

Experiment Number: 97011-25
Test Type: 26-WEEK
Route: GAVAGE
Species/Strain: Mouse/FVB/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Transgenic model evaluation (Melphalan)

CAS Number: 148-82-3

Date Report Requested: 10/20/2014

Time Report Requested: 04:56:25

First Dose M/F: NA / NA

Lab: MBA

C Number:	C97011D
Lock Date:	07/21/2000
Cage Range:	All
Date Range:	All
Reasons For Removal:	All
Removal Date Range:	All
Treatment Groups:	All
Study Gender:	Both
PWG Approval Date	NONE

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

Alimentary System

Intestine Large, Cecum	A	+	+	+	+	+	+	+	+	+	+	+	+	+	14
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Intestine Large, Rectum	A	+	+	+	+	+	+	+	+	+	+	+	+	+	14
Intestine Small, Duodenum	A	+	+	+	+	+	+	+	+	+	+	+	+	+	14
Intestine Small, Ileum	A	+	+	+	+	+	+	+	+	+	+	+	+	+	14
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Liver	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Stomach, Glandular	A	+	+	+	+	+	+	+	+	+	+	+	+	+	14

Cardiovascular System

Heart	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

Endocrine System

Adrenal Cortex	A	+	+	+	+	+	+	+	+	+	+	+	+	+	14
Adrenal Medulla	A	+	+	+	+	+	+	+	+	+	+	+	+	+	14
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	+	+	I	+	14
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15

General Body System

NONE

Genital System

* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

Experiment Number: 97011-25

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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	0	0	0	0	*TOTALS
		1	1	1	1	1	1	1	1	1	1	1	1	1	1	
		6	8	8	8	8	8	8	8	8	8	8	8	8	8	
		9	7	7	7	7	7	7	7	7	7	7	7	7	7	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
	4	3	3	3	3	3	3	3	3	3	4	4	4	4	4	
	5	1	2	3	4	5	6	7	8	9	0	1	2	3	4	
Epididymis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Testes	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Hematopoietic System																
Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Lymph Node, Mediastinal	+	+	+	+	M	+	+	+	+	+	+	+	+	+	+	14
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Thymus	A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	14
Integumentary System																
Mammary Gland	M	M	M	M	M	+	M	M	M	M	M	M	M	M	M	1
Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Musculoskeletal System																
NONE																
Nervous System																
NONE																
Respiratory System																
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	15
Alveolar/Bronchiolar Adenoma						X										1

* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

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: 04:56:25

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

Special Senses System

NONE

Urinary System

Kidney

+ + + + + + + + + + + + + + 15

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + + + + + 15

* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

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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: 04:56:25
 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 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 5 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 |
| | 3 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | *TOTALS | | | | | | | | | | | | | | |

Alimentary System

| | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Intestine Small, Ileum | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 14 |
| Intestine Small, Jejunum | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 14 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |

Cardiovascular System

| | | | | | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

Endocrine System

| | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |

General Body System

NONE

Genital System

* ..Total animals with tissue examined microscopically; Total animals with tumor
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue

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

Experiment Number: 97011-25

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Date Report Requested: 10/20/2014

Test Type: 26-WEEK

Test Compound: Transgenic model evaluation (Melphalan)

Time Report Requested: 04:56:25

Route: GAVAGE

CAS Number: 148-82-3

First Dose M/F: NA / NA

Species/Strain: Mouse/FVB/N

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 | *TOTALS |
|-------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| | ANIMAL ID | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| | | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 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 | |
| | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 5 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | |
| | | 3 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |
| Epididymis | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Testes | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Hematopoietic System | | | | | | | | | | | | | | | | | |
| Bone Marrow | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Lymph Node, Mandibular | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Lymph Node, Mediastinal | | + | M | M | + | + | + | + | + | + | + | + | + | + | + | + | 13 |
| Lymph Node, Mesenteric | | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | 14 |
| Spleen | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Thymus | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Integumentary System | | | | | | | | | | | | | | | | | |
| Mammary Gland | | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 0 |
| Skin | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Musculoskeletal System | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | |
| Nervous System | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | |
| Respiratory System | | | | | | | | | | | | | | | | | |
| Lung | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Alveolar/Bronchiolar Adenoma | | | X | | X | X | | X | | | | | | | | | 4 |

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..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: 04:56:26

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 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 4 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 5 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 |
| | 3 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| | *TOTALS | | | | | | | | | | | | | | |

