



## CMHD Pathology Report



### CMHD Pathology Core

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ReportID: Report Date: November 23,  
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### Mouse Genetics Project

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CMHD LabID: N11-197

### AnimalID: M00166751 Lrrc16a hom

#### Tissue Preservation and Staining:

Tissues not present in submission: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

#### Histopathology Findings:

##### liver (MA:0000358)

#### Histopath Description:

The overall hepatic lobular architecture is normal. Diffusely, hepatocytes contain intracytoplasmic clear vacuoles (lipid). The lipid vacuoles within the midzonal and periportal regions are small (2-3 um in diameter) and surround a central nucleus (interpreted as microvesicular lipid). The lipid vacuoles within the portal areas are large (8-12 um in diameter) and displace the nucleus to the margin (macrovesicular lipid). There are rare perivascular mononuclear inflammatory cells.

#### Morphological Diagnosis:

**Distribution:** Diffuse; **Severity:** moderate; **MPATH Diagnosis:** lipid deposition MPATH:42

#### Definitive Diagnosis:

Hepatic lipidosis

#### Histopathology Comments:

Hepatocellular vacuolar change of variable degree suggestive of lipidosis is present in all mice from WTSI, consistent with high lipid diet.

##### lymph node (MA:0000139)

#### Histopath Description:

The mesenteric lymph node is enlarged (greater than three-fold). There are multiple follicles with large germinal centers. The sinuses contain large numbers of mature lymphocytes.

#### Morphological Diagnosis:

**Duration:** Sub-acute; **Distribution:** Diffuse; **Severity:** moderate; **MPATH Diagnosis:** hyperplasia MPATH:134

#### Definitive Diagnosis:

Lymphoid hyperplasia.

#### Histopathology Comments:

The changes in the mesenteric lymph node are suggestive of draining of a regional inflammatory process. However, such a process was not observed in the tissues examined.

##### pancreatic duct (MA:0000124)

#### Histopath Description:

The submucosa and to a less extent the epithelium of the main pancreatic duct is infiltrated by moderate numbers of neutrophils along the whole available section. Rare neutrophils are also present within the duct.

#### Morphological Diagnosis:

**Duration:** Sub-acute; **Distribution:** Multifocal; **Severity:** moderate; **MPATH Diagnosis:** inflammation MPATH:212

**Definitive Diagnosis:**

Neutrophilic pancreatitis, ductular.

**Histopathology Comments:**

The lesion was likely caused by an ascending bacterial infection from the intestine.

**stomach (MA:0000353)****Histopath Description:**

There are rare eosinophils and neutrophils within the deep lamina propria

**Morphological Diagnosis:**

**Duration:** Sub-acute; **Distribution:** Multifocal; **Severity:** mild; **MPATH Diagnosis:** inflammation MPATH:212

**Definitive Diagnosis:**

Gastritis, suppurative

**Histopathology Comments:**

This lesion is most commonly associated with Helicobacter infection. Further investigation is suggested using histochemistry (Silver stain) or colony fecal PCR.

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

There is a mild enlargement of the lateral ventricle.

**Morphological Diagnosis:**

**Severity:** mild; **MPATH Diagnosis:** hydrocephalus MPATH:639

**Definitive Diagnosis:**

hydrocephalus, third ventricle

**Histopathology Comments:**

Variable degree of hydrocephalus is observed in a proportion of wild type C57 Black 6 mice.

**bone marrow (MA:0000134)****Histopath Description:**

Nearly one-third of the femoral bone marrow is replaced by well differentiated lymphoid tissue with features reminiscent of cortical nodules and a hypocellular medullary-like compartment in the center. Occasional mitotic cells are present within the centre.

**Morphological Diagnosis:**

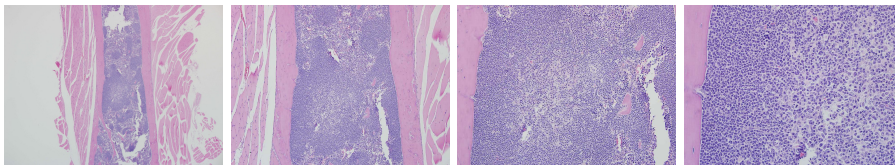
**Distribution:** Multifocal; **Severity:** mild; **MPATH Diagnosis:** metaplasia MPATH:160

**Definitive Diagnosis:**

lymphoid metaplasia

**Histopathology Comments:**

This is a rare condition rarely reported in non human primates. We are not aware a report in mice. We speculate that this may also represent a hyperplastic response to inflammatory lesions uniquely seen in this mouse (inflammation of the pancreatic duct).

**Organ/Tissue Analyzed:**

NSF will be appended

**AnimalID: M00166754 Lrrc16a hom****Tissue Preservation and Staining:**

Tissues not present in submission: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

**Histopathology Findings:****lymph node (MA:0000139)****Histopath Description:**

The mesenteric lymph node is enlarged (greater than three-fold). There are multiple follicles with large germinal centers. The sinuses contain large numbers of mature lymphocytes.

**Morphological Diagnosis:**

**Duration:** Sub-acute; **Distribution:** Diffuse; **Severity:** moderate; **MPATH Diagnosis:** hyperplasia MPATH:134

**Definitive Diagnosis:**

Lymphoid hyperplasia.

