

**Experiment Number:** 97011-13  
**Test Type:** 18-33 DAYS  
**Route:** GAVAGE  
**Species/Strain:** Mouse/FVB/N

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Transgenic model evaluation (Melphalan)  
**CAS Number:** 148-82-3

**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 05:00:40  
**First Dose M/F:** NA / NA  
**Lab:** MBA

<b>C Number:</b>	C97011M
<b>Lock Date:</b>	03/31/1999
<b>Cage Range:</b>	All
<b>Date Range:</b>	All
<b>Reasons For Removal:</b>	All
<b>Removal Date Range:</b>	All
<b>Treatment Groups:</b>	All
<b>Study Gender:</b>	Both
<b>PWG Approval Date</b>	NONE

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<b>FVB/N Mouse Male VEHICLE CONTROL</b>	DAY ON TEST	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	
		0	0	0	0	0	0	0	0	0	0	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	<b>*TOTALS</b>	
	0	0	0	0	0	0	0	0	0			
	0	0	0	0	0	0	0	0	1			
	0	0	0	0	0	0	0	0	0			
	1	2	3	4	5	6	7	8	9	0		

**Alimentary System**

Liver	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

Spleen	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic Cell Proliferation	1	1	1	1	1	1	1	1	1	1	10 1.0
Thymus	+	+	+	+	+	+	+	+	+	+	10

**Integumentary System**

Skin	+	+	+	+	+	+	+	+	+	+	10
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**Musculoskeletal System**

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 97011-13

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First Dose M/F: NA / NA

Lab: MBA

FVB/N Mouse Male VEHICLE CONTROL	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	*TOTALS
		0	0	0	0	0	0	0	0	0	0	
		3	3	3	3	3	3	3	3	3	3	
		0	0	0	0	0	0	0	0	0	0	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	1		
	1	2	3	4	5	6	7	8	9	0		

NONE  
Nervous System

NONE  
Respiratory System

NONE  
Special Senses System

NONE  
Urinary System

NONE

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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BLANK ..Not examined microscopically

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 Test Compound: Transgenic model evaluation (Melphalan)  
 CAS Number: 148-82-3

Date Report Requested: 10/20/2014  
 Time Report Requested: 05:00:40  
 First Dose M/F: NA / NA  
 Lab: MBA

**FVB/N Mouse Male**  
**1.0 MG/KG**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	2
	1	2	3	4	5	6	7	8	9	0	
	<b>*TOTALS</b>										

**Alimentary System**

Liver	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

Spleen	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic Cell Proliferation	1	1	1	1	1	1	1	1	1	1	10 1.0
Thymus	+	+	+	+	+	+	+	+	+	+	10

**Integumentary System**

Skin	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	----

**Musculoskeletal System**

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

+ ..Tissue examined microscopically

X ..Lesion present

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Test Type: 18-33 DAYS

Route: GAVAGE

Species/Strain: Mouse/FVB/N

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Test Compound: Transgenic model evaluation (Melphalan)

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Time Report Requested: 05:00:40

First Dose M/F: NA / NA

Lab: MBA

**FVB/N Mouse Male  
1.0 MG/KG**

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

**\*TOTALS**

NONE  
**Nervous System**

NONE  
**Respiratory System**

NONE  
**Special Senses System**

NONE  
**Urinary System**

NONE

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+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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Test Type: 18-33 DAYS

Route: GAVAGE

Species/Strain: Mouse/FVB/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Transgenic model evaluation (Melphalan)

CAS Number: 148-82-3

Date Report Requested: 10/20/2014

Time Report Requested: 05:00:40

First Dose M/F: NA / NA

Lab: MBA

FVB/N Mouse Male  
2.0 MG/KG

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

Alimentary System

Liver	+	+	+	+	+	+	+	+	+	+	10	
Necrosis, Focal			1									1 1.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10	

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

Spleen	+	+	+	+	+	+	+	+	+	+	10	
Hematopoietic Cell Proliferation	2	2	2	1	3	2	1	1	2	1	10	1.7
Thymus	+	+	+	+	+	+	+	+	+	+	10	

Integumentary System

Skin	+	+	+	+	+	+	+	+	+	+	10	
------	---	---	---	---	---	---	---	---	---	---	----	--

