



# 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: March 18, 2014  
Pathologist: Dr. H. Adissu

## Mouse Genetics Project

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

CMHD LabID: N13-1269

## Relevant History:

Phenotype:

None (no hit)

## AnimalID: M01263720 (Male)

### Histopathology Findings:

#### thyroid gland (MA:0000129)

#### Histopath Description:

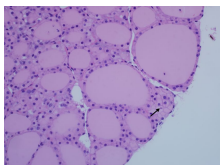
Follicular epithelial cells and parafollicular cells are markedly enlarged (1.5 -2x) normal and have a glassy eosinophilic cytoplasm

#### Morphological Diagnosis:

**Distribution:** diffuse; **Severity:** severe; **MPATH Process Term:** degenerative change  
MPATH:14

#### Definitive Diagnosis:

Thyroid gland, follicular and parafollicular cells, hypertrophy and hyaline degeneration



Thyroid gland,  
follicular and  
parafollicular cells,  
hypertrophy and  
hyaline  
degeneration, 40x,  
HE

## Organ/Tissue Analyzed:

Histopathology examination included the following organs and tissues: brain, trigeminal ganglion, eyes, salivary glands, trachea, 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: M01263724 (Male)

### Histopathology Findings:

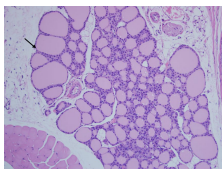
#### thyroid gland (MA:0000129)

#### Histopath Description:

Normal

#### Definitive Diagnosis:

Normal



Thyroid gland,  
normal follicular and  
parafollicular cells,  
40x, 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: M01317860 (Female)

##### Histopathology Findings:

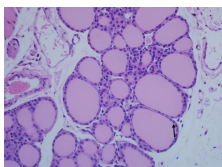
##### thyroid gland (MA:0000129)

##### Histopath Description:

Normal

##### Definitive Diagnosis:

Normal



Thyroid gland,  
normal follicular and  
parafollicular cells,  
40x, 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: M01284121 (Female)

##### Histopathology Findings:

##### thyroid gland (MA:0000129)

##### Histopath Description:

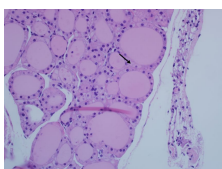
Follicular epithelial cells and parafollicular cells are markedly enlarged (1.5 -2x) normal and have a glassy eosinophilic cytoplasm

##### Morphological Diagnosis:

**Distribution:** diffuse; **Severity:** severe; **MPATH Process Term:** degenerative change  
MPATH:14

##### Definitive Diagnosis:

Thyroid gland, follicular and parafollicular cells, hypertrophy and hyaline degeneration



Thyroid gland,  
follicular and

parafollicular cells,  
hypertrophy and  
hyaline  
degeneration, 40x,  
HE

**eye (MA:0000261)****Histopath Description:**

focal retinal fold

**Morphological Diagnosis:**

**Distribution:** focal; **Severity:** mild; **MPATH Process Term:** developmental dysplasia  
MPATH:64

**Definitive Diagnosis:**

Focal retinal fold/dysplasia

**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:**

Hypertrophy and hyaline degeneration of the thyroid follicular and parafollicular cells was observed in two mice. This is a unique lesion although its significance in absence of any reported endocrine abnormality is uncertain. Similar lesion was associated with spontaneous loss of calcitonin and somatostatin in thyroid C cells of a guinea pig (Kameda, 1984).

Other lesions in this line are incidental or attributable to strain background.

Thyroid gland, follicular and parafollicular cells, hypertrophy and hyaline degeneration (2/4)