Ulcer	15	3.7

**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: 05117-06  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/SENCAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
Time Report Requested: 20:21:26  
First Dose M/F: NA / NA  
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	0	0	0	0	0	0	0	0	0	
SENCAR Mouse Male BPO 20 COMPLETE	3	2	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	
	6	9	6	6	6	6	6	6	6	5	6	6	6	6	6	6	6	0	6	6	6	6	6	6	6	6	6	6	6	
	2	4	2	2	2	2	2	2	2	5	2	3	3	3	3	3	3	9	3	4	4	4	4	4	4	4	4	4	4	
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	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	2	2	2	2	2	2	2	2	2	2	2	
	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	0	1		
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin	+																											
Acanthosis	4																											
Inflammation, Chronic Active	3																											
Ulcer	4																											
Skin, Control	+ +																											
Acanthosis	1 1 1 2 1 1 1 1 1 2 1 2 1 2 1 1 1 1 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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:26  
 First Dose M/F: NA / NA  
 Lab: BAT

SENCAR Mouse Male BPO 20 COMPLETE	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	0	0	0	0	0
	3	2	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3
	6	9	6	6	6	6	6	6	6	5	6	6	6	6	6	6	6	6	0	6	6	6	6	6	6	6	6	6
	2	4	2	2	2	2	2	2	2	5	2	3	3	3	3	3	3	3	9	3	4	4	4	4	4	4	4	4
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	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	1	2	2	2	2	2	2	2	2	2	2
	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
Inflammation, Chronic Active										1	1		1			1	1	1		1			1				1	
Skin, SOA-Mass																												
Skin, SOA-No Mass																												
Acanthosis																												
Alopecia																												
Inflammation, Chronic Active																												
Ulcer																												
<b>Musculoskeletal System</b>																												
NONE																												
<b>Nervous System</b>																												
NONE																												
<b>Respiratory System</b>																												
NONE																												
<b>Special Senses System</b>																												
NONE																												
<b>Urinary System</b>																												
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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:26  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**BPO 20 COMPLETE**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin	4		
Acanthosis	1	4.0	
Inflammation, Chronic Active	1	3.0	
Ulcer	1	4.0	
Skin, Control	15		
Acanthosis	15	1.2	
Inflammation, Chronic Active	9	1.0	

\* ..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: 05117-06  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/SENCAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
Time Report Requested: 20:21:26  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

**SENCAR Mouse Male**  
**BPO 20 COMPLETE**

ANIMAL ID	*TOTALS	
Skin, SOA-Mass	1	
Skin, SOA-No Mass	27	
Acanthosis	25	1.7
Alopecia	1	
Inflammation, Chronic Active	26	1.2
Ulcer	2	3.5

**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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:26  
**First Dose M/F:** NA / NA  
**Lab:** BAT

	DAY ON TEST																															
<b>SENCAR Mouse Male</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>MNNG 100/BPO 20</b>	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	
	6	6	6	6	6	6	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	9	6	6	6	6	6	6	6	
	2	2	2	2	2	2	9	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	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	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	0	

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin, Control

+ +

Acanthosis

1 1 1 1 1 1 2 1

Inflammation, Chronic Active

1 1

Skin, SOA-Mass

+ +

Acanthosis

3

Skin, SOA-No Mass

+ +

\* ..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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SEN CAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:26  
 First Dose M/F: NA / NA  
 Lab: BAT

| SEN CAR Mouse Male<br>MNNG 100/BPO 20 | 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 | 0 | 0 | 0 | 0 |   |
|---------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                       | ANIMAL ID   | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 |   |
|                                       |             | 6 | 6 | 6 | 6 | 6 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 9 | 6 | 6 | 6 | 6 | 6 | 6 |   |
|                                       |             | 2 | 2 | 2 | 2 | 2 | 9 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 6 | 4 | 4 | 4 | 4 |   |
| Acanthosis                            |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| Hair Follicle, Cyst                   |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| Inflammation, Chronic Active          |             | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |   |
| Ulcer                                 |             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 |   |
|                                       |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| <b>Musculoskeletal System</b>         |             | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 2 | 3 | 1 |
| NONE                                  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |
| <b>Nervous System</b>                 |             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 |   |
| NONE                                  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Respiratory System</b>             |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                                  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Special Senses System</b>          |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                                  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Urinary System</b>                 |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 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: 05117-06  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/SENCAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
Time Report Requested: 20:21:26  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

SENCAR Mouse Male  
MNNG 100/BPO 20

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |    |     |  |
|------------------------------|----|-----|--|
| Skin, Control                | 15 |     |  |
| Acanthosis                   | 15 | 1.1 |  |
| Inflammation, Chronic Active | 14 | 1.0 |  |
| Skin, SOA-Mass               | 12 |     |  |
| Acanthosis                   | 1  | 3.0 |  |
| Skin, SOA-No Mass            | 29 |     |  |
| Acanthosis                   | 28 | 1.6 |  |

\* ..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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:26  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG 100/BPO 20**

| ANIMAL ID                    | *TOTALS |     |
|------------------------------|---------|-----|
| Hair Follicle, Cyst          | 1       |     |
| Inflammation, Chronic Active | 29      | 1.2 |
| Ulcer                        | 1       | 4.0 |

**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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:26  
**First Dose M/F:** NA / NA  
**Lab:** BAT

|  |  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>SENCAR Mouse Male<br/>MNNG 500/BPO 20</b> |  | 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 | 0 | 0 | 0 | 0 | 0 |   |
|  |  | 3           | 2 | 3 | 3 | 1 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 1 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 1 | 2 | 3 | 3 | 3 |   |
|  |  | 4           | 8 | 6 | 6 | 8 | 6 | 2 | 0 | 1 | 6 | 6 | 6 | 6 | 1 | 2 | 6 | 6 | 6 | 2 | 6 | 6 | 5 | 6 | 0 | 6 | 6 | 6 | 6 | 6 | 6 |
|  |  | 1           | 6 | 2 | 2 | 9 | 2 | 5 | 7 | 7 | 2 | 2 | 2 | 2 | 0 | 8 | 3 | 3 | 3 | 0 | 3 | 3 | 4 | 9 | 4 | 3 | 4 | 8 | 8 | 4 | 4 |
| 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 | 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 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|  |  | 4           | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 |
|  |  | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Skin                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inflammation, Chronic Active |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ulcer                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Skin, Control                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Acanthosis                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inflammation, Chronic Active |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

