

**Experiment Number:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:41  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**C Number:** C61994B  
**Lock Date:** 04/09/1992  
**Cage Range:** All  
**Date Range:** All  
**Reasons For Removal:** All  
**Removal Date Range:** All  
**Treatment Groups:** All  
**Study Gender:** Both  
**PWG Approval Date:** 04/28/1994

Experiment Number: 05117-05  
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 Species/Strain: Mouse/CD-1 CRL

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Date Report Requested: 10/19/2014  
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 First Dose M/F: NA / NA  
 Lab: BAT

DAY ON TEST	CD-1 CRL Mouse Male VEHICLE CONTROL																											
	0	0	0	0	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	1	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	1	6	6	6	6	6	6	5	6	6	6	6	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	3	2	2	2	2	2	2	8	2	3	3	3	7	3	3	3	3	4	4	4	4	4	4	4	5	5	5	5
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	1	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	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	4							4																				
Ulcer	4							4																				
Skin, SOA-No Mass	+												+	+	+													
Acanthosis	1												3	3	3													
Inflammation, Chronic Active	4												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

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 05117-05  
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 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
CD-1 CRL Mouse Male	3	3	3	3	3	3	3	1	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
VEHICLE CONTROL	1	6	6	6	6	6	6	5	6	6	6	6	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	3	2	2	2	2	2	2	8	2	3	3	3	7	3	3	3	3	4	4	4	4	4	4	4	5	5	5	5	5
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	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

Ulcer  
 Musculoskeletal System  
 NONE  
 Nervous System  
 NONE  
 Respiratory System  
 NONE  
 Special Senses System  
 NONE  
 Urinary System  
 NONE

4 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  
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 1) Minimal 3) Moderate  
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**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Init/prom comparative mouse study (DMBA/TPA/BPO/MNNG)  
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**Date Report Requested:** 10/19/2014  
**Time Report Requested:** 18:35:41  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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	27		
Inflammation, Chronic Active	2	4.0	
Ulcer	2	4.0	
Skin, SOA-No Mass	4		
Acanthosis	4	2.5	
Inflammation, Chronic Active	2	3.5	
Ulcer	2	3.5	

\* ..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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1-4 ..Lesion qualified as:

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**Experiment Number:** 051117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:41  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Male**  
**VEHICLE CONTROL**

ANIMAL ID

\*TOTALS

**Musculoskeletal System**

NONE

**Nervous System**

NONE

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

NONE

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

+ ..Tissue examined microscopically

X ..Lesion present

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M ..Missing tissue

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 Lab: BAT

CD-1 CRL Mouse Male MNNG 100/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	
	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3		
	6	6	6	6	6	6	3	6	6	6	6	6	6	6	6	6	6	6	6	6	2	6	6	6	6	6	6	6		
	2	2	2	2	2	2	9	2	3	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5	5		
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		
	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	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Inflammation, Chronic Active																								3	4
Ulcer																								3	4
Skin, SOA-Mass								+																	
Acanthosis									1																
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  
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 1-4 ..Lesion qualified as:  
 1) Minimal 3) Moderate  
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Date Report Requested: 10/19/2014  
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 First Dose M/F: NA / NA  
 Lab: BAT

CD-1 CRL Mouse Male MNNG 100/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
	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3
	6	6	6	6	6	6	3	6	6	6	6	6	6	6	6	6	6	6	6	6	2	6	6	6	6	6	6	6
	2	2	2	2	2	2	9	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	5	5	5	5	5	5
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	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	4	4	4	4	4	4	4	4	4	4	4	5	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

Acanthosis					3								1	2		1		1							2	4			
Inflammation, Chronic Active														2													4		
Ulcer					2				2																		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																													

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 + ..Tissue examined microscopically  
 X ..Lesion present  
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 1) Minimal 3) Moderate  
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**CAS Number:** INIT/PROM

**Date Report Requested:** 10/19/2014  
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**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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	22		
Inflammation, Chronic Active	2	3.5	
Ulcer	2	3.5	
Skin, SOA-Mass	1		
Acanthosis	1	1.0	
Skin, SOA-No Mass	8		
Acanthosis	7	2.0	

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

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

DAY ON TEST

**CD-1 CRL Mouse Male**  
**MNNG 100/ACETONE**

ANIMAL ID

\*TOTALS

Inflammation, Chronic Active	2	3.0
Ulcer	3	2.7

**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

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I ..Insufficient tissue

M ..Missing tissue

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 Lab: BAT

CD-1 CRL Mouse Male MNNG 500/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	0
	3	3	3	3	3	3	0	3	3	1	3	3	1	3	2	3	3	3	2	2	2	3	3	3	3	3	3	1	2	3
	6	6	6	1	4	6	5	6	6	7	6	6	9	6	9	6	6	0	3	5	2	5	6	6	6	6	6	7	5	6
	2	2	2	4	1	2	8	3	3	6	3	3	5	3	4	4	4	2	8	9	4	7	4	5	5	5	5	5	7	5
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
	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	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	+	+					+	+	+	+			+	+	+					+								+	+	+					
Acanthosis																																			
Inflammation, Chronic Active																																			
Ulcer																																			
Skin, SOA-Mass				+	+																														
Hyperplasia, Mast Cell																																			

\* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
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CD-1 CRL Mouse Male MNNG 500/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	
	3	3	3	3	3	3	0	3	3	1	3	3	1	3	2	3	3	3	2	2	2	3	3	3	3	3	3	1	2	3
	6	6	6	1	4	6	5	6	6	7	6	6	9	6	6	6	0	3	5	2	5	6	6	6	6	6	6	7	5	6
	2	2	2	4	1	2	8	3	3	6	3	3	5	3	4	4	4	2	8	9	4	7	4	5	5	5	5	5	7	5
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	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	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
Skin, SOA-No Mass																														
Acanthosis																														
Inflammation, Chronic Active																														
Ulcer																														
<b>Musculoskeletal System</b>																														
NONE																														
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NONE																														
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Lab: BAT