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

+ ..Tissue examined microscopically

X ..Lesion present

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

**FVB/N Mouse Male**  
**2.0 MG/KG**

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

**Musculoskeletal System**

NONE

**Nervous System**

NONE

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

NONE

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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Experiment Number: 97011-13

Test Type: 18-33 DAYS

Route: GAVAGE

Species/Strain: Mouse/FVB/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Transgenic model evaluation (Melphalan)

CAS Number: 148-82-3

Date Report Requested: 10/20/2014

Time Report Requested: 05:00:40

First Dose M/F: NA / NA

Lab: MBA

FVB/N Mouse Male  
4.0 MG/KG

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

Alimentary System

Liver	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

Epididymis						+	1		
Developmental Malformation, Diffuse					4			1	4.0
Testes						+	1		
Hypoplasia, Diffuse					4			1	4.0

Hematopoietic System

Spleen	+	+	+	+	+	+	+	+	+	+	10	
Hematopoietic Cell Proliferation	1	1	2	3	3	2	2	2	2	2	10	2.0
Thymus	+	+	+	+	+	+	+	+	+	+	10	
Atrophy, Diffuse				2							1	2.0

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**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Transgenic model evaluation (Melphalan)  
 CAS Number: 148-82-3

Date Report Requested: 10/20/2014  
 Time Report Requested: 05:00:40  
 First Dose M/F: NA / NA  
 Lab: MBA

**FVB/N Mouse Male**  
**4.0 MG/KG**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	4
	1	2	3	4	5	6	7	8	9	0
	<b>*TOTALS</b>									

**Integumentary System**

Skin + + + + + + + + + + 10

**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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Experiment Number: 97011-13

Test Type: 18-33 DAYS

Route: GAVAGE

Species/Strain: Mouse/FVB/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Transgenic model evaluation (Melphalan)

CAS Number: 148-82-3

Date Report Requested: 10/20/2014

Time Report Requested: 05:00:40

First Dose M/F: NA / NA

Lab: MBA

FVB/N Mouse Male  
8.0 MG/KG

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

Alimentary System

Liver	+	+	+	+	+	+	+	+	+	+	10	
Centrilobular, Necrosis, Focal			1								1	1.0
Centrilobular, Sinusoid, Dilatation, Focal	1										1	1.0
Midzonal, Necrosis, Focal									3		1	3.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10	

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

Spleen	+	+	+	+	+	+	+	+	+	+	10	
Hematopoietic Cell Proliferation	4	3	3	3	3	3	3	3	3		9	3.1
Lymph Follic, Depletion Cellular, Diffuse									4		1	4.0
Thymus	+	+	+	+	+	+	+	+	+	+	10	

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CAS Number: 148-82-3

Date Report Requested: 10/20/2014

Time Report Requested: 05:00:40

First Dose M/F: NA / NA

Lab: MBA

FVB/N Mouse Male  
8.0 MG/KG

DAY ON TEST	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0		
	3	3	3	3	3	3	3	3	3	2		
	0	0	0	0	0	0	0	0	0	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		
	4	4	4	4	4	4	4	4	4	5		
	1	2	3	4	5	6	7	8	9	0		
											<b>*TOTALS</b>	
Atrophy, Diffuse	2								4		2	3.0
Atrophy, Focal			1				1				2	1.0

**Integumentary System**

Skin + + + + + + + + + 10

**Musculoskeletal System**

NONE

**Nervous System**

NONE

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

Kidney + 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

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1-4 ..Lesion qualified as:

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Date Report Requested: 10/20/2014  
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 First Dose M/F: NA / NA  
 Lab: MBA

**FVB/N Mouse Male**  
**16.0 MG/KG**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	1	2	1	3	2	2	3	0	2	2
	4	6	0	0	6	4	0	9	9	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
	5	5	5	5	5	5	5	5	5	6
	1	2	3	4	5	6	7	8	9	0
	<b>*TOTALS</b>									

**Alimentary System**

Liver	+	+	+	+	+	+	+	+	+	+	10		
Centrilobular, Sinusoid, Dilatation, Focal			2		1	1		1		2	1	6	1.3
Hepatocyte, Periportal, Vacuolization Cytoplasmic, Focal					2	4						2	3.0
Midzonal, Necrosis, Focal							3					1	3.0
Periportal, Necrosis, Focal					1							1	1.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10		
Hyperkeratosis, Diffuse			2				1		2			3	1.7

