University of Washington National Primate Research Center Accession #<u>21-003</u> Submission Date <u>5 Jan 21</u>

DIAGNOSTIC LABORATORY NECROPSY REPORT

Requester MO Investigator MO Animal ID # Z14176 Species Mn Requester's Phone			
Date of Death_5 Jan 21 Date of Necropsy5 Jan 21_Time_0930_Pathologist_RM			
Nutritional Condition:			
Other Tests Required: ☐ Sero ☐ Micro ☐ Parasit ☐ Other			
Other Diagnostic Samples			
Type of report: ⊠ Final5 Jan 21 □ Preliminary □ Amended			
Clinical History:			
This animal was assigned to the project "Evaluating risks of ZIKV co-infection in SIV-infected macaques" and was inoculated with ZIKV in Dec '20. The animal has remained normal with unremarkable bloodwork.			
Gross Description:			
A 6 year old, 11.9 kg, intact male with active reproductive tract pig-tailed macaque is presented euthanized in good postmortem and nutritional (adequate muscling and adipose stores) condition. There are no external lesions besides mild tartar deposition on the teeth and the integumentary and musculoskeletal systems are unremarkable.			
The nervous, cardiovascular, respiratory, digestive, urogenital, endocrine and hemic-lymphatic systems are grossly unremarkable.			
Gross Diagnosis(es):			
Unremarkable gross exam			
Gross Comments:			
Samples acquired as per research protocol (copy in case folder). Histology is not requested.			
PathologistRM			

University of Washington National Primate Research Center Accession #<u>21-006</u> Submission Date <u>12 Jan 21</u>

DIAGNOSTIC LABORATORY NECROPSY REPORT

Requester CP Investigator HK Animal ID # A18130 Species Mm Requester's Phone				
Date of Death12 Jan 21 Date of Necropsy_12 Jan21 Time0930_Pathologist RM				
Nutritional Condition: ⊠ Adequate □ Marginal □ Poor □ Obese				
Other Tests Required: Sero Micro Parasit Other				
Other Diagnostic Samples				
Type of report: ⊠ Final _18 Mar 21 □ Preliminary12 Jan 21 □ Amended				
Clinical History:				
This animal was assigned to the project "Cell and gene therapy for HIV cure" and was inoculated with SHIV in Mar '19. The animal has been clinically normal with recent unremarkable bloodwork.				
Gross Description:				
A 5 year old, ~8.2 kg, intact male with active reproductive tract rhesus macaque is presented euthanized in good postmortem and nutritional (adequate muscling and adipose stores) condition. There is mild tartar deposition on the teeth and the middle digit on the right arm is partially amputated and healed over, and otherwise there are no significant external lesions and the integumentary and musculoskeletal systems are otherwise unremarkable.				
The nervous, cardiovascular, respiratory, digestive, urogenital, endocrine and hemic-lymphatic (lymph nodes moderate to large sized, and the spleen has multifocal capsular irregular indentations and fibrosis secondary to laparoscopic biopsies) systems are unremarkable besides stated changes.				
Gross Diagnosis(es):				
Unremarkable tissues/organs				
Gross Comments:				
Samples acquired as per research protocol (copy of protocol in case folder) and representative samples of all remaining available organs acquired for histology.				
Histological Findings:				

Sections/blocks of lymph nodes are as follows: 5 is axillary, 6 is pulmonary hilar, 7 is iliac (and sacral), 8 is inguinal, 9 is mesenteric, and 10 is submandibular.

Heart has mild to moderate, multifocal, interstitial granulomatous infiltrates with scattered degenerate to necrotic myocyte, and most prominent in the left ventricular freewall. Aorta is unremarkable.

Stomach, small intestine and large intestine have mild to moderate lamina propria infiltrate of/increase in eosinophils, lymphocytes, plasma cells, and macrophages. The small intestine has moderate villar blunting and fusion, scattered tortuous crypts, and one section has ares of moderate to extensive goblet cell hyperplasia. Large and small intestine have mild to moderate increase in mucosal cell turnover (apoptosis). Large intestine has near-diffuse, moderate to extensive, superficial mucosal, adherent prolifertation of curved to coiled bacterial organisms (spirochetosis). Esophagus is unremarkable. GALT is unremarkable and mildly to moderately active.

Sections of brain, pituitary gland, eye, lymph nodes (moderate to moderately extensive follicular activity), spleen (moderate follicular activity and multifocal, mild to moderate capsular fibrosis secondary to previous biopsies, and reactive endothelium), thymus (residual and with multifocal, small epithelial lined cysts – ultimobranchial remnants), liver (minimal lobular collapse, and vacuolar degeneration), gall bladder, kidneys (mild, multifocal, interstitial lymphohistiocytic aggregates, and mild diffuse membranoproliferative change of glomeruli), urinary bladder, lungs (mild perivascular, peribronchial and peribronchiolar lymphohistiocytic aggregates and pneumoconiosis), trachea, pancreas, salivary gland, thyroid glands, parathyroid gland, adrenal gland (mild multifocal regions of calcification of corticomedullary junction and multifocal nodular cortical hyperplasia), tongue, skeletal muscle, testis (active), epididymis, seminal vesicle, bone with marrow, and skin with mammary ducts are unremarkable besides stated minor changes.