DAY ON TEST

CD-1 CRL 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	15		
Acanthosis	1	3.0	
Inflammation, Chronic Active	7	3.6	
Ulcer	7	3.9	
Skin, SOA-Mass	4		
Hyperplasia, Mast Cell	1	2.0	
Skin, SOA-No Mass	18		

\* ..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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:42  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Male**  
**MNNG 500/ACETONE**

ANIMAL ID

\*TOTALS

Acanthosis	13	2.0
Inflammation, Chronic Active	13	2.8
Ulcer	9	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: 051117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
Time Report Requested: 18:35:42  
First Dose M/F: NA / NA  
Lab: BAT

CD-1 CRL 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	
		3	1	2	1	2	1	3	1	3	3	2	2	2	2	1	3	3	2	3	1	3	3	2	2	1	1	1	2	3	
		6	7	9	7	9	8	6	9	6	6	3	9	0	3	7	6	3	8	0	7	6	6	6	1	7	8	7	1	1	6
		2	5	2	5	2	9	2	5	3	3	0	9	7	6	5	4	5	0	6	9	4	4	5	5	1	7	5	3	4	5
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	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	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	4												3																			
Inflammation, Chronic Active	4	3			4		3			3	3	3	4															3	2				
Subcut Tiss, Infiltration Cellular, Mixed Cell					4																												
Ulcer	4	3			4		3			4	3		3															4	3				
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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
 Time Report Requested: 18:35:42  
 First Dose M/F: NA / NA  
 Lab: BAT

CD-1 CRL 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		
	3	1	2	1	2	1	3	1	3	3	2	2	2	2	1	3	3	2	3	1	3	3	3	2	2	1	1	1	3		
	6	7	9	7	9	8	6	9	6	6	3	9	0	3	7	6	3	8	0	7	6	6	6	1	7	8	7	1	1	6	
	2	5	2	5	2	9	2	5	3	3	0	9	7	6	5	4	5	0	6	9	4	4	5	5	1	7	5	3	4	5	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	
	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
Acanthosis					3		2																								
Skin, SOA-Mass				+		+		+	+		+						+	+				+			+	+	+		+	+	
Acanthosis											3																			2	
Skin, SOA-No Mass	+	+		+	+	+	+	+			+	+	+	+		+	+			+		+	+	+	+	+	+	+	+	+	
Acanthosis	2					3	3	2	3			3	3		3		2		4		1	3			1	3	3		1		
Inflammation, Chronic Active	1	4		3	2	3	2	2				3	2	4		4	2		4			2	4	2	2	2	2	2	2	1	
Ulcer		4		3				4				3	3		4				4				4						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: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:42  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

CD-1 CRL 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	14	
Acanthosis	3	3.7
Inflammation, Chronic Active	10	3.2
Subcut Tiss, Infiltration Cellular, Mixed Cell	1	4.0
Ulcer	9	3.4
Skin, Control	2	
Acanthosis	2	2.5

\* ..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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:42  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Male**  
**MNNG1000/ACETONE**

ANIMAL ID

\*TOTALS

Skin, SOA-Mass	13		
Acanthosis	2	2.5	
Skin, SOA-No Mass	23		
Acanthosis	16	2.5	
Inflammation, Chronic Active	21	2.5	
Ulcer	9	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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
 Time Report Requested: 18:35:43  
 First Dose M/F: NA / NA  
 Lab: BAT

CD-1 CRL Mouse Male TPA 5 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
	1	3	3	0	3	3	3	2	3	0	3	3	3	3	2	2	3	2	3	3	3	2	3	3	2	2	3	3	3
	9	2	6	6	6	5	6	5	6	0	6	6	6	6	6	9	6	9	6	6	6	6	6	6	6	6	6	6	6
	5	0	2	3	2	7	2	7	3	5	3	3	3	4	6	5	4	5	4	4	5	6	5	5	5	5	1	5	5
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	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
	2	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	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
Skin, SOA-Mass																													
Acanthosis																													
Skin, SOA-No Mass	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Acanthosis	3	3	2	3	3	2	2	2	2	3	3	3	3	3	2	2	2	2	4	3	4	2	2	2	4	4	2	2	3
Inflammation, Chronic Active	3	3	1		2	3	1	3	1	2	3	2	2	2			2	2			4	1	1	3	2		1	1	2
Ulcer	3	3			3		3		3			3									3		3		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: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:43  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

CD-1 CRL Mouse Male  
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**

Skin	9		
Inflammation, Chronic Active	5	3.4	
Ulcer	8	3.1	
Skin, Control	12		
Acanthosis	12	1.8	
Inflammation, Chronic Active	3	1.3	
Skin, SOA-Mass	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:43  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Male**  
**TPA 5 COMPLETE**

ANIMAL ID	<u>*TOTALS</u>	
Acanthosis	1	2.0
Skin, SOA-No Mass	30	
Acanthosis	30	2.6
Inflammation, Chronic Active	24	2.0
Ulcer	8	3.1

**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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
 Time Report Requested: 18:35:43  
 First Dose M/F: NA / NA  
 Lab: BAT

CD-1 CRL Mouse Male 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	
	2	3	3	3	3	3	3	3	3	2	3	3	0	3	2	3	3	3	2	2	3	3	3	3	3	3	3	3	3	
	8	0	6	4	6	4	6	6	6	3	6	2	3	4	1	3	6	2	4	9	6	1	6	6	6	6	4	6	4	6
ANIMAL ID																														
5	6	2	1	2	8	2	2	3	0	3	7	6	8	9	5	3	0	3	3	3	3	4	4	4	4	5	8	5	8	5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	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	1
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	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	0
Inflammation, Chronic Active	2	1											1					2							3					
Skin, SOA-Mass		+	+	+		+	+	+	+		+		+	+	+	+	+	+		+	+	+			+		+	+	+	
Acanthosis				3														2												
Skin, SOA-No Mass	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Acanthosis	2	1	1	1	3	2	2	2	3	3	2	1	3	3	3	2	3	3	1	2	2	2	3	3	2	2		1	1	2
Inflammation, Chronic Active	2	1	1	1	3	1	1		3			3	3		2				1	2	1				1	3		3	3	1
Ulcer					4				2			3	3				2							2	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: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:43  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