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

Testes					+						1	
Bilateral, Hypoplasia, Diffuse					4						1	4.0

**Hematopoietic System**

Spleen	+	+	+	+	+	+	+	+	+	+	10	
--------	---	---	---	---	---	---	---	---	---	---	----	--

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+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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Time Report Requested: 05:00:40

First Dose M/F: NA / NA

Lab: MBA

FVB/N Mouse Male  
16.0 MG/KG

	DAY ON TEST											
	0	0	0	0	0	0	0	0	0	0		
ANIMAL ID	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0		
	5	5	5	5	5	5	5	5	5	6		
	1	2	3	4	5	6	7	8	9	6		
											<b>*TOTALS</b>	
Hematopoietic Cell Proliferation		1		4	3		4		3	2	6	2.8
Lymph Follic, Depletion Cellular, Diffuse	4	4	4	3	3	4		4	3	4	9	3.7
Pigmentation		1							1		2	1.0
Thymus	M	M	+	+	+	+	+	+	+	+	8	
Atrophy, Diffuse			4	3	4	4	4	3	4	4	8	3.8
<b>Integumentary System</b>												
Skin	+	+	+	+	+	+	+	+	+	+	10	
<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>												
Kidney							+			1		

\*\*\*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

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1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 97011-13

Test Type: 18-33 DAYS

Route: GAVAGE

Species/Strain: Mouse/FVB/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Transgenic model evaluation (Melphalan)

CAS Number: 148-82-3

Date Report Requested: 10/20/2014

Time Report Requested: 05:00:40

First Dose M/F: NA / NA

Lab: MBA

FVB/N Mouse Female VEHICLE CONTROL	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	
		3	3	3	3	3	3	3	3	3	3	
		0	0	0	0	0	0	0	0	0	0	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	*TOTALS
	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0		
	6	6	6	6	6	6	6	6	6	7		
	1	2	3	4	5	6	7	8	9	0		

Alimentary System

Liver	+	+	+	+	+	+	+	+	+	+	10
Centrilobular, Hepatocyte, Vacuolization Cytoplasmic, Focal			1								1 1.0
Inflammation, Focal			1								1 1.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

Spleen	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic Cell Proliferation	1	2	2	3	2	3	2	2	2	1	10 2.0
Thymus	+	+	+	+	+	+	+	+	+	+	10

Integumentary System

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 97011-13

Test Type: 18-33 DAYS

Route: GAVAGE

Species/Strain: Mouse/FVB/N

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Test Compound: Transgenic model evaluation (Melphalan)

CAS Number: 148-82-3

Date Report Requested: 10/20/2014

Time Report Requested: 05:00:40

First Dose M/F: NA / NA

Lab: MBA

<b>FVB/N Mouse Female</b> <b>VEHICLE CONTROL</b>	DAY ON TEST	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	
		0	0	0	0	0	0	0	0	0	0	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	
		6	6	6	6	6	6	6	6	6	7	
		1	2	3	4	5	6	7	8	9	0	
												<b>*TOTALS</b>
Skin		+	+	+	+	+	+	+	+	+	10	
<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: 97011-13  
 Test Type: 18-33 DAYS  
 Route: GAVAGE  
 Species/Strain: Mouse/FVB/N

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Transgenic model evaluation (Melphalan)  
 CAS Number: 148-82-3

Date Report Requested: 10/20/2014  
 Time Report Requested: 05:00:40  
 First Dose M/F: NA / NA  
 Lab: MBA

<b>FVB/N Mouse Female</b> <b>1.0 MG/KG</b>	DAY ON TEST	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	
		0	0	0	0	0	0	0	0	0	0	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0		
	7	7	7	7	7	7	7	7	7	8		
	1	2	3	4	5	6	7	8	9	0		
											<b>*TOTALS</b>	

**Alimentary System**

Liver	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

Spleen	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic Cell Proliferation	1	3	1	2	2	2	1	2	2	2	10 1.8
Thymus	+	+	+	+	+	+	+	+	+	+	10

