[redacted]

Case Health Report

Animal Resources Facility

[redacted]
Albuquerque, NM 8713[redacted]
Phone [redacted]
FAX [redacted]

Case No	19-0002	**Date Rec'd**	01/16/2019	**Protocol**	
Investigator	[redacted]			**Clinician**	[redacted]
Facility	[redacted]	**Room**	[redacted]	**Rack**	
Category	Clinical	**Animal ID**	LEF32-34	**Group ID**	
Species	Rats	**Strain**	LE		
Vendor	Envigo	**Vendor Area**	[redacted]		

Description and Associated Results

Necropsy - Gross — Date Completed: 1/16/2019

ID Result

Hx: Recently weaned female Long Evans pup (LEF32-34, sired by male breeder G) that was found dead with no history of illness. This is one of many offspring reported to have diluted coat color from black to gray. This condition was reported to Envigo as there are concerns that it could be due to epigenetic mutations or strain contamination that could impact the research model.

Physical Exam: The rat had good body condition and hydration and she was reasonable size for her age. The carcass had been cannibalized with hind limbs, body wall and a short segment bowel exteriorized and chewed/ingested.

Gross: Slight autolysis noted based upon discoloration of abdominal viscera and adjacent body wall. Abdomin - Some small bowel was ingested and pulled through an opening in the right ventral caudal abdomen; the proximal uterus was not identified but may have been damaged from cannibalism. GI – normal amount of ingesta suggesting that the rat died acutely without anorexia. The abdominal organs were within normal limits. Thorax the heart and lung were normal size and consistency. The right and left cardiac ventricular wall thicknesses were normal and in the correct ratio. Brain - within normal limits.

Cause of death unknown. There was no indication of right ventricular hypertropic disease often seen in male LE offspring born at HSC that has been associated with pulmonary artery hypertension likely due to genetics and elevation.

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Case Health Report

Animal Resources Facility

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Albuquerque, NM 8713
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Case No	19-0012	**Date Rec'd**	05/22/2019	**Protocol**	16-200569
Investigator	[redacted]			**Clinician**	[redacted]
Facility	[redacted]	**Room**	[redacted]	**Rack**	
Category	Clinical	**Animal ID**	LE-33-41	**Group ID**	
Species	Rats	**Strain**	LE		
Vendor	Envigo	**Vendor Area**			

Description and Associated Results

Necropsy - Gross Date Completed: 5/22/2019

ID LE-33-41
Hx. 4 mo old Female LE received April 2, 2019; she was bred about 1 month ago, and appeared to be pregnant based upon weight gains in the first week but subsequently she lost weight due/to apparent resorption of the litter.

Physical - normal body confirmation with no external lesions and no evidence of diarrhea, nasal/ocular discharges, dehydration, or other obvious external abnormalities.

Gross exam: mild autolysis; abdomen – contained significant quantities of both liquid and clotted blood. GI track relatively empty with only a few fecal pellets in the colon. Uterus – involuted and within normal limits (WNL); Liver – significantly enlarged with rounded margins; Spleen – 6 x 1.5 x 1 cm extremely enlarged cranial pole dark red and visceral surface had extensive clotted blood adhered to the hilar region-suggesting source of the abdominal hemorrhage. Thorax heart and lung WNL.

Pathological DX: hemorrhage, abdominal extensive; hepatomegaly; splenomegaly. Liver and splenic lesions are suggestive of lymphoma or lymphosarcoma.
Lymphoma is not extremely common in LE rats but generally, incidence of malignant tumors in LE rats, including lymphoma, is significantly higher in females than in males. Some literature suggests that, unlike mice and many other mammals, that malignant lymphomas of rats are not cause by endogenous oncogenic viruses. Definitive diagnosis would require histopathology; if we see additional rats with such lesions, I can submit tissues for to vet path for histopathology

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Case Health Report

Animal Resources Facility

[redacted]
Albuquerque, NM 8713[redacted]
Phone [redacted]
FAX [redacted]

Case No	19-0019	**Date Rec'd**	09/10/2019	**Protocol**	18-200717
Investigator	[redacted]			**Clinician**	[redacted]
Facility	[redacted]	**Room**	[redacted]	**Rack**	
Category	Clinical	**Animal ID**		**Group ID**	
Species	Mice	**Strain**	C57BL/6J Cre fl		
Vendor	Animal Resource	**Vendor Area**			

Description and Associated Results

Necropsy - Gross — Date Completed: 9/10/2019

Hx: Five of 60 mice died following 5 days of Tamoxifen injections that were completed 9/8/2019. These mice were Cre+ and 4 appeared to have significant autolysis while 1 appeared to have died within 3-4 hours based upon gross finding.

Gross Path: Abdomen – Gastric content was slightly reduced; the small bowel was friable and beginning to lose structural integrity due to early post mortem autolysis; small amounts of fluid were identified in the abdominal cavity with oily consistency, which was associated with the oil base diluent used to solubilize tamoxifen for injection. Various organs including stomach, cecum, liver, spleen were mildly adhered to the abdominal wall and adjacent tissues; Liver slightly pale but normal size with acute margins; other than slight adhesions the parietal and cut surfaces of the liver was within normal limits; kidneys dark but otherwise within normal limits; spleen normal size with acute margins and within normal limits. Thorax – cardiopulmonary tissues within normal limits.

Morphological Diagnosis: Mild abdominal visceral adhesions, slight autolysis. Oil based innocula can cause fibrinous adhesions. The fact that all were Cre+ suggest that these could be a higher risk group than the Cre negative.

9/19/19 NOTE: Additional mice died by 9/11/19 and specimens were held for histopathology. However, the pathologist stated that changes associated with tamoxifen toxicity are very subtle and that carcasses held for more than 1 hour post mortem before fixation were too autolytic for an accurate diagosis. After the request no other mice were affected and so histopathology was not competed.

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Case Health Report

Animal Resources Facility

[redacted]
Albuquerque, NM 8713[redacted]
Phone [redacted]
FAX [redacted]

Case No	19-0021	**Date Rec'd**	10/01/2019	**Protocol**	
Investigator	[redacted]			**Clinician**	[redacted]
Facility	[redacted]	**Room**	[redacted]	**Rack**	
Category	Clinical	**Animal ID**	Post Op 9/30/19	**Group ID**	
Species	Mice	**Strain**	C57BL/6		
Vendor	Animal Resource	**Vendor Area**			

Description and Associated Results

Necropsy - Gross — Date Completed: 10/1/2019

ID Mouse Case 19-0021; fetal ethanol exposed offspring - adult 4 month old male
Hx. Cranial implant surgery conducted on 9/30/2019 (injected with mCherry-expressing AAV (0.5ul into right lateral orbital) and implanted with a fiber optic stub (tip sitting inside lateral orbital). Finally, the stub was held in place with dental cement (Stoelting Co.). There was no hemorrhage or other adverse events during surgery. The mouse recovered normally postop and routine post operative care/support was provided (nutritional gel cup; thermal support, food, water, etc.). At 9 am on 10/1, the mouse appeared sluggish and therefore, s.c. saline was administered. At about 12:00 pm on 10/1 the mouse was found dead. There have been no changes in surgical technique, personnel, equipment or materials yet there has been a recent increase in morbitity and mortality of recent post surgical mice (2/6 from the most recent post surgical group dead and 1/6 (one week post op) that is still under treatment that has failed to thrive as normal).

Gross Exam: Normal hydration; normal quantity of engesta in GI tract; There was slight autolysis of small intestine but otherwise no gross lesions noted. Carcass abdominal/thoracic and calvarium opened and carcase placed in 10% buffered formalin.

Request: histopathology to determine evidence of infectious or other causes of death.

Veterinary Diagnostic Services
[redacted]
Albuquerque, New Mexico 87102
[redacted] phone
fax

Owner: UNM HSC - [redacted]
ID: 19-0021
Species: Mouse NOS
Breed: Mouse NOS

[redacted]
ANIMAL RESOURCE FACILITY
[redacted] (UNM)
ALBUQUERQUE, NM 87131

Received: 10/02/19
Reported: 10/07/19
Final Report

SPECIMEN DESCRIPTION

The specimen consists of a carcass, received in formalin. Hemorrhage and malacia in dorsal aspect of left cerebral hemisphere of brain. Representative sections of each organ are submitted.

HISTOPATHOLOGY

Sections of murine (mouse) brain, heart, lung, stomach, small intestine, colon, liver, pancreas, omentum, spleen, and kidney were examined. Regionally extensive cerebral hemorrhage and edema was noted, with gliosis that consisted of an increase in Type II Alzheimer's astrocytes associated with zones of necrotic neurons. The affected neurons were shrunken, angular, and hypereosinophilic with condensed nuclei and surrounding astrocytes had swollen, pale basophilic cytoplasm with distinct cytoplasmic borders. Hemorrhage was mild and suspended in moderate amounts of edema fluid.
Adipose tissue of the omentum and epicardium was atrophic, with centralization of many rounded adipocyte nuclei and replacement of cytoplasmic fat by smaller, multiple cytoplasmic vacuoles. The changes were consistent with atrophic adipose tissue.

This case was read by: [redacted] MS, DVM, DACVP - Anatomic Pathology, DABVP - Food Animal and Beef Practice [redacted]

FINAL COMMENTS

Morphologic Diagnosis:
1. Brain, cerebrum; neuronal necrosis, regionally extensive, acute, moderate, with hemorrhage, edema, and Type II Alzheimer's cells.
2. Omental and epicardial adipose tissue; adipocyte atrophy, moderate, subacute, diffuse.
3. Lung, stomach, small intestine, liver, pancreas, spleen, kidney; essentially normal tissues.

The brain lesion is consistent with trauma to this site within the cerebrum. With the necrotic neurons and Alzheimer's Type II cells, I suspect an injury of greater than 24 hours duration, but with too short an interval to involve Gitter cells that would clear up necrotic neurons and myelin (several days). The adipocyte atrophy would be consistent with the suspected duration of days, rather than hours or weeks. I did not see evidence of post surgical infection or any etiological agents in the tissues.

This case was read by: [redacted] MS, DVM, DACVP - Anatomic Pathology, DABVP - Food Animal and Beef Practice [redacted]

CASE DIAGNOSIS

POLIOENCEPHALOMALACIA

[redacted], DVM, PhD
Diplomate, ACVP
Veterinary Pathologist

End of Report

[redacted]

Case Health Report

Animal Resources Facility

[redacted]
Albuquerque, NM 87131
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FAX [redacted]

Necropsy - Histopathology Date Completed: 10/7/2019

History: Tissues submitted to Vet Path. See Attached

Request: histopathology to determine evidence of infectious or other causes of death.

FINAL COMMENTS
Morphologic Diagnosis:
1. Brain, cerebrum; neuronal necrosis, regionally extensive, acute, moderate, with hemorrhage, edema, and Type II Alzheimer's cells.
2. Omental and epicardial adipose tissue; adipocyte atrophy, moderate, subacute, diffuse.
3. Lung, stomach, small intestine, liver, pancreas, spleen, kidney; essentially normal tissues.
The brain lesion is consistent with trauma to this site within the cerebrum. With the necrotic neurons and Alzheimer's Type II cells, I suspect an injury of greater than 24 hours duration, but with too short an interval to involve Gitter cells that would clear up necrotic neurons and myelin (several days). The adipocyte atrophy would be consistent with the suspected duration of days, rather than hours or weeks. I did not see evidence of post surgical infection or any etiological agents in the tissues.