CD-1 CRL 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	7		
Acanthosis	1	3.0	
Inflammation, Chronic Active	5	3.2	
Ulcer	6	3.2	
Skin, Control	16		
Acanthosis	15	1.5	
Inflammation, Chronic Active	5	1.8	

\* ..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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:43  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Male**  
**MNNG100/COMPLETE**

ANIMAL ID	<u>*TOTALS</u>	
Skin, SOA-Mass	21	
Acanthosis	2	2.5
Skin, SOA-No Mass	29	
Acanthosis	29	2.1
Inflammation, Chronic Active	19	1.9
Ulcer	9	3.1

**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: 051117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
 Time Report Requested: 18:35:43  
 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
CD-1 CRL Mouse Male	3	2	3	3	2	2	3	3	3	3	3	2	3	3	3	2	3	3	3	3	3	3	2	3	3	3	3	3
BPO 20 COMPLETE	1	5	6	3	8	5	6	6	3	6	6	7	6	6	6	1	6	6	6	4	6	6	6	3	6	6	6	6
	3	8	2	5	5	6	2	2	4	2	2	2	3	3	3	5	3	3	4	8	4	4	4	4	1	5	5	5
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	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	2	2	2	2	2	2	2	2	2
	8	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	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

**Alimentary System**

NONE

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

NONE

**Integumentary System**

Skin	+	+		+	+			+		+			+		+	+		+		+	+	+	
Acanthosis								3															
Inflammation, Chronic Active	3	3		3	3					3			3					3				3	2
Ulcer	4	4		4	4					3			4					3				4	2
Skin, Control					+				+	+	+		+	+	+	+							
Acanthosis					2				1	1	2		2	1	2	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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
 Time Report Requested: 18:35:43  
 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>CD-1 CRL Mouse Male</b>	3	2	3	3	2	2	3	3	3	3	3	2	3	3	3	2	3	3	3	3	3	3	2	3	3	3	3	3	3
<b>BPO 20 COMPLETE</b>	1	5	6	3	8	5	6	6	3	6	6	7	6	6	6	1	6	6	6	4	6	6	6	6	3	6	6	6	6
	3	8	2	5	5	6	2	2	4	2	2	2	3	3	3	5	3	3	4	8	4	4	4	4	1	5	5	5	5
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	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	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	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	9
Inflammation, Chronic Active					1							1	1		2				1										
Skin, SOA-Mass																													
Acanthosis																													
Skin, SOA-No Mass		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Acanthosis		2	2	3	3	2	2	2	1	2	1	2	2	2	1	2	1	2	2	2	2	1	1	1	1	1	1	1	1
Inflammation, Chronic Active		1			1				1		1		3	1	3	1	2	1	1	1	2	1							1
Ulcer												3		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: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:43  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

CD-1 CRL 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	13		
Acanthosis	1	3.0	
Inflammation, Chronic Active	9	2.9	
Ulcer	9	3.6	
Skin, Control	8		
Acanthosis	8	1.5	
Inflammation, Chronic Active	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:43  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Male**  
**BPO 20 COMPLETE**

ANIMAL ID	*TOTALS	
Skin, SOA-Mass	1	
Acanthosis	1	2.0
Skin, SOA-No Mass	25	
Acanthosis	25	1.7
Inflammation, Chronic Active	15	1.4
Ulcer	3	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:43  
**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	0	0	0
	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CD-1 CRL Mouse Male	6	6	6	6	6	6	6	6	6	2	6	6	6	6	6	6	6	2	6	7	6	6	1	6	6	6	6	6	6	6	6	6	6	6	6	6	6
MNNG 100/BPO 20	2	2	2	2	2	2	3	3	3	0	3	3	3	4	4	4	0	4	2	4	4	3	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5
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
	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	2	2	2	2	2	2
	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	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	1	2	3	4	5	6	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																																																					
Skin, SOA-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:** 051117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:44  
**First Dose M/F:** NA / NA  
**Lab:** BAT

<b>CD-1 CRL Mouse Male</b> <b>MNNG 100/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	0	
	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	
ANIMAL ID	6	6	6	6	6	6	6	6	6	2	6	6	6	6	6	6	7	6	6	1	6	6	6	6	6	6	6	6	6	
	2	2	2	2	2	2	3	3	3	0	3	3	3	4	4	4	0	4	4	4	3	4	5	5	5	5	5	5	5	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	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
Skin, SOA-No Mass	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	
Acanthosis	1	1	1	2	2	2	1	1	2	2	1	2	1	2	1	2	1	2	2	1	1	3	1	1	3	3	1	2	2	
Inflammation, Chronic Active					1	2		2	3			3				1		1	3	1			3					1		
Ulcer	2					2			3			4		2					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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:44  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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	10		
Inflammation, Chronic Active	3	3.0	
Ulcer	3	3.3	
Skin, Control	4		
Acanthosis	4	1.3	
Skin, SOA-Mass	1		
Skin, SOA-No Mass	23		

\* ..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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:44  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Male**  
**MNNG 100/BPO 20**