\* ..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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:27  
 First Dose M/F: NA / NA  
 Lab: BAT

| SENCAR Mouse Male<br>MNNG 500/BPO 20 | 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 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| ANIMAL ID                            | 3           | 2 | 3 | 3 | 1 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 1 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 1 | 2 | 3 | 3 |
|                                      | 4           | 8 | 6 | 6 | 8 | 6 | 2 | 0 | 1 | 6 | 6 | 6 | 6 | 1 | 2 | 6 | 6 | 6 | 2 | 6 | 6 | 6 | 5 | 6 | 0 | 6 | 6 | 6 | 6 | 6 |
|                                      | 1           | 6 | 2 | 2 | 9 | 2 | 5 | 7 | 7 | 2 | 2 | 2 | 0 | 8 | 3 | 3 | 3 | 0 | 3 | 3 | 4 | 9 | 4 | 3 | 4 | 8 | 8 | 4 | 4 |   |
|                                      | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                      | 0           | 0 | 0 | 0 | 0 | 0 | 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 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|                                      | 4           | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 |
|                                      | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| Skin, SOA-Mass                       | +           | + |   | + |   |   | + | + | + | + |   |   | + |   | + | + | + |   | + | + | + | + | + | + | + | + | + | + | + |   |
| Acanthosis                           |             |   |   |   |   |   |   |   | 3 |   | 3 |   |   |   | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Skin, SOA-No Mass                    | +           | + | + | + | + | + | + |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Acanthosis                           | 4           | 2 | 4 | 1 | 4 | 1 | 1 |   | 3 | 2 | 1 | 1 | 3 | 1 | 3 | 2 | 3 | 1 |   | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 2 |   | 3 | 1 |
| Hair Follicle, Cyst                  |             |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| Inflammation, Chronic Active         | 3           | 1 | 2 | 1 | 3 | 1 | 1 |   | 3 | 1 | 1 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 3 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 3 |   | 1 |
| Subcut Tiss, Edema                   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3 |   |   |   |   |   |   |   |   |   |   |
| Ulcer                                |             |   |   |   | 3 |   |   |   | 4 |   |   |   |   | 4 |   |   |   |   |   | 3 |   |   |   |   |   |   |   | 4 |   |   |
| <b>Musculoskeletal System</b>        |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                                 |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Nervous System</b>                |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                                 |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Respiratory System</b>            |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                                 |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Special Senses System</b>         |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                                 |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Urinary System</b>                |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:27  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG 500/BPO 20**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |    |     |  |
|------------------------------|----|-----|--|
| Skin                         | 3  |     |  |
| Inflammation, Chronic Active | 3  | 3.0 |  |
| Ulcer                        | 3  | 3.7 |  |
| Skin, Control                | 14 |     |  |
| Acanthosis                   | 14 | 1.4 |  |
| Inflammation, Chronic Active | 14 | 1.1 |  |
| Skin, SOA-Mass               | 21 |     |  |

\* ..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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:27  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG 500/BPO 20**

| ANIMAL ID                    | <u>*TOTALS</u> |     |
|------------------------------|----------------|-----|
| Acanthosis                   | 3              | 2.3 |
| Skin, SOA-No Mass            | 29             |     |
| Acanthosis                   | 27             | 2.0 |
| Hair Follicle, Cyst          | 2              |     |
| Inflammation, Chronic Active | 28             | 1.6 |
| Subcut Tiss, Edema           | 1              | 3.0 |
| Ulcer                        | 5              | 3.6 |

**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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:27  
 First Dose M/F: NA / NA  
 Lab: BAT

|                                      |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SENCAR Mouse Male<br>MNNG1000/BPO 20 | 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 | 0 | 0 | 0 | 0 | 0 |   |   |
|                                      |             | 1 | 3 | 3 | 2 | 2 | 2 | 1 | 3 | 1 | 1 | 3 | 2 | 1 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 1 | 2 | 3 | 1 | 1 | 3 | 1 |
|                                      |             | 0 | 6 | 6 | 6 | 4 | 5 | 5 | 6 | 8 | 9 | 6 | 6 | 2 | 0 | 6 | 6 | 1 | 2 | 4 | 0 | 0 | 1 | 4 | 2 | 1 | 1 | 6 | 7 | 1 | 1 |
|                                      |             | 5 | 2 | 2 | 8 | 4 | 0 | 4 | 3 | 1 | 5 | 3 | 8 | 2 | 9 | 4 | 4 | 7 | 7 | 5 | 9 | 3 | 6 | 2 | 8 | 3 | 6 | 3 | 5 | 4 | 1 |
|                                      | 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 |

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Skin                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alopecia                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inflammation, Chronic Active |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ulcer                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Skin, Control                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Acanthosis                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