**Histopathology Comments:**

The changes in the mesenteric lymph node are suggestive of draining of a regional inflammatory process. However, such a process was not observed in the tissues examined.

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

The overall hepatic lobular architecture is normal. Approximately 50% of hepatocytes within the midzonal region contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid). There are rare foci of neutrophilic clusters with rare nuclear fragments.

**Morphological Diagnosis:**

**Distribution:** Multifocal; **Severity:** moderate; **MPATH Diagnosis:** lipid deposition MPATH:42

**Definitive Diagnosis:**

Hepatic lipidoses.

**Histopathology Comments:**

Hepatocellular vacuolar change of variable degree suggestive of lipidoses is present in all mice from WTSI, consistent with high lipid diet.

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

There is a mild enlargement of the lateral ventricle.

**Morphological Diagnosis:**

**Severity:** mild; **MPATH Diagnosis:** hydrocephalus MPATH:639

**Definitive Diagnosis:**

hydrocephalus, lateral ventricle

**Histopathology Comments:**

Variable degree of hydrocephalus is observed in a proportion of wild type C57 Black 6 mice.

**spleen (MA:0000141)****Histopath Description:**

There is mild expansion of the marginal zones of the spleen. There are rare germinal centers in some of the follicles.

**Morphological Diagnosis:**

**Distribution:** Multifocal; **Severity:** mild; **MPATH Diagnosis:** hyperplasia MPATH:134

**Definitive Diagnosis:**

Mild germinal hyperplasia

**Histopathology Comments:**

The changes suggest antigenic stimulation.

**Organ/Tissue Analyzed:**

NSF will be appended

**AnimalID: M00166767 Lrrc16a hom****Tissue Preservation and Staining:**

The thyroid gland is not present in section. Tissues not present in submission: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

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

The overall hepatic lobular architecture is normal. Approximately 25% of hepatocytes within the midzonal region contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid). There are rare foci of neutrophilic clusters with rare nuclear fragments.

**Morphological Diagnosis:**

**Distribution:** Multifocal; **Severity:** moderate; **MPATH Diagnosis:** lipid deposition MPATH:42

**Definitive Diagnosis:**

Hepatic lipidoses.

**Histopathology Comments:**

Hepatocellular vacuolar change of variable degree suggestive of lipidosis is present in all mice from WTSI, consistent with high lipid diet.

**thymus (MA:0000142)****Histopath Description:**

There is a 200 um diameter epithelial inclusion cyst within the thymus

**Morphological Diagnosis:**

**Distribution:** Focal; **Severity:** mild; **MPATH Diagnosis:** developmental and structural abnormality MPATH:55

**Definitive Diagnosis:**

Focal epithelial inclusion cyst

**brown fat (MA:0000057)****Histopath Description:**

There is a focally extensive non suppurative inflammation of the brown fat.

**Morphological Diagnosis:**

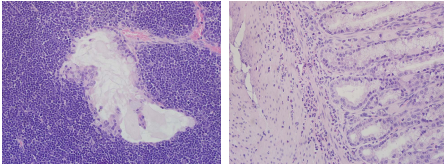
**Distribution:** Focal; **Severity:** mild; **MPATH Diagnosis:** inflammation MPATH:212

**Definitive Diagnosis:**

Mild lymphocytic steatitis

**Histopathology Comments:**

The lesion is likely an extension of an overlying dermatitis and inflammation of the subcutaneous fat (paniculitis)

**Organ/Tissue Analyzed:**

NSF will be appended

**AnimalID: M00166769 Lrrc16a hom****Tissue Preservation and Staining:**

The dermis and hypodermis are artefactually separated. Tissues not present in submission: Calvarium, ears, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, gall bladder.

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

The overall hepatic lobular architecture is normal. Approximately 50% of hepatocytes within the midzonal region contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid). There are rare foci of neutrophilic clusters with rare nuclear fragments.

**Morphological Diagnosis:**

**Distribution:** Multifocal; **Severity:** moderate; **MPATH Diagnosis:** lipid deposition MPATH:42

**Definitive Diagnosis:**

Hepatic lipidosis.

**Histopathology Comments:**

Hepatocellular vacuolar change of variable degree suggestive of lipidosis is present in all mice from WTSI, consistent with high lipid diet.

**stomach (MA:0000353)****Histopath Description:**

There are large numbers of neutrophils and moderate numbers of eosinophils within the lamina propria of the glandular region at the limiting ridge.

**Morphological Diagnosis:**

**Duration:** Sub-acute; **Distribution:** Multifocal; **Severity:** moderate; **MPATH Diagnosis:** inflammation MPATH:212

**Definitive Diagnosis:**

Gastritis, suppurative

**Histopathology Comments:**

This lesion is most commonly associated with Helicobacter infection. Further investigation is suggested using histochemistry (Silver stain) or colony fecal PCR. The presence of eosinophils suggest allergic cause.

**Organ/Tissue Analyzed:**

NSF will be appended

**Summary:**

Incidental lesions attributable to diet or strain background are observed in this line. A unique finding in one of the mice is lymphoid metaplasia/hyperplasia of the bone marrow.

**Report Summary and Recommendation:**

Incidental lesions attributable to diet or strain background are observed in this line. A unique finding in one of the mice is lymphoid metaplasia/hyperplasia of the bone marrow.