ANIMAL ID

\*TOTALS

Acanthosis	22	1.5
Inflammation, Chronic Active	11	1.9
Ulcer	7	2.9

**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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
 Time Report Requested: 18:35:44  
 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>CD-1 CRL Mouse Male</b>	3	2	2	3	3	0	3	3	1	3	3	3	3	3	1	3	3	2	3	3	3	3	0	3	3	3	3	3	
<b>MNNG 500/BPO 20</b>	6	1	8	6	6	4	6	6	7	6	6	6	6	7	3	6	4	6	4	6	4	6	3	4	7	4	5	5	
	2	5	4	2	2	6	2	2	5	3	3	3	3	3	4	4	6	4	1	4	6	3	4	7	4	5	5		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	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	
	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	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	0	
Acanthosis		2						1																					
Inflammation, Chronic Active		1																											
Skin, SOA-Mass	+	+			+								+				+				+								
Sebaceous Gl, Hyperplasia					1																								
Skin, SOA-No Mass	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	
Acanthosis	2	2	2	1	1		3	3	2	1		3	3	3	1	1	2	3		3	3	3	1	1	1	1	1	3	
Inflammation, Chronic Active	1	1	3	1		3	3	2	1				2	1		1	1	3		3	1	3	1		1			3	2
Ulcer						3	3	3					2				3		3									3	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:44  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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	7		
Acanthosis	1	2.0	
Alopecia	1		
Inflammation, Chronic Active	3	3.7	
Ulcer	5	3.6	
Skin, Control	2		
Acanthosis	2	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:44  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Male**  
**MNNG 500/BPO 20**

ANIMAL ID	<u>*TOTALS</u>	
Inflammation, Chronic Active	1	1.0
Skin, SOA-Mass	5	
Sebaceous GI, Hyperplasia	1	1.0
Skin, SOA-No Mass	27	
Acanthosis	25	2.0
Inflammation, Chronic Active	20	1.9
Ulcer	8	2.8

**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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
 Time Report Requested: 18:35:44  
 First Dose M/F: NA / NA  
 Lab: BAT

CD-1 CRL Mouse Male 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	1	3	3	2	3	3	1	3	3	1	3	2	2	2	2	2	3	3	3	2	1	2	2	2	2	3	1	1	3	3	
	5	2	6	6	7	8	7	0	7	7	3	8	4	8	9	0	3	4	4	9	6	6	7	9	5	5	5	4	5	5	
Inflammation, Chronic Active	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Skin, SOA-Mass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Skin, SOA-No Mass	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	
Acanthosis	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	0	
Hair Follicle, Cyst	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	
Hemorrhage					1										1									1						1	
Inflammation, Chronic Active			+	+	+	+	+	+	+					+	+	+	+					+	+		+	+	+	+	+	+	
Ulcer	3	2	3			2	3		3	3		3	3	3	1	3	2	1	1	2	2	2	3	2	3	1	3	2	3		
Musculoskeletal System																															
Nervous System																															
Respiratory System																															
Special Senses System																															
Urinary 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: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:44  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

CD-1 CRL 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	14		
Acanthosis	1	2.0	
Inflammation, Chronic Active	10	3.3	
Ulcer	11	3.6	
Skin, Control	11		
Acanthosis	11	1.5	
Inflammation, Chronic Active	5	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:44  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Male**  
**MNNG1000/BPO 20**

ANIMAL ID

\*TOTALS

Skin, SOA-Mass	16	
Skin, SOA-No Mass	28	
Acanthosis	25	2.4
Hair Follicle, Cyst	1	
Hemorrhage	1	2.0
Inflammation, Chronic Active	20	2.3
Ulcer	10	3.2

**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:** 051117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:44  
**First Dose M/F:** NA / NA  
**Lab:** BAT

CD-1 CRL Mouse Male MNNG 100/TPA 5	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	0	0	0	0	0										
	2	3	3	3	0	2	3	2	2	1	3	2	2	3	2	3	3	3	3	3	3	2	3	2	3	2	2	1	3	2	2	3	3	3	3	3	3	3	3	3	3	3								
	8	3	6	2	8	3	1	9	5	7	6	3	9	6	7	1	4	6	6	6	6	3	6	5	6	7	6	9	3	8	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6					
	4	6	2	5	5	5	3	5	9	6	2	0	6	2	2	3	8	3	3	3	3	5	4	9	4	1	5	9	0	1	5	4	4	4	4	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	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	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	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	3	3																																																		
Ulcer	4	4	4																																																		
Skin, Control	+	+	+																																																		
Acanthosis	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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
 Time Report Requested: 18:35:45  
 First Dose M/F: NA / NA  
 Lab: BAT

CD-1 CRL Mouse Male MNNG 100/TPA 5	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	2	3	3	3	0	2	3	2	2	1	3	2	2	3	2	3	3	3	3	3	3	2	3	2	3	2	3	2	1	3
	8	3	6	2	8	3	1	9	5	7	6	3	9	6	7	1	4	6	6	6	3	6	5	6	7	6	9	3	8	6
	4	6	2	5	5	5	3	5	9	6	2	0	6	2	2	3	8	3	3	3	5	4	9	4	1	5	9	0	1	5
Inflammation, Chronic Active	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skin, SOA-Mass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skin, SOA-No Mass	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
Acanthosis	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3
Inflammation, Chronic Active	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4	5	6	7	8	9	0	1	1	2	2	3	3	4	5	6
Ulcer	1	2	3	4	5	6	7	8	9	0	1	1	2	3	4	5	6	7	8	9	0	1	1	2	2	3	3	4	5	6
<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: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:45  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

CD-1 CRL 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**

Skin	14		
Acanthosis	1	4.0	
Inflammation, Chronic Active	12	3.1	
Ulcer	13	3.2	
Skin, Control	21		
Acanthosis	21	2.0	
Inflammation, Chronic Active	18	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:45  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Male**  
**MNNG 100/TPA 5**

ANIMAL ID	*TOTALS	
Skin, SOA-Mass	10	
Skin, SOA-No Mass	30	
Acanthosis	29	2.9
Inflammation, Chronic Active	28	2.1
Ulcer	11	3.1