\* ..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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SEN CAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:27  
 First Dose M/F: NA / NA  
 Lab: BAT

| DAY ON TEST                  | 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 |   |
| <b>SEN CAR Mouse Male</b>    | 1         | 3 | 3 | 2 | 2 | 2 | 1 | 3 | 1 | 1 | 3 | 2 | 1 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 1 | 2 | 3 | 1 | 1 | 3 | 1 |
| <b>MNNG1000/BPO 20</b>       | 0         | 6 | 6 | 6 | 4 | 5 | 5 | 6 | 8 | 9 | 6 | 6 | 2 | 0 | 6 | 6 | 1 | 2 | 4 | 0 | 0 | 1 | 4 | 2 | 1 | 1 | 6 | 7 | 1 | 1 |
|                              | 5         | 2 | 2 | 8 | 4 | 0 | 4 | 3 | 1 | 5 | 3 | 8 | 2 | 9 | 4 | 4 | 7 | 7 | 5 | 9 | 3 | 6 | 2 | 8 | 3 | 6 | 3 | 5 | 4 | 1 |
|                              | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                              | 0         | 0 | 0 | 0 | 0 | 0 | 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 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
|                              | 7         | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 0 |
|                              | 1         | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| Inflammation, Chronic Active |           |   | 1 | 1 | 2 | 2 | 1 |   | 1 |   |   | 2 | 2 | 2 |   |   | 1 |   | 1 | 1 | 1 | 2 | 1 |   | 1 | 1 | 1 | 1 | 1 | 1 |
| Skin, SOA-Mass               | +         | + | + | + | + | + |   | + | + | + | + | + | + | + | + | + |   | + | + | + | + |   | + | + | + | + | + | + | + | + |
| Skin, SOA-No Mass            | +         |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   | + | + | + | + | + | + | + |
| Acanthosis                   | 1         |   | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 2 | 2 | 3 | 3 | 3 | 2 | 1 | 3 | 2 | 4 | 4 | 2 | 2 | 2 |   | 3 | 3 | 3 | 2 | 1 | 3 |
| Inflammation, Chronic Active | 1         |   | 1 | 1 | 3 | 2 | 2 | 1 | 2 | 1 | 3 | 2 | 2 | 2 | 1 |   | 3 | 2 | 2 | 3 | 2 | 2 | 1 |   | 2 | 3 | 2 | 1 | 1 | 1 |
| Ulcer                        |           |   |   |   | 4 |   |   |   |   |   | 4 |   |   |   |   | 4 |   |   | 4 |   |   |   |   |   | 4 |   |   |   |   |   |

**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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:27  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG1000/BPO 20**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |    |     |  |
|------------------------------|----|-----|--|
| Skin                         | 3  |     |  |
| Alopecia                     | 1  |     |  |
| Inflammation, Chronic Active | 3  | 3.0 |  |
| Ulcer                        | 3  | 4.0 |  |
| Skin, Control                | 21 |     |  |
| Acanthosis                   | 21 | 1.7 |  |
| Inflammation, Chronic Active | 21 | 1.3 |  |

\* ..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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:27  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG1000/BPO 20**

| ANIMAL ID                    | *TOTALS |     |
|------------------------------|---------|-----|
| Skin, SOA-Mass               | 27      |     |
| Skin, SOA-No Mass            | 28      |     |
| Acanthosis                   | 28      | 2.6 |
| Inflammation, Chronic Active | 27      | 1.8 |
| Ulcer                        | 5       | 4.0 |

**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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:27  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG 100/TPA 5**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**Nervous 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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:27  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG 100/TPA 5**

ANIMAL ID

\*TOTALS

---

**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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:27  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG1000/TPA 5**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**Nervous 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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:27  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**MNNG1000/TPA 5**

ANIMAL ID

\*TOTALS

**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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:27  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Male**  
**SENTINEL MALE**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**Nervous 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: 05117-06  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/SENCAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
Time Report Requested: 20:21:27  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

SENCAR Mouse Male  
SENTINEL MALE

ANIMAL ID

\*TOTALS

Respiratory System

NONE

Special Senses System

NONE

Urinary System

NONE

\*\*\*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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:27  
 First Dose M/F: NA / NA  
 Lab: BAT

|                            | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>SENCAR Mouse Female</b> | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| <b>VEHICLE CONTROL</b>     | 6           | 6 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 0 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
|                            | 2           | 2 | 2 | 2 | 2 | 2 | 6 | 2 | 2 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 6 | 3 | 3 | 4 | 0 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
|                            | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 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 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|                            | 6           | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
|                            | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin

+ +

**Musculoskeletal System**

NONE

**Nervous 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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:27  
 First Dose M/F: NA / NA  
 Lab: BAT

|                            | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>SENCAR Mouse Female</b> | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <b>VEHICLE CONTROL</b>     | 3           | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|                            | 6           | 6 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 0 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
|                            | 2           | 2 | 2 | 2 | 2 | 2 | 6 | 2 | 2 | 0 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 6 | 3 | 3 | 4 | 0 | 4 | 4 | 4 | 4 | 4 |
|                            | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                            | 0           | 0 | 0 | 0 | 0 | 0 | 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 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|                            | 6           | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 |
|                            | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

**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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:27  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**VEHICLE CONTROL**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin

30

**Musculoskeletal System**

NONE

**Nervous 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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:27  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**VEHICLE CONTROL**

ANIMAL ID

\*TOTALS

**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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG 100/ACETONE**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |    |     |  |
|------------------------------|----|-----|--|
| Skin                         | 28 |     |  |
| Inflammation, Chronic Active | 1  | 2.0 |  |
| Ulcer                        | 1  | 2.0 |  |
| Skin, SOA-No Mass            | 2  |     |  |
| Abscess                      | 1  | 1.0 |  |
| Acanthosis                   | 1  | 1.0 |  |

**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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG 100/ACETONE**

