

Experiment Number: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

F2_Rev.1_M3

NTP Study Number: C20701

Lock Date: 02/24/2009

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

Study Gender: Both

TDMSE Version: 3.0.1.1_001

PWG Approval Date: NONE

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First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

B6C3F1 MICE MALE	0 mg/m ³	DAY ON TEST	0	0	0	0	0	0	0	0	0	0
			0	0	0	0	0	0	0	0	0	0
ANIMAL ID		8	8	8	8	8	8	8	8	8	8	8
		9	9	9	9	9	9	9	9	9	9	9
		0	0	0	0	0	0	0	0	0	0	0
		1	1	1	1	1	1	1	1	1	1	1
		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	
												* TOTALS

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	+	10
Gallbladder	+	+	+	+	+	+	+	+	+	M		9
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+		10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+		10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+		10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+		10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+		10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+		10
Liver	+	+	+	+	+	+	+	+	+	+		10
Pancreas	+	+	+	+	+	+	+	+	+	+		10
Salivary Glands	+	+	+	+	+	+	+	+	+	+		10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+		10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+		10

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	+	10
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* .. 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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Lab: BNW

B6C3F1 MICE MALE	DAY ON TEST	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
0 mg/m ³	ANIMAL ID	8	8	8	8	8	8	8	8	8	8
		9	9	9	9	9	9	9	9	9	9
Heart		0	0	0	0	0	0	0	0	0	0
		1	1	1	1	1	1	1	1	1	1
ENDOCRINE SYSTEM		0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	1
Adrenal Cortex		1	2	3	4	5	6	7	8	9	0
		* TOTALS									
Heart		+	+	+	+	+	+	+	+	+	10
ENDOCRINE SYSTEM											
Adrenal Cortex		+	+	+	+	+	+	+	+	+	10
Adrenal Medulla		+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic		+	+	+	+	+	+	+	+	+	10
Parathyroid Gland		+	M	M	+	M	M	+	M	+	5
Pituitary Gland		+	+	+	+	+	+	+	+	+	10
Thyroid Gland		+	+	+	+	+	+	+	+	+	10
GENERAL BODY SYSTEM											
GENERAL BODY SYSTEM		NONE									
GENITAL SYSTEM											
Epididymis		+	+	+	+	+	+	+	+	+	10
Preputial Gland		+	+	+	+	+	+	+	+	+	10
Prostate		+	+	+	+	+	+	+	+	+	10
Seminal Vesicle		+	+	+	+	+	+	+	+	+	10
Testes		+	+	+	+	+	+	+	+	+	10

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B6C3F1 MICE MALE	DAY ON TEST	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
0 mg/m ³	ANIMAL ID	8	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	0
		1	1	1	1	1	1	1	1	1	1
		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

* TOTALS

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Bronchial	+	M	+	M	M	+	+	+	+	+	M	6
Lymph Node, Mandibular	M	+	+	M	M	+	+	+	M	M		5
Lymph Node, Mediastinal	M	M	M	M	M	M	M	+	M	M		1
Lymph Node, Mesenteric	+	M	+	+	+	+	+	+	+	+	+	9
Spleen	+	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	+	10

INTEGUMENTARY SYSTEM

Mammary Gland	M	M	M	M	M	M	M	M	M	M	M	0
Skin	+	+	+	+	+	+	+	+	+	+	+	10

MUSCULOSKELETAL SYSTEM

Bone	+	+	+	+	+	+	+	+	+	+	+	10
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NERVOUS SYSTEM

Brain	+	+	+	+	+	+	+	+	+	+	+	10
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RESPIRATORY SYSTEM

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B6C3F1 MICE MALE	DAY ON TEST	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
0 mg/m ³	ANIMAL ID	8	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	0
		1	1	1	1	1	1	1	1	1	1
		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
		* TOTALS									
Larynx		+	+	+	+	+	+	+	+	+	10
Lung		+	+	+	+	+	+	+	+	+	10
Nose		+	+	+	+	+	+	+	+	+	10
Trachea		+	+	+	+	+	+	+	+	+	10
SPECIAL SENSES SYSTEM											
Eye		+	+	+	+	+	+	+	+	+	10
Harderian Gland		+	+	+	+	+	+	+	+	+	10
URINARY SYSTEM											
Kidney		+	+	+	+	+	+	+	+	+	10
Urinary Bladder		+	+	+	+	+	+	+	+	+	10
SYSTEMIC LESIONS											
Multiple Organ		+	+	+	+	+	+	+	+	+	10