**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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
 Time Report Requested: 18:35:45  
 First Dose M/F: NA / NA  
 Lab: BAT

CD-1 CRL Mouse Male MNNG1000/TPA 5	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	2	2	3	1	1	2	1	2	3	2	3	1	1	1	2	2	3	1	2	3	2	2	3	2	1	2	1	2	2	
	4	3	6	9	7	2	7	9	6	2	6	6	9	7	3	9	6	7	4	3	9	4	0	4	2	9	7	9	3	7
	9	6	2	5	3	4	5	3	3	7	4	8	7	5	6	3	5	6	3	4	9	6	6	3	8	3	5	9	1	1
Skin, Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0
Inflammation, Chronic Active	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
Ulcer	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	6
Skin, SOA-Mass	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	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Skin, SOA-No Mass	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Ulcer	3	3	4	3	3	3	4	3	2	1	1	2	3	1	3	2	3	3	3	3	3	2	3	2	3	3	3	2	3	3
Hair Follicle, Cyst											X																			
Inflammation, Chronic Active	3		3	2	2	4	3	3	2	1		3	1	2		1	1	1	3	3	2	1	1	1		3	1	3	4	
Ulcer			3				4	2				3							4							4	4			4

**Musculoskeletal System**

NONE  
**Nervous System**

NONE  
**Respiratory System**

NONE  
**Special Senses System**

NONE  
**Urinary 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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:45  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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**

Skin	12	
Acanthosis	1	4.0
Inflammation, Chronic Active	10	3.1
Subcut Tiss, Edema	1	4.0
Subcut Tiss, Infiltration Cellular, Mixed Cell	1	3.0
Ulcer	10	3.2
Skin, Control	15	

\* ..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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:45  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Male**  
**MNNG1000/TPA 5**

ANIMAL ID	*TOTALS	
Acanthosis	14	2.2
Inflammation, Chronic Active	12	1.1
Ulcer	1	1.0
Skin, SOA-Mass	20	
Ulcer	1	4.0
Skin, SOA-No Mass	29	
Acanthosis	28	2.6
Hair Follicle, Cyst	2	
Inflammation, Chronic Active	25	2.2
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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:45  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:45  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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: 051117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
 Time Report Requested: 18:35:45  
 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	
<b>CD-1 CRL Mouse Female</b>	<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	3	
		3	6	6	6	6	6	6	6	6	6	6	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
		5	2	2	2	2	2	2	2	3	3	3	7	3	3	3	3	4	4	4	4	4	4	5	5	0	5	5	5
	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
		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	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	4																												
Ulcer	4																												
Skin, SOA-No Mass	+																											+	
Acanthosis	2																											3	
Inflammation, Chronic Active																												3	

\* ..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: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:45  
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>CD-1 CRL Mouse Female</b> <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	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
		5	2	2	2	2	2	2	2	3	3	3	7	3	3	3	3	4	4	4	4	4	4	5	5	0	5	5	5	
	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	
		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	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	

Ulcer 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: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:45  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

CD-1 CRL 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	29		
Inflammation, Chronic Active	1	4.0	
Ulcer	1	4.0	
Skin, SOA-No Mass	2		
Acanthosis	2	2.5	
Inflammation, Chronic Active	1	3.0	
Ulcer	1	3.0	

\* ..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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:45  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**VEHICLE CONTROL**

ANIMAL ID

\*TOTALS

**Musculoskeletal System**

NONE

**Nervous System**

NONE

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

NONE

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked



Experiment Number: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
 Time Report Requested: 18:35:45  
 First Dose M/F: NA / NA  
 Lab: BAT

CD-1 CRL Mouse Female MNNG 100/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
	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
	6	6	5	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	4	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5	5
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
	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	9	9	9	9	9	9	9	9	9	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	1	1	1	1	1	1	2

**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			1						1					1	1				1	3					1						
Inflammation, Chronic Active				1				1							1				1	2					1						
Ulcer																															

\* ..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: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:46  
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
CD-1 CRL Mouse Female	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
MNNG 100/ACETONE	6	6	5	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	4	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	5	5	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:46  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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	21		
Skin, SOA-No Mass	9		
Acanthosis	7	1.3	
Inflammation, Chronic Active	6	1.2	
Ulcer	1	2.0	

**Musculoskeletal 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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:46  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**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:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:46  
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
<b>CD-1 CRL Mouse Female</b>		3	3	3	3	3	2	3	3	3	3	1	3	3	3	3	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
	<b>MNNG 500/ACETONE</b>	6	6	6	6	6	5	6	6	6	6	7	6	6	6	6	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
ANIMAL ID		2	2	2	2	2	7	2	3	3	3	5	3	3	3	3	2	4	4	4	4	4	4	5	5	5	5	5	5	5			
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	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	4		
	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	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	0		

Alimentary System

NONE

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

Skin		+	+		+				+				+	+									+	+										
Skin, Control						+							+						+												+			
Acanthosis						1							1						1											1				
Inflammation, Chronic Active						1							1						1															
Skin, SOA-Mass							+			+						+	+			+	+												+	
Acanthosis																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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
 Time Report Requested: 18:35:46  
 First Dose M/F: NA / NA  
 Lab: BAT

CD-1 CRL Mouse Female MNNG 500/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
	3	3	3	3	3	3	2	3	3	3	3	1	3	3	3	3	0	3	3	3	3	3	3	3	3	3	3	3
	6	6	6	6	6	6	5	6	6	6	6	7	6	6	6	6	4	6	6	6	6	6	6	6	6	6	6	6
	2	2	2	2	2	2	7	2	3	3	3	5	3	3	3	3	2	4	4	4	4	4	4	4	5	5	5	5
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	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
	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	4	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
Skin, SOA-No Mass	+	+			+		+	+	+		+	+					+	+	+					+		+		+
Acanthosis	2	1			1		2	1	1		1	3					3	2	1				1		1			1
Hair Follicle, Cyst	X																	X										
Inflammation, Chronic Active	1	1			1		1	1	1		1	4						1	1				1		1			1
Ulcer											4							2										
<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: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:46  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

