



# CMHD Pathology Report



## CMHD Pathology Core

Toronto Centre for  
Phenogenomics  
25 Orde St. 3rd fl.  
Toronto, Ont. M5T 3H7  
Tel.(416) 586-8375  
Fax (416) 586-5993

contact: Dr. Susan  
Newbigging  
email:  
[newbigging@lunenfeld.ca](mailto:newbigging@lunenfeld.ca)

ReportID: Report Date: November 23,  
2011  
Pathologist: H. Adissu

## Mouse Genetics Project

Wellcome Trust Sanger  
Institute  
Wellcome Trust Genome  
Campus  
Hinxton, Cambridge  
CB10 1SA  
UK

CMHD LabID: N11-83

**AnimalID: M00329510 Abcd1 -/-**

### 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 periacinar 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).

#### Morphological Diagnosis:

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

#### Definitive Diagnosis:

Hepatic lipidosi

#### Histopathology Comments:

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

#### salivary gland (MA:0000346)

#### Histopath Description:

Within the mandibular salivary gland, the interstitium (mainly surrounding blood vessels) is focally expanded by aggregates of lymphocytes, histiocytes, and low numbers of plasma cells.

#### Morphological Diagnosis:

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

#### Definitive Diagnosis:

Interstitial histiocytic and lymphocytic sialadenitis

#### Histopathology Comments:

This is a common and insignificant incidental finding in mice.

### Organ/Tissue Analyzed:

There were no significant findings in the following tissues: Brain, eyes, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, liver, gall bladder, exocrine and endocrine pancreas, esophagus, stomach, intestines, urinary organs and tract, adrenal gland, reproductive organs, lymph nodes, spinal cord, bones, bone marrow, skeletal muscles, brown fat, and skin.

**AnimalID: M00329511 Abcd1 -/-**

**Tissue Preservation and Staining:**

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

**Histopathology Findings:****lung (MA:0000415)****Histopath Description:**

There is a focal perivascular mononuclear inflammatory cell aggregate within the lung

**Morphological Diagnosis:**

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

**Definitive Diagnosis:**

Perivascular inflammatory aggregates

**Histopathology Comments:**

This lesion is suggestive of antigenic stimulation of hematogenous origin. It is a common and insignificant incidental finding.

**kidney (MA:0000368)****Histopath Description:**

There are moderate numbers of lymphocytes, histiocytes and rare plasma cells within the submucosa of the renal pelvis and proximal ureter.

**Morphological Diagnosis:**

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

**Definitive Diagnosis:**

Non suppurative pyelonephritis

**Histopathology Comments:**

This lesion is a common lesion attributed to ascending urinary tract infection. The lesion in this case is minimal.

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

There are low numbers of neutrophils within the deep lamina propria

**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.

**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).

**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 WT51, consistent with high lipid diet.

**salivary gland (MA:0000346)****Histopath Description:**

Within the mandibular salivary gland, the interstitium (mainly surrounding blood vessels) is focally expanded by aggregates of lymphocytes, histiocytes, and low numbers of plasma cells.

**Morphological Diagnosis:**

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

**Definitive Diagnosis:**

Interstitial histiocytic and lymphocytic sialadenitis

**Histopathology Comments:**

This is a common and insignificant incidental finding in mice.

**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 C57BL/6 mice.

**Organ/Tissue Analyzed:**

There were no significant findings in the following tissues: Eyes, tongue, Harderian gland, zymbal gland, nasal sinuses, teeth, trachea, heart, thymus, thyroid gland, parathyroid gland, spleen, gall bladder, exocrine and endocrine pancreas, esophagus, intestines, adrenal gland, reproductive organs, lymph nodes, spinal cord, bones, bone marrow, skeletal muscles, brown fat, and skin.

**AnimalID: M00302759 Abcd1 HEMI****Tissue Preservation and Staining:**

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

**Histopathology Findings:****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.

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

There are large numbers of neutrophils within the deep lamina propria, muscularis mucosa and submucosa. Rare necrotic gastric epithelial cells are present.

**Morphological Diagnosis:**

**Duration:** Chronic-active; **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.

**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). In two foci, there are moderate numbers of mononuclear inflammatory cells admixed with markedly enlarged moderately basophilic and lipidic hepatocytes.

**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 WT5I, consistent with high lipid diet.

**Organ/Tissue Analyzed:**

There were no significant findings in the following tissues: Calvarium, brain, eyes, ears, tongue, Harderian gland, zymbal gland, salivary glands, nasal sinuses, teeth, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, spleen, liver, gall bladder, exocrine and endocrine pancreas, esophagus, stomach, intestines, urinary organs and tract, adrenal gland, reproductive organs, lymph nodes, spinal cord, bones, bone marrow, skeletal muscles, brown fat, and skin.

**AnimalID: M00302760 Abcd1 HEMI****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).

**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 WT5I, consistent with high fat diet.

**Organ/Tissue Analyzed:**

There were no significant findings in the following tissues: Brain, eyes, salivary glands, trachea, lungs, heart, thymus, thyroid gland, parathyroid gland, spleen, exocrine and endocrine pancreas, esophagus, stomach, intestines, urinary organs and tract, adrenal gland, reproductive organs, lymph nodes, spinal cord, bones, bone marrow, skeletal muscles, brown fat, and skin.

**Summary:**

Various incidental lesions were found. These lesions were also variably documented in the wild type control mice.

**Report Summary and Recommendation:**

Incidental and lesions attributable to background strain are noted in this line. These lesions were also variably documented in the wild type control mice.