ANIMAL ID

\*TOTALS

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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:28  
 First Dose M/F: NA / NA  
 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| <b>SENCAR Mouse Female</b>    | 3           | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 2 |
| <b>MNNG 500/ACETONE</b>       | 6           | 6 | 6 | 6 | 6 | 6 | 6 | 8 | 6 | 7 | 6 | 6 | 6 | 6 | 4 | 6 | 6 | 0 | 6 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 5 |
|                               | 2           | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 8 | 3 | 3 | 9 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 9 | 0 |
|                               | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                               | 0           | 0 | 0 | 0 | 0 | 0 | 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 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
|                               | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
|                               | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| Skin, SOA-No Mass             |             | + | + |   |   | + |   |   | + | + | + | + |   | + | + | + |   | + | + | + | + |   |   |   |   |   | + | + | + |   |
| Acanthosis                    |             | 1 | 1 |   |   | 1 |   |   | 1 | 1 | 1 | 2 |   | 2 | 1 | 1 |   | 1 | 1 | 2 | 1 |   |   |   |   | 1 | 3 | 1 |   |   |
| Inflammation, Chronic Active  |             | 1 |   |   |   | 1 |   |   | 1 | 1 | 1 | 1 |   | 2 | 1 | 1 |   | 1 | 1 | 2 | 1 |   |   |   |   | 1 | 1 | 3 |   |   |
| Ulcer                         |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3 |
| <b>Musculoskeletal System</b> |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Nervous System</b>         |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Respiratory System</b>     |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Special Senses System</b>  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Urinary System</b>         |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 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: 05117-06  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/SENCAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
Time Report Requested: 20:21:28  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

SENCAR Mouse Female  
MNNG 500/ACETONE

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |    |     |  |
|------------------------------|----|-----|--|
| Mammary Gland                | 1  |     |  |
| Skin                         | 10 |     |  |
| Skin, Control                | 3  |     |  |
| Acanthosis                   | 3  | 1.0 |  |
| Inflammation, Chronic Active | 1  | 1.0 |  |
| Skin, SOA-Mass               | 8  |     |  |
| Skin, SOA-No Mass            | 17 |     |  |

\* ..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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG 500/ACETONE**

ANIMAL ID

**\*TOTALS**

|                              |    |     |
|------------------------------|----|-----|
| Acanthosis                   | 17 | 1.3 |
| Inflammation, Chronic Active | 16 | 1.3 |
| Ulcer                        | 1  | 3.0 |

**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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SEN CAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:28  
 First Dose M/F: NA / NA  
 Lab: BAT

| DAY ON TEST          | 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 |
| SEN CAR Mouse Female | 2         | 1 | 2 | 1 | 1 | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 2 | 3 | 3 | 2 | 1 | 1 | 3 | 3 | 3 | 1 | 2 | 3 | 2 | 1 | 2 | 3 | 3 |
| MNNG1000/ACETONE     | 4         | 7 | 8 | 1 | 4 | 6 | 8 | 6 | 6 | 6 | 1 | 6 | 3 | 0 | 6 | 5 | 5 | 3 | 5 | 6 | 6 | 9 | 8 | 4 | 4 | 4 | 5 | 6 | 6 |
|                      | 5         | 4 | 6 | 1 | 6 | 2 | 8 | 2 | 2 | 3 | 9 | 3 | 8 | 3 | 3 | 0 | 4 | 2 | 4 | 4 | 4 | 7 | 9 | 6 | 7 | 8 | 7 | 4 | 4 |
|                      | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                      | 0         | 0 | 0 | 0 | 0 | 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 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
|                      | 5         | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 |
|                      | 1         | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |  |   |  |  |   |  |  |  |  |   |  |   |  |   |   |  |  |   |   |  |  |   |   |   |   |   |   |  |  |  |
|------------------------------|--|---|--|--|---|--|--|--|--|---|--|---|--|---|---|--|--|---|---|--|--|---|---|---|---|---|---|--|--|--|
| Skin                         |  | + |  |  | + |  |  |  |  | + |  |   |  |   | + |  |  | + | + |  |  | + |   |   |   |   | + |  |  |  |
| Acanthosis                   |  |   |  |  | 3 |  |  |  |  |   |  |   |  |   |   |  |  |   |   |  |  |   |   |   |   |   |   |  |  |  |
| Alopecia                     |  |   |  |  |   |  |  |  |  |   |  |   |  |   |   |  |  |   |   |  |  |   |   |   |   |   |   |  |  |  |
| Inflammation, Chronic Active |  |   |  |  | 3 |  |  |  |  | 3 |  |   |  |   | 3 |  |  |   |   |  |  |   | 3 |   |   | 3 |   |  |  |  |
| Ulcer                        |  |   |  |  | 3 |  |  |  |  |   |  |   |  |   | 4 |  |  |   |   |  |  |   | 4 |   |   | 4 |   |  |  |  |
| Skin, Control                |  | + |  |  |   |  |  |  |  |   |  | + |  | + |   |  |  |   |   |  |  |   |   | + | + | + |   |  |  |  |

\* ..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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:28  
 First Dose M/F: NA / NA  
 Lab: BAT

| DAY ON TEST                | 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 |
| <b>SENCAR Mouse Female</b> | 2         | 1 | 2 | 1 | 1 | 3 | 2 | 3 | 3 | 3 | 1 | 3 | 2 | 3 | 3 | 2 | 1 | 1 | 3 | 3 | 3 | 1 | 2 | 3 | 2 | 1 | 2 | 3 | 3 |
| <b>MNNG1000/ACETONE</b>    | 4         | 7 | 8 | 1 | 4 | 6 | 8 | 6 | 6 | 6 | 1 | 6 | 3 | 0 | 6 | 5 | 5 | 3 | 5 | 6 | 6 | 9 | 8 | 4 | 4 | 4 | 5 | 6 | 6 |
|                            | 5         | 4 | 6 | 1 | 6 | 2 | 8 | 2 | 2 | 3 | 9 | 3 | 8 | 3 | 3 | 0 | 4 | 2 | 4 | 4 | 4 | 7 | 9 | 6 | 7 | 8 | 7 | 4 | 4 |
|                            | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                            | 0         | 0 | 0 | 0 | 0 | 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 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
|                            | 5         | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 |
|                            | 1         | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

|                              |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|
| Acanthosis                   | 1 |   |   |   |   |   |   |   |  |   |   |   |   |   | 1 | 2 |   |   |  |   |   |   |   |   | 1 | 1 |   |   |   |   |
| Inflammation, Chronic Active | 1 |   |   |   |   |   |   |   |  |   |   |   |   |   | 1 |   |   |   |  |   |   |   |   |   | 3 |   |   |   |   |   |
| Ulcer                        |   |   |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |  |   |   |   |   |   | 3 |   |   |   |   |   |
| Skin, SOA-Mass               | + | + | + |   | + | + | + |   |  | + | + | + | + |   | + | + | + |   |  | + |   | + | + | + | + | + | + | + | + |   |
| Acanthosis                   |   |   |   |   |   |   |   |   |  |   |   | 3 |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   | 2 |
| Skin, SOA-No Mass            | + |   |   | + | + | + | + | + |  | + |   |   |   | + | + | + |   | + |  | + | + | + | + |   |   | + | + |   | + |   |
| Acanthosis                   | 4 |   |   | 1 | 1 | 1 | 1 | 1 |  |   |   |   |   | 3 | 1 | 4 |   | 1 |  | 1 |   |   |   |   |   |   |   | 4 |   |   |
| Hair Follicle, Cyst          |   |   |   |   |   |   |   |   |  |   | X |   |   |   |   |   |   |   |  |   |   | X |   |   |   |   |   |   |   |   |
| Inflammation, Chronic Active | 1 |   |   | 1 | 1 | 1 | 1 | 1 |  | 3 |   |   |   | 1 | 1 | 2 |   | 3 |  | 1 | 3 | X | 3 |   |   | 3 |   |   | 2 |   |
| Ulcer                        |   |   |   | 4 |   |   |   |   |  | 4 |   |   |   |   |   |   |   | 4 |  |   |   | 3 | 3 | 4 |   |   | 3 |   | 3 |   |

**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: 05117-06  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/SENCAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
Time Report Requested: 20:21:28  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

SENCAR Mouse Female  
MNNG1000/ACETONE

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |   |     |  |
|------------------------------|---|-----|--|
| Skin                         | 9 |     |  |
| Acanthosis                   | 1 | 3.0 |  |
| Alopecia                     | 1 |     |  |
| Inflammation, Chronic Active | 6 | 3.0 |  |
| Ulcer                        | 4 | 3.8 |  |
| Skin, Control                | 6 |     |  |
| Acanthosis                   | 5 | 1.2 |  |

\* ..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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG1000/ACETONE**

| ANIMAL ID                    | *TOTALS |     |
|------------------------------|---------|-----|
| Inflammation, Chronic Active | 3       | 1.7 |
| Ulcer                        | 1       | 3.0 |
| Skin, SOA-Mass               | 22      |     |
| Acanthosis                   | 2       | 2.5 |
| Skin, SOA-No Mass            | 17      |     |
| Acanthosis                   | 11      | 2.0 |
| Hair Follicle, Cyst          | 2       |     |
| Inflammation, Chronic Active | 16      | 1.8 |
| Ulcer                        | 8       | 3.5 |

**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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**TPA 5 COMPLETE**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**Nervous 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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:28  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**TPA 5 COMPLETE**

ANIMAL ID

\*TOTALS

---

**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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:29  
 First Dose M/F: NA / NA  
 Lab: BAT

| SENCAR Mouse Female<br>MNNG100/COMPLETE | 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 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| ANIMAL ID                               | 1           | 3 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 3 | 1 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |  |
|   | 7           | 2 | 9 | 8 | 8 | 6 | 8 | 6 | 6 | 6 | 1 | 2 | 4 | 8 | 8 | 6 | 1 | 8 | 0 | 6 | 1 | 6 | 1 | 0 | 4 | 6 | 0 | 4 | 1 |  |
|   | 0           | 4 | 8 | 6 | 9 | 2 | 9 | 8 | 3 | 8 | 2 | 5 | 7 | 8 | 6 | 3 | 7 | 6 | 7 | 8 | 6 | 4 | 0 | 6 | 1 | 4 | 6 | 1 | 4 |  |
|   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
|   | 0           | 0 | 0 | 0 | 0 | 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 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |  |
|   | 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 |  |
|   | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |  |
| Skin, Control                           | +           | + |   | + | + |   |   |   | + | + | + | + |   | + | + | + |   | + |   | + | + | + | + | + | + | + |   | + |   |  |
| Acanthosis                              | 1           | 1 |   | 2 | 2 |   |   |   | 2 | 1 | 2 | 3 |   | 2 | 3 | 2 |   |   |   | 2 | 1 | 1 | 1 | 1 | 1 | 1 |   |   | 2 |  |
| Inflammation, Chronic Active            | 1           | 1 |   | 2 | 2 |   |   |   | 1 | 1 | 2 | 2 |   | 1 |   | 1 |   |   | 1 | 1 |   | 1 | 1 | 1 | 2 |   |   |   | 2 |  |
| Skin, SOA-Mass                          | +           | + | + | + | + | + | + | + |   | + | + | + | + | + | + | + | + | + |   | + | + | + | + | + | + | + | + | + | + |  |
| Skin, SOA-No Mass                       | +           | + | + | + | + | + | + | + | + | + | + | + | + | + |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Acanthosis                              | 1           | 3 | 4 | 2 | 2 | 1 | 1 | 1 |   | 1 | 2 | 2 | 4 | 2 |   | 2 | 2 | 3 | 1 |   | 4 | 3 | 1 | 2 |   | 1 | 1 | 2 |   |  |
| Inflammation, Chronic Active            | 1           | 3 | 2 | 2 | 3 | 1 | 1 | 1 | 3 | 2 | 2 | 2 | 2 | 2 |   | 1 | 1 | 3 | 2 |   | 2 | 2 | 1 | 2 | 3 | 1 | 2 | 2 | 4 |  |
| Ulcer                                   |             |   |   |   | 4 |   |   |   | 4 |   |   |   |   |   |   |   |   |   |   | 4 | 3 |   |   | 3 |   |   |   |   | 4 |  |
| <b>Musculoskeletal System</b>           |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| NONE                                    |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| <b>Nervous System</b>                   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| NONE                                    |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| <b>Respiratory System</b>               |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| NONE                                    |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| <b>Special Senses System</b>            |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| NONE                                    |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| <b>Urinary System</b>                   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| 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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG100/COMPLETE**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |    |     |
|------------------------------|----|-----|
| Skin                         | 5  |     |
| Acanthosis                   | 2  | 4.0 |
| Alopecia                     | 1  |     |
| Hair Follicle, Cyst          | 1  |     |
| Inflammation, Chronic Active | 2  | 2.5 |
| Ulcer                        | 3  | 3.7 |
| Skin, Control                | 20 |     |

\* ..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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG100/COMPLETE**

| ANIMAL ID                    | *TOTALS |     |
|------------------------------|---------|-----|
| Acanthosis                   | 19      | 1.6 |
| Inflammation, Chronic Active | 17      | 1.4 |
| Skin, SOA-Mass               | 28      |     |
| Skin, SOA-No Mass            | 28      |     |
| Acanthosis                   | 24      | 2.0 |
| Inflammation, Chronic Active | 27      | 2.0 |
| Ulcer                        | 6       | 3.7 |

**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: 05117-06

Test Type: INIT/PROMOT

Route: SKIN APPLICATION

Species/Strain: Mouse/SEN CAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)

CAS Number: INIT/PROM

Date Report Requested: 10/18/2014

Time Report Requested: 20:21:29

First Dose M/F: NA / NA

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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|------------------------|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                        | <b>SEN CAR Mouse Female</b> | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| <b>BPO 20 COMPLETE</b> | 6                           | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| <b>ANIMAL ID</b>       | 2                           | 2 | 2 | 8 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |

|                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Skin, SOA-Mass                | + |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Skin, SOA-No Mass             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Acanthosis                    | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 1 | 2 | 1 | 2 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Inflammation, Chronic Active  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Ulcer                         |   |   |   |   |   |   |   |   |   |   |   |   |   | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Musculoskeletal System</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Nervous System</b>         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Respiratory System</b>     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Special Senses System</b>  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Urinary System</b>         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 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: 05117-06  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/SENCAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
Time Report Requested: 20:21:29  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

SENCAR Mouse Female  
BPO 20 COMPLETE

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |    |     |  |
|------------------------------|----|-----|--|
| Skin                         | 5  |     |  |
| Inflammation, Chronic Active | 2  | 3.0 |  |
| Ulcer                        | 2  | 3.5 |  |
| Skin, Control                | 14 |     |  |
| Acanthosis                   | 14 | 1.2 |  |
| Inflammation, Chronic Active | 14 | 1.0 |  |
| Skin, SOA-Mass               | 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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**BPO 20 COMPLETE**

|                              | ANIMAL ID | <u>*TOTALS</u> |     |
|------------------------------|-----------|----------------|-----|
| Skin, SOA-No Mass            |           | 27             |     |
| Acanthosis                   |           | 27             | 1.6 |
| Inflammation, Chronic Active |           | 27             | 1.1 |
| Ulcer                        |           | 1              | 4.0 |

**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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:29  
 First Dose M/F: NA / NA  
 Lab: BAT

|                            |                        | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------------|------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>SENCAR Mouse Female</b> | <b>MNNG 100/BPO 20</b> | 0           | 0 | 0 | 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 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|                            |                        | 6           | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 8 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
|                            |                        | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 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 | 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 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 |   |
|                            | 7                      | 7           | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |   |
|                            | 1                      | 2           | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   |

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |   |   |  |   |   |   |  |  |   |  |   |   |   |  |  |   |   |   |   |  |  |  |  |  |  |  |   |   |
|------------------------------|---|---|--|---|---|---|--|--|---|--|---|---|---|--|--|---|---|---|---|--|--|--|--|--|--|--|---|---|
| Skin                         |   |   |  |   |   |   |  |  |   |  |   |   |   |  |  | + |   |   |   |  |  |  |  |  |  |  | + |   |
| Inflammation, Chronic Active |   |   |  |   |   |   |  |  |   |  |   |   |   |  |  | 2 |   |   |   |  |  |  |  |  |  |  |   |   |
| Ulcer                        |   |   |  |   |   |   |  |  |   |  |   |   |   |  |  | 3 |   |   |   |  |  |  |  |  |  |  |   |   |
| Skin, Control                | + | + |  | + | + | + |  |  | + |  | + | + | + |  |  |   | + | + | + |  |  |  |  |  |  |  |   | + |
| Acanthosis                   | 1 | 1 |  | 1 | 1 | 1 |  |  | 1 |  | 1 | 2 | 1 |  |  |   | 1 | 2 | 1 |  |  |  |  |  |  |  |   | 1 |
| Inflammation, Chronic Active | 1 | 1 |  | 1 | 1 | 1 |  |  | 1 |  | 1 | 1 | 1 |  |  |   | 1 | 2 | 1 |  |  |  |  |  |  |  |   | 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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:29  
 First Dose M/F: NA / NA  
 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SENCAR Mouse Female           | 3           | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| MNNG 100/BPO 20               | 6           | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
|                               | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 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           | 0 | 0 | 0 | 0 | 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 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 |
|                               | 7           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 |
|                               | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Skin, SOA-Mass                |             |   |   |   | + |   |   | + |   | + |   |   | + |   |   | + | + |   |   | + |   |   | + |   |   |   | + | + |   |
| Skin, SOA-No Mass             | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Acanthosis                    | 1           | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 1 |   |   |   | 1 | 1 |   | 1 |
| Inflammation, Chronic Active  | 1           | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |   |   |   | 1 | 1 |   | 1 |
| <b>Musculoskeletal System</b> |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Nervous System</b>         |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Respiratory System</b>     |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Special Senses System</b>  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Urinary System</b>         |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 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: 05117-06  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/SENCAR

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL  
Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
Time Report Requested: 20:21:29  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