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

+ .. Tissue examined microscopically

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B6C3F1 MICE MALE 2 mg/m3	DAY ON TEST	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
	ANIMAL ID	8	8	8	8	8	6	8	8	8	8
		9	9	9	9	9	3	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	2	2	2	2	2	2	2	2	2
		0	0	0	0	0	0	0	0	1	1
		1	2	3	4	5	6	7	8	9	0

* **TOTALS**

ALIMENTARY SYSTEM

Esophagus	+	1
Gallbladder	+	1
Intestine Large, Cecum	+	1
Intestine Large, Colon	+	1
Intestine Large, Rectum	+	1
Intestine Small, Duodenum	+	1
Intestine Small, Ileum	+	1
Intestine Small, Jejunum	+	1
Liver	+	1
Lymphoma Malignant	X	1
Pancreas	+	1
Salivary Glands	+	1
Stomach, Forestomach	+	1
Stomach, Glandular	+	1

CARDIOVASCULAR SYSTEM

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

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Lab: BNW

		DAY ON TEST	0	0	0	0	0	0	0	0	0
B6C3F1 MICE MALE		0	0	0	0	0	0	0	0	0	0
2 mg/m3		8	8	8	8	8	6	8	8	8	8
		9	9	9	9	9	3	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	2	2	2	2	2	2	2	2	2
		0	0	0	0	0	0	0	0	1	
		1	2	3	4	5	6	7	8	9	0

* TOTALS

Heart	+		1
Lymphoma Malignant	X		1

ENDOCRINE SYSTEM

Adrenal Cortex	+		1
Adrenal Medulla	+		1
Islets, Pancreatic	+		1
Parathyroid Gland	+		1
Pituitary Gland	+		1
Thyroid Gland	+		1

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland						+					1
Prostate						+					1
Seminal Vesicle						+					1

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

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X .. Lesion present

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B6C3F1 MICE MALE	DAY ON TEST	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
2 mg/m ³	ANIMAL ID	8	8	8	8	8	6	8	8	8	8
		9	9	9	9	9	3	9	9	9	9
Testes		0	0	0	0	0	0	0	0	0	0
		1	1	1	1	1	1	1	1	1	1
HEMATOPOIETIC SYSTEM		2	2	2	2	2	2	2	2	2	2
		0	0	0	0	0	0	0	0	1	1
Bone Marrow		1	2	3	4	5	6	7	8	9	0
		+	+	+	+	+	+	+	+	+	+
Lymph Node, Bronchial											10
		M	M	+	M	M	+	M	+	M	
Lymph Node, Mandibular Lymphoma Malignant											1
											1
Lymph Node, Mediastinal											0
		M									
Lymph Node, Mesenteric Lymphoma Malignant											1
											1
Spleen Lymphoma Malignant											1
											1
Thymus Lymphoma Malignant											1
											1
INTEGUMENTARY SYSTEM											
Mammary Gland											0
		M									
Skin											1
		+									
MUSCULOSKELETAL SYSTEM											
Bone											1
		+									

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		DAY ON TEST											
		ANIMAL ID											
B6C3F1 MICE MALE		0	0	0	0	0	0	0	0	0	0	0	0
2 mg/m ³		0	0	0	0	0	0	0	0	0	0	0	0
		1	1	1	1	1	1	1	1	1	1	1	1
		2	2	2	2	2	2	2	2	2	2	2	2
		0	0	0	0	0	0	0	0	0	0	0	1
		1	2	3	4	5	6	7	8	9	0	0	0

* TOTALS

NERVOUS SYSTEM

Brain	+	1
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RESPIRATORY SYSTEM

Larynx	I + + + + + + + + +	9
Lung	+ + + + + + + + + +	10
Lymphoma Malignant	X	1
Nose	+	1
Trachea	+	1

SPECIAL SENSES SYSTEM

Eye	+	1
Harderian Gland	+	1

URINARY SYSTEM

Kidney	+ + + + + + + + + +	10
Lymphoma Malignant	X	1
Urinary Bladder	+	1

SYSTEMIC LESIONS

Multiple Organ	+ + + + + + + + + +	10
----------------	---------------------	----

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Lab: BNW

		DAY ON TEST	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	6	8	8	8	8										
		9	9	9	9	9	9	3	9	9	9	9										
B6C3F1 MICE MALE		ANIMAL ID	0	0	0	0	0	0	0	0	0	0										
2 mg/m3			1	1	1	1	1	1	1	1	1	1										
			2	2	2	2	2	2	2	2	2	2										
			0	0	0	0	0	0	0	0	0	1										
			1	2	3	4	5	6	7	8	9	0										
Lymphoma Malignant		X																				
* TOTALS																						
1																						

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

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

* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	10
------------	---	---	---	---	---	---	---	---	---	---	----

Testes	+	+	+	+	+	+	+	+	+	+	10
--------	---	---	---	---	---	---	---	---	---	---	----

HEMATOPOIETIC SYSTEM

Lymph Node, Bronchial	+	+	+	+	+	M	M	M	M	M	5
-----------------------	---	---	---	---	---	---	---	---	---	---	---

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

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Lab: BNW

		DAY ON TEST									
B6C3F1 MICE MALE	15 mg/m3	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
ANIMAL ID		8	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	0
		1	1	1	1	1	1	1	1	1	1
		4	4	4	4	4	4	4	4	4	4
		0	0	0	0	0	0	0	0	0	1
		1	2	3	4	5	6	7	8	9	0

* TOTALS

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Larynx

+ + + + + + + + + + 10

Lung

Alveolar/Bronchiolar Adenoma

+ + + + + + + + + + 10
X 1

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney

+ + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

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

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Lab: BNW

| B6C3F1 MICE MALE | 30 mg/m3 | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|------------------|----------|-------------|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B6C3F1 MICE MALE | 30 mg/m3 | ANIMAL ID | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| * TOTALS | | | | | | | | | | | | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Gallbladder | + | + | M | M | + | + | + | + | + | + | + | 8 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | 10 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Blood Vessel | + | I | + | + | + | + | + | + | + | + | + | 9 |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|

* .. 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: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| | DAY ON TEST | | | | | | | | | | | * TOTALS |
|----------------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
| | | 0
0
8
9 | |
| B6C3F1 MICE MALE | ANIMAL ID | 0
1
6
0
1 | 0
1
6
0
2 | 0
1
6
0
3 | 0
1
6
0
4 | 0
1
6
0
5 | 0
1
6
0
6 | 0
1
6
0
7 | 0
1
6
0
8 | 0
1
6
0
9 | 0
1
6
1
0 | |
| Heart | | + + + + + + + + + + | | | | | | | | | | 10 |
| ENDOCRINE SYSTEM | | | | | | | | | | | | |
| Adrenal Cortex | | + + + + + + + + + + | | | | | | | | | | 10 |
| Adrenal Medulla | | + + + + + + + + + + | | | | | | | | | | 10 |
| Islets, Pancreatic | | + + + + + + + + + + | | | | | | | | | | 10 |
| Parathyroid Gland | | M M + + M M + + + + | | | | | | | | | | 6 |
| Pituitary Gland | | + + + + + + + + + + | | | | | | | | | | 10 |
| Thyroid Gland | | + + + + + + + + + + | | | | | | | | | | 10 |
| GENERAL BODY SYSTEM | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | |
| GENITAL SYSTEM | | | | | | | | | | | | |
| Epididymis | | + + + + + + + + + + | | | | | | | | | | 10 |
| Preputial Gland | | + + + + + + + + + + | | | | | | | | | | 10 |
| Prostate | | + + + + + + + + + + | | | | | | | | | | 10 |
| Seminal Vesicle | | + + + + + + + + + + | | | | | | | | | | 10 |
| Testes | | + + + + + + + + + + | | | | | | | | | | 10 |

* .. 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: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| B6C3F1 MICE MALE | 30 mg/m3 | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|------------------|----------|-------------|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | | | 8 | 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 | 0 |
| | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Bronchial | + | + | + | + | M | + | + | + | + | + | + | 9 |
| Lymph Node, Mandibular | + | M | + | M | M | + | + | M | M | M | M | 4 |
| Lymph Node, Mediastinal | + | M | M | + | M | + | + | M | M | M | M | 4 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | 10 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | M | M | M | M | M | M | M | M | M | M | M | 0 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | 10 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | |
|------|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | 10 |
|------|---|---|---|---|---|---|---|---|---|---|---|----|