Special Senses System

NONE

Urinary System

Kidney

+ + + + + + + + + + + + + + 15

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + + + + + 15

END OF MALE DATA

* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

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 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 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 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 |
| | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 |
| | | *TOTALS | | | | | | | | | | | | | | |

Alimentary System

| | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus | | | | | | | | | | | | | | | | | 1 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |

Cardiovascular System

| | | | | | | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

Endocrine System

| | | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |

General Body System

NONE

* ..Total animals with tissue examined microscopically; Total animals with tumor
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue

M ..Missing tissue
 A ..Autolysis precludes evaluation
 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: 04:56:26
 First Dose M/F: NA / NA
 Lab: MBA

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

Genital System

| | | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |

Hematopoietic System

| | | | | | | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Lymph Node, Mediastinal | + | + | + | + | + | I | M | + | + | M | + | + | + | + | + | + | 12 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |

Integumentary System

| | | | | | | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |

Musculoskeletal System

| | | | | | | | | | | | | | | | | | |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| NONE | | | | | | | | | | | | | | | | | |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

Nervous System

| | | | | | | | | | | | | | | | | | |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| NONE | | | | | | | | | | | | | | | | | |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

Respiratory System

| | | | | | | | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

* ..Total animals with tissue examined microscopically; Total animals with tumor
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue

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

Experiment Number: 97011-25

Test Type: 26-WEEK

Route: GAVAGE

Species/Strain: Mouse/FVB/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Transgenic model evaluation (Melphalan)

CAS Number: 148-82-3

Date Report Requested: 10/20/2014

Time Report Requested: 04:56:26

First Dose M/F: NA / NA

Lab: MBA

| DAY ON TEST | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | | |
|---|------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FVB/N Mouse Female
VEHICLE CONTROL | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | |
| | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | | | | | | | | | | | | | |
| | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 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 | | | | | | | | | | | | | | |
| | 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 | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | *TOTALS | | | | | | | | | | | | | | |
| Alveolar/Bronchiolar Adenoma | | | | | | | | | | | | | | | X | 1 | | | | | | | | | | | | | |
| Special Senses System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| SYSTEMIC LESIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multiple Organ | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue

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

Experiment Number: 97011-25

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/20/2014

Test Type: 26-WEEK

Test Compound: Transgenic model evaluation (Melphalan)

Time Report Requested: 04:56:26

Route: GAVAGE

CAS Number: 148-82-3

First Dose M/F: NA / NA

Species/Strain: Mouse/FVB/N

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 | *TOTALS |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | |
| | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 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 | |
| | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 8 | |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 8 | 9 | |

Alimentary System

| | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |

Cardiovascular System

| | | | | | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

Endocrine System

| | | | | | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 14 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |

General Body System

NONE

Genital System

* ..Total animals with tissue examined microscopically; Total animals with tumor

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 97011-25

Test Type: 26-WEEK

Route: GAVAGE

Species/Strain: Mouse/FVB/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Test Compound: Transgenic model evaluation (Melphalan)

CAS Number: 148-82-3

Date Report Requested: 10/20/2014

Time Report Requested: 04:56:26

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 | *TOTALS |
|---------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| | ANIMAL ID | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | |
| | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 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 | |
| | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 8 | |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 0 | 9 | |
| Ovary | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Uterus | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Hematopoietic System | | | | | | | | | | | | | | | | | |
| Bone Marrow | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Lymph Node, Mandibular | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Lymph Node, Mediastinal | | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | 14 |
| Lymph Node, Mesenteric | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Spleen | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Thymus | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Integumentary System | | | | | | | | | | | | | | | | | |
| Mammary Gland | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
| Skin | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Musculoskeletal System | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | |
| Nervous System | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | |
| Respiratory System | | | | | | | | | | | | | | | | | |
| Lung | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
| Alveolar/Bronchiolar Adenoma | | | | | X | | X | | | | | | | | | | 2 |

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue

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

Experiment Number: 97011-25

Test Type: 26-WEEK

Route: GAVAGE

Species/Strain: Mouse/FVB/N

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

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CAS Number: 148-82-3

Date Report Requested: 10/20/2014

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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 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 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 |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 7 | 7 | 7 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 9 | 8 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 8 | 0 | 9 |
| | *TOTALS | | | | | | | | | | | | | | | |

Special Senses System

NONE

Urinary System

| | | | | | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | 14 |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

SYSTEMIC LESIONS

| | | | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 15 |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

** END OF REPORT **

* ..Total animals with tissue examined microscopically; Total animals with tumor

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically