



# CMHD Pathology Report



## CMHD Pathology Core

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

Wellcome Trust Sanger  
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Hinxton, Cambridge  
CB10 1SA  
UK

CMHD LabID: N11-198

### AnimalID: M00176479 Necab2 hom

#### Tissue Preservation and Staining:

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

#### Histopathology Findings:

##### testis (MA:0000411)

##### Histopath Description:

There are occasional large spermatids (30-50 um in diameter) that have a large basophilic amorphous nucleus.

##### Morphological Diagnosis:

**Distribution:** Multifocal; **Severity:** mild; **MPATH Diagnosis:** degenerative change MPATH:14

##### Definitive Diagnosis:

Spermatocyte swelling

##### liver (MA:0000358)

##### Histopath Description:

There is diffuse hepatic lipidosis.

##### Morphological Diagnosis:

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

##### Definitive Diagnosis:

Hepatic lipiosis

##### gall bladder (MA:0000356)

##### Histopath Description:

There are moderate numbers of neutrophils within the submucosa of main bile duct and the gall bladder.

##### Morphological Diagnosis:

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

##### Definitive Diagnosis:

Suppurative cholangitis and cholecystitis

##### salivary gland (MA:0000346)

##### Histopath Description:

There are multifocal interstitial mononuclear inflammatory aggregates.

##### Morphological Diagnosis:

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

##### Definitive Diagnosis:

Interstitial mononuclear inflammatory infiltrate

**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.

**Organ/Tissue Analyzed:**

NSF will be appended

**AnimalID: M00176483 Necab2 hom****Tissue Preservation and Staining:**

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

**Histopathology Findings:****gall bladder (MA:0000356)****Histopath Description:**

There are moderate numbers of neutrophils within the submucosa of main bile duct and the gall bladder.

**Morphological Diagnosis:**

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

**Definitive Diagnosis:**

Suppurative cholangitis and cholecystitis

**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).

**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 WTS1, consistent with high lipid diet.

**ear (MA:0000236)****Histopath Description:**

There is a focally extensive epidermal hyperplasia with prominent basket-weave orthokeratotic hyperkeratosis.

**Morphological Diagnosis:**

**Distribution:** Focal; **Severity:** moderate; **MPATH Diagnosis:** hyperplasia MPATH:134

**Definitive Diagnosis:**

Focally extensive acanthosis with hyperkeratosis

**Organ/Tissue Analyzed:**

NSF will be appended

**AnimalID: M00176476 Necab2 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. Approximately 20% 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 lipidosi.

**Histopathology Comments:**

Hepatocellular vacuolar change of variable degree suggestive of lipidosi is present in all mice from WTS1, 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.

**testis (MA:0000411)****Histopath Description:**

There are occasional large spermatids (30-50 um in diameter) that have a large basophilic amorphous nucleus.

**Morphological Diagnosis:**

**Distribution:** Multifocal; **Severity:** mild; **MPATH Diagnosis:** degenerative change MPATH:14

**Definitive Diagnosis:**

Spermatocyte swelling

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

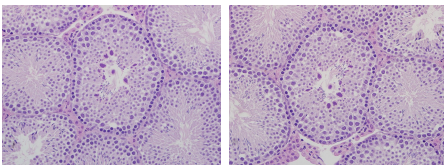
The lymph node architecture is altered by the presence of large numbers of monomorphic lymphocytes filling and distending the paracortical and subcapsular sinuses and elevate the capsule. The neoplastic cells have generally a scant amount of eosinophilic cytoplasm, medium sized round central nucleus with granular chromatin and single variably distinct amphophilic nucleoli. Mitotic figures are less than 1/HPF.

**Morphological Diagnosis:**

**Distribution:** Multifocal; **MPATH Diagnosis:** lymphoma [obsolete use MPATH:516 or 535] MPATH:343

**Definitive Diagnosis:**

Lymphoma



Testis, spermatid gigantism, 40x

Testis, spermatid gigantism, 40x

**Organ/Tissue Analyzed:**

NSF will be appended

**AnimalID: M00202729 Necab2 hom****Tissue Preservation and Staining:**

There is separation of dermis and hypodermis. 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 30% of hepatocytes within the midzonal region contain large (8-12 um in diameter) intracytoplasmic clear vacuoles (macrovesicular lipid). There are occasional aggregates of lymphocytes and neutrophils within the parenchyma.

**Morphological Diagnosis:**

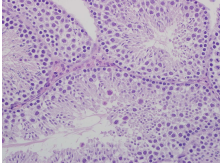
**Distribution:** Multifocal; **Severity:** moderate; **MPATH Diagnosis:** lipid deposition MPATH:42

**Definitive Diagnosis:**

Hepatic lipidosis.

**Histopathology Comments:**

Hepatocellular vacuolar change of variable degree suggestive of lipidosis is present in all mice from WTS1, consistent with high lipid diet.



Testis, spermatic gigantism, 40x

**Organ/Tissue Analyzed:**

NSF will be appended

**Summary:**

Mild degenerative change characterized by swelling or gigantism of occasional spermatids is present. The significance of this change in the face of a robust spermatogenesis is not certain. Swollen spermatids, together with multinucleated spermatids, have been reported as spontaneous lesions in young beagle dogs. Other lesions seen in this line are considered incidental or attributable to diet (hepatic lipidosis) and strain background (hydrocephalus).

**Report Summary and Recommendation:**

Mild degenerative change characterized by swelling or gigantism of occasional spermatids is present. The significance of this change in the face of a robust spermatogenesis is not certain. Swollen spermatids, together with multinucleated spermatids, have been reported as spontaneous lesions in young beagle dogs. Other lesions seen in this line are considered incidental or attributable to diet (hepatic lipidosis) and strain background (hydrocephalus).

Seminiferous tubule - Spermatic: hypertrophy MPATH:159

**References:**

Michael J et al. (2008). Spontaneous and Age-Related Testicular Findings in Beagle Dogs. Toxicol Pathol 2008 36: 465