SENCAR Mouse Female  
MNNG 100/BPO 20

ANIMAL ID

\*TOTALS

Alimentary System

NONE

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

|                              |    |     |  |
|------------------------------|----|-----|--|
| Skin                         | 2  |     |  |
| Inflammation, Chronic Active | 1  | 2.0 |  |
| Ulcer                        | 1  | 3.0 |  |
| Skin, Control                | 15 |     |  |
| Acanthosis                   | 15 | 1.1 |  |
| Inflammation, Chronic Active | 15 | 1.1 |  |
| Skin, SOA-Mass               | 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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:29  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG 100/BPO 20**

ANIMAL ID

\*TOTALS

|                              |    |     |
|------------------------------|----|-----|
| Skin, SOA-No Mass            | 28 |     |
| Acanthosis                   | 28 | 1.3 |
| Inflammation, Chronic Active | 28 | 1.2 |

**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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:29  
 First Dose M/F: NA / NA  
 Lab: BAT

|  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SENCAR Mouse Female<br>MNNG 500/BPO 20 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |             | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |   |
|  |             | 6 | 1 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 4 | 6 | 6 | 6 | 6 | 8 | 6 | 6 | 6 | 5 | 8 | 6 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |   |
|  |             | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 7 | 3 | 6 | 3 | 3 | 3 | 3 | 1 | 4 | 4 | 4 | 0 | 9 | 4 | 1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |   |
|  | 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 | 0 | 0 | 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 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |   |
|  |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |   |   |
|  |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 | 0 |   |   |

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |   |   |   |   |   |  |  |  |   |  |  |  |   |   |   |   |   |  |   |  |   |   |   |   |  |   |   |   |   |   |
|------------------------------|---|---|---|---|---|--|--|--|---|--|--|--|---|---|---|---|---|--|---|--|---|---|---|---|--|---|---|---|---|---|
| Skin                         |   |   |   |   | + |  |  |  |   |  |  |  |   |   |   |   |   |  | + |  |   |   |   |   |  | + |   |   |   |   |
| Alopecia                     |   |   |   |   |   |  |  |  |   |  |  |  |   |   |   |   |   |  | X |  |   |   |   |   |  |   |   |   |   |   |
| Inflammation, Chronic Active |   |   |   |   | 4 |  |  |  |   |  |  |  |   |   |   |   |   |  | 3 |  |   |   |   |   |  |   |   |   |   |   |
| Ulcer                        |   |   |   |   | 4 |  |  |  |   |  |  |  |   |   |   |   |   |  | 3 |  |   |   |   |   |  |   |   |   |   |   |
| Skin, Control                | + | + | + | + |   |  |  |  | + |  |  |  | + | + | + | + | + |  |   |  | + | + | + | + |  |   | + |   |   |   |
| Acanthosis                   | 2 | 1 | 1 | 1 |   |  |  |  | 1 |  |  |  | 1 | 1 | 1 | 3 | 1 |  |   |  | 1 | 1 | 2 | 1 |  |   | 1 | 1 | 2 | 2 |

\* ..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: 051117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:30  
 First Dose M/F: NA / NA  
 Lab: BAT

| DAY ON TEST                   | SENCAR Mouse Female<br>MNNG 500/BPO 20 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                               | 0                                      | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Inflammation, Chronic Active  | 1                                      | 1 | 1 | 1 |   |   |   |   |   | 1 |   |   |   | 1 | 1 | 1 | 2 | 1 |   | 1 | 1 | 1 | 1 |   | 1 | 1 |   |   | 1 |   |
| Skin, SOA-Mass                |  |   | + |   |   |   |   | + |   |   |   |   | + |   |   |   |   |   | + |   |   | + |   |   |   |   | + |   |   | + |
| Acanthosis                    |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Skin, SOA-No Mass             | +                                      | + | + | + | + | + |   |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Acanthosis                    | 3                                      | 4 | 4 | 1 | 1 | 2 |   |   | 1 | 3 | 3 | 1 | 3 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 3 | 2 | 4 | 2 | 1 | 1 | 2 | 1 | 2 |
| Inflammation, Chronic Active  | 2                                      | 2 | 1 | 1 | 1 | 1 |   |   | 1 | 2 | 4 | 1 | 2 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 |   |
| Ulcer                         |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Musculoskeletal System</b> |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Nervous System</b>         |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Respiratory System</b>     |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Special Senses System</b>  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                          |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Urinary System</b>         |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG 500/BPO 20**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |    |     |
|------------------------------|----|-----|
| Skin                         | 3  |     |
| Alopecia                     | 1  |     |
| Inflammation, Chronic Active | 2  | 3.5 |
| Ulcer                        | 2  | 3.5 |
| Skin, Control                | 17 |     |
| Acanthosis                   | 17 | 1.3 |
| Inflammation, Chronic Active | 17 | 1.1 |

\* ..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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG 500/BPO 20**

|                              | ANIMAL ID | *TOTALS |     |
|------------------------------|-----------|---------|-----|
| Skin, SOA-Mass               |           | 14      |     |
| Acanthosis                   |           | 1       | 4.0 |
| Skin, SOA-No Mass            |           | 28      |     |
| Acanthosis                   |           | 28      | 1.9 |
| Inflammation, Chronic Active |           | 28      | 1.4 |
| Ulcer                        |           | 2       | 3.5 |