NERVOUS SYSTEM

| | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|---|----|
| Brain | + | + | + | + | + | + | + | + | + | + | + | 10 |
|-------|---|---|---|---|---|---|---|---|---|---|---|----|

RESPIRATORY 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: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| B6C3F1 MICE MALE | 30 mg/m ³ | DAY ON TEST | | | | | | | | | | | | | * TOTALS |
|------------------------------|----------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|------------------|----------|
| | | | 0
0
8
9 | 0
0
8
9 | 0
0
8
9 | |
| | | ANIMAL ID | 0
1
6
0
1 | 0
1
6
0
2 | 0
1
6
0
3 | 0
1
6
0
4 | 0
1
6
0
5 | 0
1
6
0
6 | 0
1
6
0
7 | 0
1
6
0
8 | 0
1
6
0
9 | 0
1
6
0
0 | | | |
| Larynx | | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Lung | | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Nose | | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Trachea | | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | |
| Eye | | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Harderian Gland | | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| URINARY SYSTEM | | | | | | | | | | | | | | | |
| Kidney | | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| SYSTEMIC LESIONS | | | | | | | | | | | | | | | |
| Multiple Organ | | | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

*** 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

Experiment Number: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| B6C3F1 MICE FEMALE | 0 mg/m ³ | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|--------------------|---------------------|-------------|----------|---|---|---|---|---|---|---|---|---|
| | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID | | | 8 | 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 | 0 |
| | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | | 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 |
| | | | * TOTALS | | | | | | | | | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Gallbladder | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | 10 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | |
|--------------|---|---|--|---|--|---|---|---|---|---|--|---|
| Blood Vessel | + | + | | + | | + | M | + | + | + | | 7 |
|--------------|---|---|--|---|--|---|---|---|---|---|--|---|

* .. 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: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| B6C3F1 MICE FEMALE | 0 mg/m ³ | ANIMAL ID | DAY ON TEST | | | | | | | | | | | | * TOTALS |
|--------------------|---------------------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|----------|
| | | | 0
0
8
9 | | |
| | | | 0
1
1
0
1 | 0
1
1
0
2 | 0
1
1
0
3 | 0
1
1
0
4 | 0
1
1
0
5 | 0
1
1
0
6 | 0
1
1
0
7 | 0
1
1
0
8 | 0
1
1
0
9 | 0
1
1
0
0 | 0
1
1
0
1 | | |

| | | | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland | + | M | + | + | + | + | M | + | M | M | | | | 6 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Clitoral Gland | + | + | + | M | + | + | + | + | + | + | + | + | + | 9 |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

* .. 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: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| B6C3F1 MICE FEMALE | 0 mg/m ³ | DAY ON TEST | | | | | | | | | | | | | * TOTALS | |
|-------------------------------|---------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|------------------|----------|--|
| | | | 0
0
8
9 | 0
0
8
9 | 0
0
8
9 | | |
| | | ANIMAL ID | 0
1
1
0
1 | 0
1
1
0
2 | 0
1
1
0
3 | 0
1
1
0
4 | 0
1
1
0
5 | 0
1
1
0
6 | 0
1
1
0
7 | 0
1
1
0
8 | 0
1
1
0
9 | 0
1
1
0
0 | | | | |
| Lymph Node, Bronchial | | M | M | + | M | M | + | M | + | + | + | + | | | 5 | |
| Lymph Node, Mandibular | | + | M | + | + | + | M | + | + | M | M | | | | 6 | |
| Lymph Node, Mediastinal | | M | M | M | M | M | + | M | M | M | + | M | | | 2 | |
| Lymph Node, Mesenteric | | + | + | + | M | + | + | + | + | + | + | + | | | 9 | |
| Spleen | | + | + | + | + | + | + | + | + | + | + | + | | | 10 | |
| Thymus | | + | + | + | + | + | + | + | + | + | + | + | | | 10 | |
| INTEGUMENTARY SYSTEM | | | | | | | | | | | | | | | | |
| Mammary Gland | | + | + | + | + | + | + | + | + | + | + | + | | | 10 | |
| Skin | | + | + | + | + | + | + | + | + | + | + | + | | | 10 | |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | | | | | | | |
| Bone | | + | + | + | + | + | + | + | + | + | + | + | | | 10 | |
| NERVOUS SYSTEM | | | | | | | | | | | | | | | | |
| Brain | | + | + | + | + | + | + | + | + | + | + | + | | | 10 | |
| RESPIRATORY SYSTEM | | | | | | | | | | | | | | | | |
| Larynx | | + | + | + | + | + | + | + | + | + | + | + | | | 10 | |
| Lung | | + | + | + | + | + | + | + | + | + | + | + | | | 10 | |