**Integumentary System**

Skin	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	----

**Musculoskeletal System**

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked



Experiment Number: 97011-13  
 Test Type: 18-33 DAYS  
 Route: GAVAGE  
 Species/Strain: Mouse/FVB/N

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Transgenic model evaluation (Melphalan)  
 CAS Number: 148-82-3

Date Report Requested: 10/20/2014  
 Time Report Requested: 05:00:40  
 First Dose M/F: NA / NA  
 Lab: MBA

**FVB/N Mouse Female**  
**1.0 MG/KG**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	7	7	7	7	8
	1	2	3	4	5	6	7	8	9	0
	<b>*TOTALS</b>									

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: 97011-13  
 Test Type: 18-33 DAYS  
 Route: GAVAGE  
 Species/Strain: Mouse/FVB/N

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Transgenic model evaluation (Melphalan)  
 CAS Number: 148-82-3

Date Report Requested: 10/20/2014  
 Time Report Requested: 05:00:40  
 First Dose M/F: NA / NA  
 Lab: MBA

<b>FVB/N Mouse Female</b> <b>2.0 MG/KG</b>	DAY ON TEST	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
		0	0	0	0	0	0	0	0	0	0
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
		8	8	8	8	8	8	8	8	8	9
		1	2	3	4	5	6	7	8	9	0
		<b>*TOTALS</b>									

**Alimentary System**

Liver	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

Spleen	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic Cell Proliferation	2	2	2	2	3	2	2	3	2	3	10 2.3
Thymus	+	+	+	+	+	+	+	+	+	+	10

**Integumentary System**

Skin	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	----

**Musculoskeletal System**

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 97011-13  
 Test Type: 18-33 DAYS  
 Route: GAVAGE  
 Species/Strain: Mouse/FVB/N

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Transgenic model evaluation (Melphalan)  
 CAS Number: 148-82-3

Date Report Requested: 10/20/2014  
 Time Report Requested: 05:00:40  
 First Dose M/F: NA / NA  
 Lab: MBA

**FVB/N Mouse Female**  
**2.0 MG/KG**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0
	8	8	8	8	8	8	8	8	8	8	9
	1	2	3	4	5	6	7	8	8	9	0
	<b>*TOTALS</b>										

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: 97011-13  
 Test Type: 18-33 DAYS  
 Route: GAVAGE  
 Species/Strain: Mouse/FVB/N

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Transgenic model evaluation (Melphalan)  
 CAS Number: 148-82-3

Date Report Requested: 10/20/2014  
 Time Report Requested: 05:00:40  
 First Dose M/F: NA / NA  
 Lab: MBA

**FVB/N Mouse Female**  
**4.0 MG/KG**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1
	9	9	9	9	9	9	9	9	9	0
	1	2	3	4	5	6	7	8	9	0
	<b>*TOTALS</b>									

**Alimentary System**

Liver	+	+	+	+	+	+	+	+	+	+	10		
Hematopoietic Cell Proliferation											1	1	1.0
Hepatocyte, Necrosis, Focal											1	1	1.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10		

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

Spleen	+	+	+	+	+	+	+	+	+	+	10		
Hematopoietic Cell Proliferation	3	3	3	2	2	3	3	3	2	3	10	2.7	
Thymus	+	+	+	+	+	+	+	+	+	+	10		
Atrophy, Diffuse											2	1	2.0

**Integumentary System**

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 97011-13

Test Type: 18-33 DAYS

Route: GAVAGE

Species/Strain: Mouse/FVB/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Transgenic model evaluation (Melphalan)

CAS Number: 148-82-3

Date Report Requested: 10/20/2014

Time Report Requested: 05:00:41

First Dose M/F: NA / NA

Lab: MBA

FVB/N Mouse Female  
4.0 MG/KG

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1
	9	9	9	9	9	9	9	9	9	0
	1	2	3	4	5	6	7	8	9	0
	<b>*TOTALS</b>									
Skin	+	+	+	+	+	+	+	+	+	+
	10									

Musculoskeletal System

NONE

Nervous System

NONE

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney

+ 1

Bilateral, Inflammation, Chronic Active, Focal

3 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: 97011-13  
 Test Type: 18-33 DAYS  
 Route: GAVAGE  
 Species/Strain: Mouse/FVB/N

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Transgenic model evaluation (Melphalan)  
 CAS Number: 148-82-3

Date Report Requested: 10/20/2014  
 Time Report Requested: 05:00:41  
 First Dose M/F: NA / NA  
 Lab: MBA

<b>FVB/N Mouse Female</b> <b>8.0 MG/KG</b>	DAY ON TEST	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	
		0	0	0	0	0	0	0	0	0	0	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0		
	1	1	1	1	1	1	1	1	1	1		
	0	0	0	0	0	0	0	0	0	1		
		1	2	3	4	5	6	7	8	9	0	<b>*TOTALS</b>

**Alimentary System**

Liver	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic Cell Proliferation									1		1 1.0
Necrosis, Focal	1										1 1.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10

**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

Spleen	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic Cell Proliferation	2	3	3	3	2	4	2	3	3	3	10 2.8
Lymph Follic, Depletion Cellular, Diffuse							3				1 3.0
Thymus	+	+	+	+	+	+	+	+	+	+	10
Atrophy, Diffuse				4							1 4.0

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 97011-13  
 Test Type: 18-33 DAYS  
 Route: GAVAGE  
 Species/Strain: Mouse/FVB/N

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
 Test Compound: Transgenic model evaluation (Melphalan)  
 CAS Number: 148-82-3

Date Report Requested: 10/20/2014  
 Time Report Requested: 05:00:41  
 First Dose M/F: NA / NA  
 Lab: MBA

**FVB/N Mouse Female**  
**8.0 MG/KG**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0
	<b>*TOTALS</b>									

**Integumentary System**

Skin + + + + + + + + + + 10

**Musculoskeletal System**

NONE

**Nervous System**

NONE

**Respiratory System**

NONE

**Special Senses System**

NONE

**Urinary System**

Kidney + 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: 97011-13

Test Type: 18-33 DAYS

Route: GAVAGE

Species/Strain: Mouse/FVB/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Transgenic model evaluation (Melphalan)

CAS Number: 148-82-3

Date Report Requested: 10/20/2014

Time Report Requested: 05:00:41

First Dose M/F: NA / NA

Lab: MBA

FVB/N Mouse Female 16.0 MG/KG	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	*TOTALS
		0	0	0	0	0	0	0	0	0	0	
		0	0	3	3	3	3	3	3	3	3	
		7	8	0	0	0	0	0	0	0	0	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0		
	1	1	1	1	1	1	1	1	1	1		
	1	1	1	1	1	1	1	1	1	2		
	1	2	3	4	5	6	7	8	9	0		

Alimentary System

Intestine Small, Duodenum											+	1													
Intestine Small, Ileum											+	1													
Intestine Small, Jejunum											+	1													
Liver	A										+	+	+	+	+	+	+	+	+	+	9				
Centrilobular, Sinusoid, Dilatation, Focal																					1	1	2	1.0	
Hepatocyte, Vacuolization Cytoplasmic, Diffuse																							3	1	3.0
Stomach, Forestomach											+	+	+	+	+	+	+	+	+	+	10				
Epithelium, Degeneration, Focal																					3		1	3.0	
Hyperkeratosis, Diffuse																					3	1	2	2.0	

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic 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: 97011-13

Test Type: 18-33 DAYS

Route: GAVAGE

Species/Strain: Mouse/FVB/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: Transgenic model evaluation (Melphalan)

CAS Number: 148-82-3

Date Report Requested: 10/20/2014

Time Report Requested: 05:00:41

First Dose M/F: NA / NA

Lab: MBA

FVB/N Mouse Female 16.0 MG/KG	DAY ON TEST										*TOTALS
	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	0	0	3	3	3	3	3	3	3	3	
	7	8	0	0	0	0	0	0	0	0	
Spleen	A	+	+	+	+	+	+	+	+	+	9
Hematopoietic Cell Proliferation		1	4	3	2	4	1	3	3	3	9 2.7
Lymph Follic, Depletion Cellular, Diffuse		4			3		3				3 3.3
Pigmentation							2				1 2.0
Thymus	A	M	+	+	+	+	+	+	+	+	8
Atrophy, Diffuse				2	4		4		3	4	5 3.4
<b>Integumentary System</b>											
Skin		+	+	+	+	+	+	+	+	+	10
<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>											
Kidney										+	1

\*\* END OF REPORT \*\*

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked