



CMHD Pathology Report



CMHD Pathology Core

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ReportID: Report Date: October 24, 2013
Pathologist: Dr. H. Adissu

Mouse Genetics Project

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[Mouse Portal](#)
[Europhenome](#)

CMHD LabID: N13-705

Relevant History:

Phenotypes:

decreased grip strength
abnormal tail morphology
kinked tail
decreased body length
decreased body weight
decreased lean body mass
decreased bone mineral content
abnormal digit morphology
abnormal femur morphology
abnormal joint morphology
abnormal tibia morphology
bowed tibia
decreased body weight
decreased leukocyte cell number
increased blood urea nitrogen level
increased energy expenditure
increased oxygen consumption
increased carbon dioxide production

AnimalID: M00516946 (Male)

Histopathology Findings:

liver (MA:0000358)

Histopath Description:

very minimal lipidosis

Morphological Diagnosis:

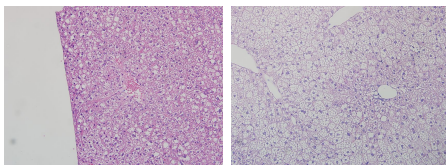
Distribution: multifocal; **Severity:** mild; **MPATH Process Term:** lipid deposition MPATH:42

Definitive Diagnosis:

Minimal hepatic lipidosis

Histopathology Comments:

Hepatic lipidosis is minimal in this mouse despite high fat diet



Liver, Minimal
lipidosis, 20x, HE

Liver, WT, severe
lipidosis, 20x, HE

brain (MA:0000168)

Histopath Description:

There is a mild dorsolateral flattening of the brain

Morphological Diagnosis:

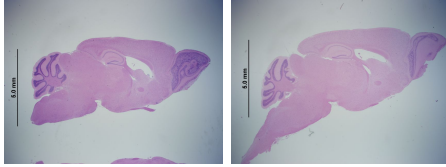
Distribution: diffuse; **Severity:** mild; **MPATH Process Term:** developmental and structural abnormality MPATH:55

Definitive Diagnosis:

Brain, dorsolateral flattening

Histopathology Comments:

The lesion suggests abnormal morphology of the cranium



Brain, dorsoventral flattening (compression), 1.25x, HE

Brain, WT, normal, 1.25x, HE

Organ/Tissue Analyzed:

Histopathology examination included the following organs and tissues: brain, trigeminal ganglion, eyes, salivary glands, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, exocrine and endocrine pancreas, oesophagus, stomach, small intestine, large intestine, liver, gall bladder, spleen, kidneys, adrenal gland, lymph nodes, spinal cord, bone marrow, sternum, femur and tibia with associated skeletal muscles, brown fat, pinna, skin, testis, epididymis, seminal vesicle, and prostate.

AnimalID: M00516954 (Male)

Histopathology Findings:

liver (MA:0000358)

Histopath Description:

Hepatic lipidosis is minimal to absent

Morphological Diagnosis:

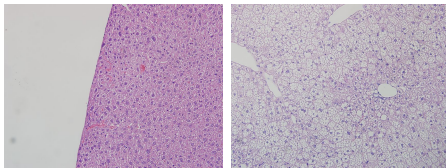
Severity: no lesions;

Definitive Diagnosis:

Absent hepatic lipidosis

Histopathology Comments:

Hepatic lipidosis is minimal in this mouse despite high fat diet



Liver, absent lipidosis, 20x, HE

Liver, WT, severe lipidosis, 20x, HE

brain (MA:0000168)

Histopath Description:

There is a mild dorsolateral flattening of the brain

Morphological Diagnosis:

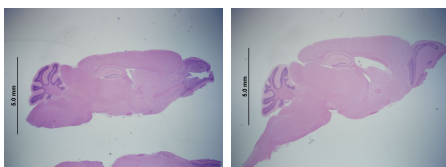
Distribution: diffuse; **Severity:** mild; **MPATH Process Term:** developmental and structural abnormality MPATH:55

Definitive Diagnosis:

Brain, dorsolateral flattening

Histopathology Comments:

The lesion suggests abnormal morphology of the cranium



Brain, dorsoventral flattening (compression), 1.25x, HE

Brain, WT, normal, 1.25x, HE

Organ/Tissue Analyzed:

Histopathology examination included the following organs and tissues: brain, trigeminal ganglion, eyes, salivary glands, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, exocrine and endocrine pancreas, oesophagus, stomach, small intestine, large intestine, liver, gall bladder, spleen, kidneys, adrenal gland, lymph nodes, spinal cord, bone marrow, sternum, femur and tibia with associated skeletal muscles, brown fat, pinna, skin, testis, epididymis, seminal vesicle, and prostate.

AnimalID: M00516955 M00516955 (Female)

Tissue Preservation and Staining:

There is marked tissue processing artifact in both eyes; so the eyes are not analyzed

Histopathology Findings:**liver (MA:0000358)****Histopath Description:**

Hepatic lipidosis is minimal to absent

Morphological Diagnosis:

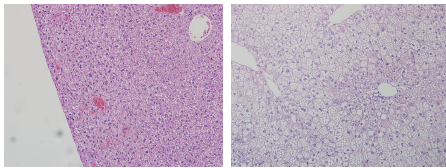
Severity: no lesions;

Definitive Diagnosis:

Absent hepatic lipidosis

Histopathology Comments:

Hepatic lipidosis is minimal in this mouse despite high fat diet



Liver, absent lipidosis, 20x, HE

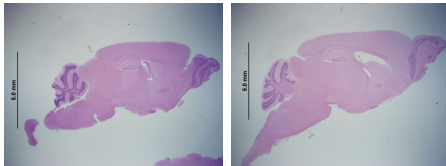
Liver, WT, severe lipidosis, 20x, HE

brain (MA:0000168)**Histopath Description:**

Normal

Morphological Diagnosis:

Severity: no lesions;



Brain, normal, 1.25x, HE

Brain, WT, normal, 1.25x, HE

Organ/Tissue Analyzed:

Histopathology examination included the following organs and tissues: brain, trigeminal ganglion, eyes, salivary glands, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, exocrine and endocrine pancreas, oesophagus, stomach, small intestine, large intestine, liver, gall bladder, spleen, kidneys, adrenal gland, lymph nodes, spinal cord, bone marrow, sternum, femur and tibia with associated skeletal muscles, brown fat, pinna, skin, uterus, oviduct, and ovary, and mammary gland.

AnimalID: M00516953 M00516955 (Female)

Histopathology Findings:**liver (MA:0000358)****Histopath Description:**

Hepatic lipidosis is minimal to absent

Morphological Diagnosis:

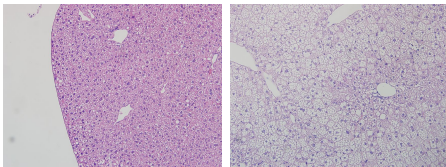
Severity: no lesions;

Definitive Diagnosis:

Absent hepatic lipidosis

Histopathology Comments:

Hepatic lipidosis is minimal in this mouse despite high fat diet



Liver, absent lipidosis, 20x, HE

Liver, WT, severe lipidosis, 20x, HE

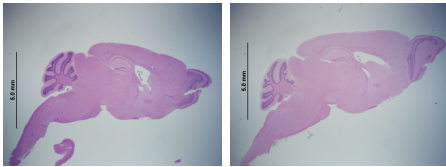
brain (MA:0000168)

Histopath Description:

Normal

Morphological Diagnosis:

Severity: no lesions;



Brain, normal, 1.25x, HE

Brain, normal, 1.25x, HE

Organ/Tissue Analyzed:

Histopathology examination included the following organs and tissues: brain, trigeminal ganglion, eyes, salivary glands, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, exocrine and endocrine pancreas, oesophagus, stomach, small intestine, large intestine, liver, gall bladder, spleen, kidneys, adrenal gland, lymph nodes, spinal cord, bone marrow, sternum, femur and tibia with associated skeletal muscles, brown fat, pinna, skin, uterus, oviduct, and ovary, and mammary gland.

Report Summary and Recommendation:

Hepatic lipidosis is absent or minimal is consistent with decreased body weight in this line. There is mild dorsoventral flattening in two mice (both males). The lesion suggests malformation of the cranial skeleton. We could not confirm skeletal abnormalities by histopathology analysis. There are no abnormalities in peripheral or central nervous tissues to explain decreased grip strength. This phenotype might have been confounded by abnormal digit morphology.

Line summary:

Liver: Minimal or absence of hepatic lipidosis (4/4)

Brain: Dorsoventral compression/flattening (2/4)