* .. 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: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| B6C3F1 MICE FEMALE | 0 mg/m ³ | DAY ON TEST | | | | | | | | | | | * TOTALS |
|------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|------------------|----------|
| | | | 0
0
8
9 | 0
0
8
9 | 0
0
8
9 | |
| ANIMAL ID | 0
1
1
0
1 | 0
1
1
0
2 | 0
1
1
0
3 | 0
1
1
0
4 | 0
1
1
0
5 | 0
1
1
0
6 | 0
1
1
0
7 | 0
1
1
0
8 | 0
1
1
0
9 | 0
1
1
0
0 | | | |
| | Nose | | + | + | + | + | + | + | + | + | + | + | 10 |
| Trachea | | + | + | + | + | + | + | + | + | + | + | + | 10 |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | |
| Eye | | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Harderian Gland | | + | + | + | + | + | + | + | + | + | + | + | 10 |
| URINARY SYSTEM | | | | | | | | | | | | | |
| Kidney | | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | | + | + | + | + | + | + | + | + | + | + | + | 10 |
| SYSTEMIC LESIONS | | | | | | | | | | | | | |
| Multiple Organ | | + | + | + | + | + | + | + | + | + | + | + | 10 |

* .. 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: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

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Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| | | 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 |
| | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| B6C3F1 MICE FEMALE | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 mg/m ³ | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 | 0 |

* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Lymph Node, Bronchial

M M M + + + + M + +

6

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL 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

Experiment Number: 20701 - 02

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CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| B6C3F1 MICE FEMALE
2 mg/m ³ | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|---|-------------|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B6C3F1 MICE FEMALE
2 mg/m ³ | ANIMAL ID | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| B6C3F1 MICE FEMALE
2 mg/m ³ | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| B6C3F1 MICE FEMALE
2 mg/m ³ | ANIMAL ID | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| B6C3F1 MICE FEMALE
2 mg/m ³ | ANIMAL ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Larynx

| | | | | | | | | | | | |
|---|---|---|---|--|---|---|---|---|--|---|---|
| + | + | + | + | | + | + | + | + | | + | 8 |
|---|---|---|---|--|---|---|---|---|--|---|---|

Lung

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|----|
| + | + | + | + | + | + | + | + | + | + | + | 10 |
|---|---|---|---|---|---|---|---|---|---|---|----|

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|----|
| + | + | + | + | + | + | + | + | + | + | + | 10 |
|---|---|---|---|---|---|---|---|---|---|---|----|

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

+ .. Tissue examined microscopically

X .. Lesion present

| .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| | | 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 |
| | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| B6C3F1 MICE FEMALE
15 mg/m3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 | 0 |

* TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Lymph Node, Bronchial

M + M M + + M + + M

5

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL 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

Experiment Number: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| B6C3F1 MICE FEMALE
15 mg/m3 | ANIMAL ID | DAY ON TEST | | | | | | | | | |
|--------------------------------|-----------|-------------|---|---|---|---|---|---|---|---|---|
| | | 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 | 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 |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Larynx

+ + + + + + + + + + 10

Lung

+ + + + + + + + + + 10

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

* .. 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

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Experiment Number: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| B6C3F1 MICE FEMALE
30 mg/m3 | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|--------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B6C3F1 MICE FEMALE
30 mg/m3 | ANIMAL ID | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| B6C3F1 MICE FEMALE
30 mg/m3 | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| B6C3F1 MICE FEMALE
30 mg/m3 | ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| B6C3F1 MICE FEMALE
30 mg/m3 | ANIMAL ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

* TOTALS

ALIMENTARY SYSTEM

| | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Gallbladder | + | + | M | I | + | M | + | + | + | + | + | 7 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | 10 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | |
|--------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | 10 |
|--------------|---|---|---|---|---|---|---|---|---|---|---|----|

* .. 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: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

Time Report Requested: 07:59:00

First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| B6C3F1 MICE FEMALE
30 mg/m3 | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|--------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| B6C3F1 MICE FEMALE
30 mg/m3 | ANIMAL ID | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| B6C3F1 MICE FEMALE
30 mg/m3 | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| B6C3F1 MICE FEMALE
30 mg/m3 | ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| B6C3F1 MICE FEMALE
30 mg/m3 | ANIMAL ID | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