CD-1 CRL 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**

Skin	10		
Skin, Control	4		
Acanthosis	4	1.0	
Inflammation, Chronic Active	3	1.0	
Skin, SOA-Mass	7		
Acanthosis	1	3.0	
Skin, SOA-No Mass	14		

\* ..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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:46  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**MNNG 500/ACETONE**

ANIMAL ID

\*TOTALS

Acanthosis	14	1.5
Hair Follicle, Cyst	2	
Inflammation, Chronic Active	13	1.2
Ulcer	2	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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
 Time Report Requested: 18:35:46  
 First Dose M/F: NA / NA  
 Lab: BAT

	DAY ON TEST																													
<b>CD-1 CRL Mouse Female</b> <b>MNNG1000/ACETONE</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
	1	2	3	0	2	3	0	2	0	3	3	3	3	3	2	1	3	3	3	2	2	3	1	2	3	3	3	3	3	3
	5	6	6	8	3	6	9	6	4	6	6	6	6	6	6	3	9	6	6	6	1	2	6	8	1	3	6	6	6	1
	1	7	2	1	0	2	5	7	3	2	2	2	3	3	4	0	4	4	4	4	9	5	3	9	5	5	5	5	6	
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	
	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	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																																		
Alopecia																																			
Inflammation, Chronic Active	4																																		
Subcut Tiss, Infiltration Cellular, Mixed Cell	3																																		
Ulcer	4																																		

\* ..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: 05117-05

Test Type: INIT/PROMOT

Route: SKIN APPLICATION

Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014

Time Report Requested: 18:35:46

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
CD-1 CRL Mouse Female	1	2	3	0	2	3	0	2	0	3	3	3	3	3	3	2	1	3	3	3	2	2	3	1	2	3	3	3	3
MNNG1000/ACETONE	5	6	6	8	3	6	9	6	4	6	6	6	6	6	6	3	9	6	6	6	1	2	6	8	1	3	6	6	6
	1	7	2	1	0	2	5	7	3	2	2	3	3	4	0	4	4	4	4	4	4	9	5	3	9	5	5	5	6

Skin, Control																																		
Acanthosis																																		
Inflammation, Chronic Active																																		
Ulcer																																		
Skin, SOA-Mass	+								+					+	+				+				+	+						+				
Skin, SOA-No Mass	+	+	+	+		+	+	+						+	+	+	+	+	+	+											+			
Acanthosis	3	3	3	1		1								2	2	1	2	1	2	2	1	2	1		2	1		3	1	2	1	1		
Hair Follicle, Cyst																																		
Inflammation, Chronic Active	3	3	4						4					4	1		2	1	3	3		1	1		1		3	3		1	1	1	3	
Ulcer									3	4				4					3	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: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:46  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

CD-1 CRL 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	8	
Acanthosis	2	3.5
Alopecia	1	
Inflammation, Chronic Active	7	3.6
Subcut Tiss, Infiltration Cellular, Mixed Cell	1	3.0
Ulcer	7	3.6
Skin, Control	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:46  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**MNNG1000/ACETONE**

ANIMAL ID	*TOTALS	
Acanthosis	1	2.0
Inflammation, Chronic Active	1	2.0
Ulcer	1	4.0
Skin, SOA-Mass	9	
Skin, SOA-No Mass	26	
Acanthosis	22	1.7
Hair Follicle, Cyst	2	
Inflammation, Chronic Active	19	2.3
Ulcer	6	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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
 Time Report Requested: 18:35:47  
 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
CD-1 CRL 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
TPA 5 COMPLETE	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	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	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	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
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	1	2	3	4	5	6	7	8	8	9	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7
Skin, SOA-Mass			+		+																								
Acanthosis																													
Skin, SOA-No Mass		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Acanthosis		2	3	2	2	3	2	3	2	3	2	2	2	3	1		4		4	3	2	3	2		2	2	2	3	1
Inflammation, Chronic Active		3	3	1	1	3	2	2	2	2	1	1	1	2				1	3	3	2	3			2	2	3	3	2
Ulcer		3	4			4													4	4							3		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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:47  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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**

Skin	4		
Acanthosis	1	2.0	
Ulcer	2	3.5	
Skin, Control	18		
Acanthosis	18	2.1	
Inflammation, Chronic Active	13	1.2	
Skin, SOA-Mass	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:47  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**TPA 5 COMPLETE**

ANIMAL ID	<u>*TOTALS</u>	
Acanthosis	1	3.0
Skin, SOA-No Mass	28	
Acanthosis	27	2.4
Inflammation, Chronic Active	25	2.1
Ulcer	7	3.4

**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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
 Time Report Requested: 18:35:47  
 First Dose M/F: NA / NA  
 Lab: BAT

CD-1 CRL Mouse Female 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	
	3	3	3	3	3	3	2	3	3	3	3	3	3	3	2	3	2	3	3	3	3	3	3	3	3	3	3	3	3	
	6	6	6	4	2	4	8	6	6	6	6	6	6	1	6	9	6	9	3	6	6	6	6	6	6	6	6	6	6	
	2	2	2	7	1	7	7	2	2	3	3	3	6	3	2	3	3	5	4	4	4	4	5	5	5	6	5	3	7	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	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	2	2	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, SOA-Mass	+	+		+	+	+	+		+		+	+	+	+	+	+		+	+	+	+	+	+					+		
Acanthosis													4																	
Skin, SOA-No Mass		+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Acanthosis		1	3	3	2	1		3	2	2	2	2	2	1	2	2	2	3	2		2	1	2	2	3	2	2	2	1	2
Hemorrhage																														
Inflammation, Chronic Active		4	2	2	2	1		1	2	2	1	2	2	1	2	1	2	3	2		2	1	1	2	3	2	2	3	3	1
Ulcer		4							3								3				2			4			3	2		
<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: 05117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
Time Report Requested: 18:35:47  
First Dose M/F: NA / NA  
Lab: BAT