**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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SEN-CAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:30  
 First Dose M/F: NA / NA  
 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>SEN-CAR Mouse Female</b> | 3 | 0 | 2 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 0 | 1 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 2 | 1 | 3 | 3 | 3 | 1 | 2 |
| <b>MNNG1000/BPO 20</b>      | 1 | 7 | 2 | 6 | 4 | 9 | 6 | 6 | 6 | 6 | 6 | 0 | 6 | 1 | 9 | 1 | 0 | 6 | 7 | 7 | 6 | 6 | 4 | 9 | 6 | 6 | 6 | 5 | 5 |
| <b>ANIMAL ID</b>            | 4 | 1 | 9 | 2 | 1 | 4 | 2 | 2 | 2 | 3 | 3 | 9 | 3 | 4 | 7 | 4 | 6 | 3 | 4 | 4 | 3 | 4 | 4 | 8 | 4 | 4 | 4 | 9 |   |
| 0                           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| 0                           | 0 | 0 | 0 | 0 | 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 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |   |
| 3                           | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |
| 1                           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Skin                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Acanthosis                   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hair Follicle, Cyst          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inflammation, Chronic Active |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ulcer                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Skin, Control                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

\* ..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: 05117-06  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
 CAS Number: INIT/PROM

Date Report Requested: 10/18/2014  
 Time Report Requested: 20:21:30  
 First Dose M/F: NA / NA  
 Lab: BAT

| SENCAR Mouse Female<br>MNNG1000/BPO 20 | 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 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| ANIMAL ID                              | 3           | 0 | 2 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 0 | 1 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 2 | 1 | 3 | 3 | 3 | 1 | 2 |   |
|  | 1           | 7 | 2 | 6 | 4 | 9 | 6 | 6 | 6 | 6 | 6 | 0 | 6 | 1 | 9 | 1 | 0 | 6 | 7 | 7 | 6 | 6 | 4 | 9 | 6 | 6 | 6 | 5 | 5 |   |
|  | 4           | 1 | 9 | 2 | 1 | 4 | 2 | 2 | 2 | 3 | 3 | 9 | 3 | 4 | 7 | 4 | 6 | 3 | 4 | 4 | 3 | 4 | 4 | 8 | 4 | 4 | 4 | 4 | 9 |   |
|  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
|  | 0           | 0 | 0 | 0 | 0 | 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 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |   |
|  | 3           | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 |   |
|  | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| Acanthosis                             |             |   | 2 | 1 |   | 1 | 1 | 1 |   |   |   | 2 | 1 | 2 | 1 | 3 | 3 | 1 |   | 1 | 1 | 1 |   |   |   |   |   |   | 2 |   |
| Inflammation, Chronic Active           |             | 3 | 1 | 1 |   | 1 | 1 | 1 |   | 3 |   | 1 |   | 1 | 1 |   | 1 | 1 |   | 1 | 1 | 1 |   |   |   |   |   |   | 1 |   |
| Ulcer                                  |             | 3 |   |   |   |   |   |   |   | 4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Skin, SOA-Mass                         | +           |   | + | + | + | + | + |   | + |   |   | + | + |   |   | + | + | + |   |   |   | + | + | + |   |   | + |   | + |   |
| Skin, SOA-No Mass                      | +           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Acanthosis                             | 4           | 2 | 3 | 2 | 4 | 3 | 1 | 1 | 1 |   | 1 | 1 | 3 | 1 | 3 |   | 4 | 3 | 2 | 4 | 3 | 2 | 2 | 3 | 3 | 4 | 2 | 2 | 2 |   |
| Hair Follicle, Cyst                    |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Inflammation, Chronic Active           | 2           | 2 | 3 | 1 | 2 | 3 | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 1 | 3 | 1 | 2 | 1 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 2 |   | 1 | 1 |
| Ulcer                                  |             |   |   |   |   | 3 |   |   |   | 4 |   |   |   |   |   | 4 |   |   | 4 |   |   |   | 4 | 3 |   |   |   |   |   |   |
| <b>Musculoskeletal System</b>          |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                                   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Nervous System</b>                  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                                   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Respiratory System</b>              |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                                   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Special Senses System</b>           |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| NONE                                   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Urinary System</b>                  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG1000/BPO 20**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

|                              |    |     |
|------------------------------|----|-----|
| Skin                         | 5  |     |
| Acanthosis                   | 1  | 3.0 |
| Hair Follicle, Cyst          | 1  |     |
| Inflammation, Chronic Active | 4  | 3.0 |
| Ulcer                        | 5  | 3.4 |
| Skin, Control                | 18 |     |
| Acanthosis                   | 16 | 1.5 |

\* ..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:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG1000/BPO 20**

| ANIMAL ID                    | <u>*TOTALS</u> |     |
|------------------------------|----------------|-----|
| Inflammation, Chronic Active | 16             | 1.3 |
| Ulcer                        | 2              | 3.5 |
| Skin, SOA-Mass               | 17             |     |
| Skin, SOA-No Mass            | 29             |     |
| Acanthosis                   | 27             | 2.4 |
| Hair Follicle, Cyst          | 1              |     |
| Inflammation, Chronic Active | 29             | 1.8 |
| Ulcer                        | 6              | 3.7 |

**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

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1) Minimal 3) Moderate

2) Mild 4) Marked

**Experiment Number:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG 100/TPA 5**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**Nervous System**

NONE

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

+ ..Tissue examined microscopically

X ..Lesion present

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M ..Missing tissue

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**Experiment Number:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
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**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG 100/TPA 5**

ANIMAL ID

\*TOTALS

---

**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

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M ..Missing tissue

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**Experiment Number:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG1000/TPA 5**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**Nervous System**

NONE

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

+ ..Tissue examined microscopically

X ..Lesion present

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**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

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

DAY ON TEST

**SENCAR Mouse Female**  
**MNNG1000/TPA 5**

ANIMAL ID

\*TOTALS

**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

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**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
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**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
**Time Report Requested:** 20:21:30  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**SENTINEL FEMALE**

ANIMAL ID

\*TOTALS

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**Nervous System**

NONE

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

+ ..Tissue examined microscopically

X ..Lesion present

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M ..Missing tissue

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**Experiment Number:** 05117-06  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/SENCAR

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
**CAS Number:** INIT/PROM

**Date Report Requested:** 10/18/2014  
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**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**SENCAR Mouse Female**  
**SENTINEL FEMALE**

ANIMAL ID

\*TOTALS

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

NONE

**\*\* 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