*** TOTALS**

| | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|---|----|
| Heart | + | + | + | + | + | + | + | + | + | + | + | 10 |
|-------|---|---|---|---|---|---|---|---|---|---|---|----|

ENDOCRINE SYSTEM

| | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | 10 |
|----------------|---|---|---|---|---|---|---|---|---|---|---|----|

| | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Medulla | + | M | + | M | + | + | + | + | + | + | + | 8 |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | 10 |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|----|

| | | | | | | | | | | | | |
|-------------------|---|---|---|---|---|---|---|---|---|---|--|---|
| Parathyroid Gland | M | + | + | M | M | M | M | + | M | + | | 4 |
|-------------------|---|---|---|---|---|---|---|---|---|---|--|---|

| | | | | | | | | | | | | |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | 10 |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|----|

| | | | | | | | | | | | | |
|---------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | 10 |
|---------------|---|---|---|---|---|---|---|---|---|---|---|----|

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland | + | M | + | + | + | M | + | + | + | + | + | 8 |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|---|----|
| Ovary | + | + | + | + | + | + | + | + | + | + | + | 10 |
|-------|---|---|---|---|---|---|---|---|---|---|---|----|

| | | | | | | | | | | | | |
|--------|---|---|---|---|---|---|---|---|---|---|---|----|
| Uterus | + | + | + | + | + | + | + | + | + | + | + | 10 |
|--------|---|---|---|---|---|---|---|---|---|---|---|----|

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | 10 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|----|

* .. 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: 20701 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE NASAL

Species/Strain: MICE/B6C3F1

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Nanoscale material (Fullerene-C60 1 micron)

CAS Number: 99685-96-8

Date Report Requested: 02/22/2013

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First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| B6C3F1 MICE FEMALE
30 mg/m3 | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|--------------------------------|-------------|----------|---|---|---|---|---|---|---|---|---|----|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ANIMAL ID | | 8 | 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 | 0 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | |
| | | * TOTALS | | | | | | | | | | |
| Lymph Node, Bronchial | | + | + | M | M | + | I | M | + | + | + | 6 |
| Lymph Node, Mandibular | | + | M | M | + | + | + | M | M | + | + | 6 |
| Lymph Node, Mediastinal | | + | M | M | M | M | + | M | + | + | M | 4 |
| Lymph Node, Mesenteric | | + | + | + | + | + | + | + | + | + | + | 10 |
| Spleen | | + | + | + | + | + | + | + | + | + | + | 10 |
| Thymus | | + | + | + | + | + | + | + | + | + | + | 10 |
| INTEGUMENTARY SYSTEM | | | | | | | | | | | | |
| Mammary Gland | | + | + | + | + | + | + | + | + | + | + | 10 |
| Skin | | + | + | + | + | + | + | + | + | + | + | 10 |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | | | |
| Bone | | + | + | + | + | + | + | + | + | + | + | 10 |
| NERVOUS SYSTEM | | | | | | | | | | | | |
| Brain | | + | + | + | + | + | + | + | + | + | + | 10 |
| RESPIRATORY SYSTEM | | | | | | | | | | | | |
| Larynx | | + | + | + | + | + | + | + | + | + | + | 10 |
| Lung | | + | + | + | + | + | + | + | + | + | + | 10 |

* .. 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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First Dose M/F: 11/05/07 / 11/05/07

Lab: BNW

| B6C3F1 MICE FEMALE
30 mg/m3 | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|--------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|----|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ANIMAL ID | | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| | | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | |
| * TOTALS | | | | | | | | | | | | |
| Nose | | + | + | + | + | + | + | + | + | + | + | 10 |
| Trachea | | + | + | + | + | + | + | + | + | + | + | 10 |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | |
| Eye | | + | + | + | + | + | + | + | + | + | + | 10 |
| Harderian Gland | | + | + | + | + | + | + | + | + | + | + | 10 |
| URINARY SYSTEM | | | | | | | | | | | | |
| Kidney | | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | | + | + | + | + | + | + | + | + | + | + | 10 |
| SYSTEMIC LESIONS | | | | | | | | | | | | |
| Multiple Organ | | + | + | + | + | + | + | + | + | + | + | 10 |

*** 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

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