DAY ON TEST

CD-1 CRL 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	4		
Inflammation, Chronic Active	1	3.0	
Ulcer	3	3.0	
Skin, Control	22		
Acanthosis	22	1.5	
Inflammation, Chronic Active	17	1.3	
Skin, SOA-Mass	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:47  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**MNNG100/COMPLETE**

ANIMAL ID	*TOTALS	
Acanthosis	1	4.0
Skin, SOA-No Mass	27	
Acanthosis	27	2.0
Hemorrhage	1	3.0
Inflammation, Chronic Active	27	1.9
Ulcer	7	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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
 Time Report Requested: 18:35:47  
 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
<b>CD-1 CRL Mouse Female</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
<b>BPO 20 COMPLETE</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
	2	2	2	2	2	2	2	3	3	1	3	3	3	3	3	4	4	4	4	4	4	4	4	5	5	5	5	5
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	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
	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
	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	3	1		1	1	1	1		1	1		1		1		1		1		4	1			1	1
Ulcer																												

**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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:47  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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	9		
Skin, Control	5		
Acanthosis	5	1.0	
Inflammation, Chronic Active	2	1.0	
Skin, SOA-No Mass	21		
Acanthosis	21	1.3	
Inflammation, Chronic Active	16	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:47  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**BPO 20 COMPLETE**

ANIMAL ID

\*TOTALS

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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
 Time Report Requested: 18:35:48  
 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>CD-1 CRL Mouse Female</b>	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3		
<b>MNNG 100/BPO 20</b>	6	6	6	6	6	6	6	6	5	6	6	6	6	6	6	6	6	6	7	6	6	6	6	6	6	6	6	6		
	2	2	2	2	2	2	2	3	1	3	3	3	3	3	4	4	4	4	6	4	4	4	4	5	5	5	5	5		
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	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	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
Acanthosis						1					1									1										
Inflammation, Chronic Active						1					1								1											
Ulcer																														
Skin, SOA-Mass																														
Skin, SOA-No Mass																														
Acanthosis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
Inflammation, Chronic Active	1	2	1	1	1	1	1	2	2	2	1		2	1	1		1	1	1	1	1	1	1	1	1	1	1	1		

**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:** 051117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:48  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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	4		
Acanthosis	1	3.0	
Hair Follicle, Cyst	1		
Inflammation, Chronic Active	2	4.0	
Ulcer	1	4.0	
Skin, Control	4		
Acanthosis	3	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:48  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**MNNG 100/BPO 20**

	ANIMAL ID		
		<u>*TOTALS</u>	
Inflammation, Chronic Active		4	1.0
Ulcer		1	2.0
Skin, SOA-Mass		3	
Skin, SOA-No Mass		28	
Acanthosis		28	1.2
Inflammation, Chronic Active		26	1.1

**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: 051117-05  
Test Type: INIT/PROMOT  
Route: SKIN APPLICATION  
Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
Time Report Requested: 18:35:48  
First Dose M/F: NA / NA  
Lab: BAT

CD-1 CRL Mouse Female 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	
	ANIMAL ID	3	3	3	2	3	3	2	3	3	3	3	3	3	3	1	3	2	2	3	3	3	2	3	2	3	3	3	2	3	3	2	3	3	2	3
		6	6	6	1	6	6	1	6	6	6	6	6	4	6	6	6	5	6	3	4	6	6	1	5	6	2	6	6	6	8	6	6	6		
		2	2	2	4	2	2	9	3	3	3	3	3	7	4	4	4	4	4	0	1	4	5	4	1	5	4	5	5	6	6	5	5	5	5	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	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	6	
		0	0	0	0	0	0	0	0	0	0	0	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	1	2	3	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																																					
Ulcer																																					
Skin, Control																																					
Acanthosis																																					

\* ..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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
 Time Report Requested: 18:35:48  
 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>CD-1 CRL Mouse Female</b>	3	3	3	2	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	1	3	2	2	3	3	2	3	3	2	3	
<b>MNNG 500/BPO 20</b>	6	6	6	1	6	6	1	6	6	6	6	6	6	4	6	6	6	5	6	3	4	6	6	1	5	6	2	6	6	8	6
	2	2	2	4	2	2	9	3	3	3	3	3	7	4	4	4	4	4	0	1	4	5	4	1	5	4	5	5	6	5	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	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	
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	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			1	1			1	1			1	2						1							1				
Skin, SOA-Mass					+			+	+			+	+			+	+						+	+			+	+		+	
Skin, SOA-No Mass	+	+	+	+	+	+		+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Acanthosis	1	1	3	3	2	1		1	1	1	1	1	3	1	1	2		1	2	2	1	1	2	3	1	1	3	1	1	1	
Inflammation, Chronic Active	1	1	2	2	1	1		1	1	1	1	1	3	1	1	1			4	1	1	1	1	2	1	1		1	1	1	
Ulcer													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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:48  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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	5	
Alopecia	1	
Inflammation, Chronic Active	3	3.7
Ulcer	2	3.5
Skin, Control	12	
Acanthosis	12	1.2
Inflammation, Chronic Active	10	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:48  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**MNNG 500/BPO 20**