Final Principal Diagnosis(es):

- 1. Mild to moderate, multifocal, granulomatous myocarditis
- Mild to moderate, diffuse, eosinophilic, lymphoplasmacytic and histiocytic gastro-entero-colitis
 with enteric villar blunting and fusion, and with extensive, near-diffuse, large intestinal
 spirochetosis

Histology Comments:

The myocarditis was clinically insignificant and speculated as being secondary to the SHIV infection or from administration of the mimetic, although other causes are possible.

The inflammatory component of diagnosis #2, which can cause diarrhea and potentially other sequelae thereof, represents typical changes in this species in this colony, and they have been previously discussed. Inflammatory changes present are consistent with food allergy/hypersensitivity/dietary intolerance/IBD. The bacterial organisms diagnosed should be considered commensals in my opinion. Please contact me if you wish to discuss these changes further.

Adrenal calcification (not diagnosed in this case as the lesions were mild) is a common, idiopathic, incidental, progressive process in rhesus.

Please contact me with any questions, comments, concerns or desired changes/additions.

Path ologist	RM
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University of Washington National Primate Research Center Accession # 21-009 Submission Date 14 Jan 21

DIAGNOSTIC LABORATORY NECROPSY REPORT

Requester CP Investigator HK Animal ID # A18133 Species Mm Requester's Phone				
Date of Death14 Jan 21 Date of Necropsy_14 Jan21 Time0930_PathologistRM				
Nutritional Condition:				
Other Tests Required: ☐ Sero ☐ Micro ☐ Parasit ☐ Other				
Other Diagnostic Samples				
Type of report: ⊠ Final _19 Mar 21 □ Preliminary14 Jan 21 □ Amended				
Clinical History:				
This animal was assigned to the project "Cell and gene therapy for HIV cure" and was inoculated with SHIV in Mar '19. The animal has been clinically normal with recent unremarkable bloodwork.				
Gross Description:				
A 6 year old, ~11.5 kg, intact male with active reproductive tract rhesus macaque is presented euthanized in good postmortem and nutritional (adequate muscling and adipose stores) condition. There is mild tartar deposition on the teeth and toothwear, and otherwise there are no significant external lesions and the integumentary and musculoskeletal systems are otherwise unremarkable.				
The nervous, cardiovascular, respiratory, digestive, urogenital, endocrine and hemic-lymphatic (lymph nodes small to moderate sized, and the spleen has multifocal capsular irregular indentations and fibrosis secondary to laparoscopic biopsies) systems are unremarkable besides stated changes.				
Gross Diagnosis(es):				
Unremarkable tissues/organs				
Gross Comments:				
Samples acquired as per research protocol (copy of protocol in case folder) and representative samples of all remaining available organs acquired for histology.				
Histological Findings:				

Sections/blocks of lymph nodes are as follows: 5 is axillary, 6 is pulmonary hilar, 7 is iliac (and sacral), 8 is inguinal, 9 is mesenteric, and 10 is submandibular.

Stomach, small intestine and large intestine have mild to moderate lamina propria infiltrate of/increase in eosinophils, lymphocytes, plasma cells, and macrophages. The small intestine has moderate villar blunting and fusion, scattered tortuous crypts, and one section (likely close to ileum) with moderate goblet cell hyperplasia. Large and small intestine have mild to moderate increase in mucosal cell turnover (apoptosis). Large intestine has near-diffuse, moderate to extensive, superficial mucosal, adherent prolifertation of curved to coiled bacterial organisms (spirochetosis). Fundic stomach has extensive, diffuse spiral bacteria infection. Esophagus is unremarkable. GALT is unremarkable and moderately active.

Sections of brain, pituitary gland, eye, lymph nodes (low follicular activity), spleen (moderate follicular activity, and reactive endothelium), thymus (residual), liver (minimal lobular collapse, and lymphohistiocytic aggregates, and lto cell vacuolation), gall bladder, heart (multifocal minimal lymphohistiocytic aggregates), aorta, kidneys (mild, multifocal, interstitial lymphohistiocytic aggregates, and mild diffuse membranoproliferative change of glomeruli), urinary bladder, lungs (mild perivascular, peribronchial and peribronchiolar lymphohistiocytic aggregates and minimal pneumoconiosis), trachea (mild submucosal lymphohistiocytic aggregates and focal minor submucosal gland cystic change), pancreas, salivary gland (mild multifocal lymphohistiocytic aggregates), thyroid glands, adrenal gland (mild multifocal nodular cortical hyperplasia), tongue, skeletal muscle, testis (active), epididymis, seminal vesicle, bone with marrow, and skin with mammary duct are unremarkable besides stated minor changes.

Final Principal Diagnosi	stes):

Mild to moderate, diffuse, eosinophilic, lymphoplasmacytic and histiocytic gastro-entero-colitis
with enteric villar blunting and fusion, and with moderate to extensive, near-diffuse, large
intestinal spirochetosis and extensive diffuse gastric-fundic spiral bacteria infection

Histology Comments:

The inflammatory component of diagnosis #1, which can cause diarrhea and potentially other sequelae thereof, represents typical changes in this species in this colony, and they have been previously discussed. Inflammatory changes present are consistent with food allergy/hypersensitivity/dietary intolerance/IBD. The bacterial organisms diagnosed should be considered commensals in my opinion. Please contact me if you wish to discuss these changes further.

Please contact me with any questions, comments, concerns or desired changes/additions.

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Pathologist	RM	