ANIMAL ID	*TOTALS	
Skin, SOA-Mass	12	
Skin, SOA-No Mass	28	
Acanthosis	28	1.5
Inflammation, Chronic Active	26	1.3
Ulcer	2	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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
 Time Report Requested: 18:35:48  
 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>CD-1 CRL Mouse Female</b>	3	3	3	2	3	3	3	3	2	3	2	3	3	3	2	2	3	3	3	1	3	1	3	3	2	2	0	1	3	3	
<b>MNNG1000/BPO 20</b>	6	4	6	8	2	6	6	6	0	6	9	6	6	6	1	6	6	6	6	5	6	3	6	6	9	1	4	6	6	6	
	2	7	2	4	6	2	2	3	7	3	3	3	3	4	4	6	4	4	4	1	5	7	5	5	3	5	8	9	5	5	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	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	
	3	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	
Inflammation, Chronic Active					1				1																	1					
Skin, SOA-Mass		+			+				+	+	+		+						+	+	+	+		+						+	
Ulcer																															4
Skin, SOA-No Mass	+	+		+		+	+	+	+	+		+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Acanthosis	4	3				2	1	2	2	1	2		3	1	2			2	2	4	1	3	2	1	1	3	3	1	1	2	
Inflammation, Chronic Active	2	2		4		1		2	1		1		2	1	1	4				4	2	4	1	1		3	2	4	1		
Ulcer				4											3					4		4								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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
 Time Report Requested: 18:35:48  
 First Dose M/F: NA / NA  
 Lab: BAT

DAY ON TEST

**CD-1 CRL 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	8		
Acanthosis	1	3.0	
Inflammation, Chronic Active	3	3.3	
Ulcer	3	3.3	
Skin, Control	7		
Acanthosis	7	1.7	
Inflammation, Chronic Active	3	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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:48  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**MNNG1000/BPO 20**

	ANIMAL ID	<u>*TOTALS</u>	
Skin, SOA-Mass		12	
Ulcer		1	4.0
Skin, SOA-No Mass		26	
Acanthosis		24	2.0
Inflammation, Chronic Active		20	2.2
Ulcer		5	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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

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: 10/19/2014  
 Time Report Requested: 18:35:49  
 First Dose M/F: NA / NA  
 Lab: BAT

CD-1 CRL Mouse Female MNNG 100/TPA 5	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	1	3	3	3	3	3	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3			
	5	6	6	6	1	6	6	1	0	6	6	6	6	6	6	7	8	6	6	6	6	6	6	6	0	6	6	2	6	6			
	0	2	2	2	5	2	2	3	0	2	3	3	3	3	3	6	3	4	4	4	4	5	5	0	5	5	6	5	5				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	0	0	0	0	0	0	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	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	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																																
Skin, SOA-No Mass	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+			
Acanthosis	3	4	3	3	3	3	4	3	3	4	4				1	2				1	3	2	3	2		2	2	3	3	2	3	4	
Inflammation, Chronic Active	2	3	1	2	2	2	1	2	2	3	2	4			1	1	3			1	1	1	1	1	3	1	1	3	2	2	1	3	
Ulcer	3			2			3			4			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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:49  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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**

Skin	3		
Inflammation, Chronic Active	3	3.0	
Ulcer	3	3.7	
Skin, Control	10		
Acanthosis	10	2.0	
Inflammation, Chronic Active	8	1.5	
Skin, SOA-Mass	16		

\* ..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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:49  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**MNNG 100/TPA 5**

ANIMAL ID	<u>*TOTALS</u>	
Acanthosis	1	3.0
Skin, SOA-No Mass	29	
Acanthosis	25	2.8
Inflammation, Chronic Active	28	1.9
Ulcer	8	3.1

**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: 05117-05  
 Test Type: INIT/PROMOT  
 Route: SKIN APPLICATION  
 Species/Strain: Mouse/CD-1 CRL

**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: 10/19/2014  
 Time Report Requested: 18:35:49  
 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>CD-1 CRL Mouse Female</b>	3	1	3	3	2	2	1	3	2	3	3	3	0	3	3	1	3	3	3	3	3	2	3	1	1	2	3	3	3		
<b>MNNG1000/TPA 5</b>	6	3	6	6	3	3	9	6	5	6	6	6	4	6	6	9	6	1	6	6	6	5	1	3	7	6	2	6	4		
	2	3	2	2	7	1	7	2	1	3	3	3	7	4	4	5	4	4	4	5	5	5	8	4	9	9	6	1	5	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	
	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	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
Skin, SOA-Mass	+	+	+	+			+		+					+	+				+		+					+	+	+	+		
Skin, SOA-No Mass	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Acanthosis			2	2	3	3	2	2	2	4	2	2	1		2	1			3	1	4	3	2	2	2	2	3	3	2	4	3
Hair Follicle, Cyst			X																												
Inflammation, Chronic Active	3	3	1	1	2	4	4	2	2	3	1	1	3	1	1	2		2	1	3	2	1		4	1	2		3	2	2	
Ulcer	3	3				4	4						3			3			3				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:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
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**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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**

Skin	5		
Inflammation, Chronic Active	4	2.8	
Ulcer	4	2.8	
Skin, Control	12		
Acanthosis	12	1.8	
Inflammation, Chronic Active	9	1.3	
Skin, SOA-Mass	14		

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+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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2) Mild 4) Marked

**Experiment Number:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:49  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**MNNG1000/TPA 5**

ANIMAL ID

\*TOTALS

Skin, SOA-No Mass	29	
Acanthosis	26	2.4
Hair Follicle, Cyst	1	
Inflammation, Chronic Active	27	2.1
Ulcer	9	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

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M ..Missing tissue

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**Experiment Number:** 05117-05  
**Test Type:** INIT/PROMOT  
**Route:** SKIN APPLICATION  
**Species/Strain:** Mouse/CD-1 CRL

**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:** 10/19/2014  
**Time Report Requested:** 18:35:49  
**First Dose M/F:** NA / NA  
**Lab:** BAT

DAY ON TEST

**CD-1 CRL 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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**Experiment Number:** 05117-05  
**Test Type:** INIT/PROMOT  
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**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
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**Lab:** BAT

DAY ON TEST

**CD-1 CRL Mouse Female**  
**SENTINEL FEMALE**

ANIMAL ID

\*TOTALS

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

NONE

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

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