

FINAL REPORT OF LABORATORY EXAMINATION

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IDEXX BioAnalytics Case # 24366-2020

Received: 9/17/2020

Completed: 9/22/2020

Submitted By

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Specimen Description

Species: mouse
 Breed/Strain: CR ATH HE
 Description: Whole Animal
 Number of Specimens/Animals: 11
 Building/Facility: Discovery Ridge

Client ID	Investigator	Room #	Species	Strain /Breed	Sex	Rack	Date Placed
116-A	Franklin	W116	mouse	CR ATH HE	F	1	6/15/2020
116-B	Franklin	W116	mouse	CR ATH HE	F	3	6/15/2020
116-C	Franklin	W116	mouse	CR ATH HE	F	4	6/15/2020
116-D	Franklin/Bryda	W116	mouse	CR ATH HE	F	5	6/15/2020
116-E	Franklin	W116	mouse	CR ATH HE	F	6	6/15/2020
113-A	Bryda	W113	mouse	CR ATH HE	F	2	6/15/2020
113-B	Bryda	W113	mouse	CR ATH HE	F	3	6/15/2020
113-C	Bryda	W113	mouse	CR ATH HE	F	4	6/15/2020
113-D	Bryda	W113	mouse	CR ATH HE	F	5	6/15/2020
113-E	Bryda	W113	mouse	CR ATH HE	F	6	6/15/2020
114-D	Bryda	W114	mouse	CR ATH HE	F	4	6/15/2020

Services/Tests Performed: MU MMRRC Mouse Annual Sentinel Profile (1-11)

Serologic evaluation for antibodies to: *Clostridium piliforme*, *Mycoplasma pulmonis*, *Pneumocystis murina*, CAR bacillus, Ectromelia, EDIM, Hantaan, K virus, LCMV, LDEV, MAV1, MAV2, MCMV, MHV, MNV, MPV, MTV, MVM, Polyoma, PVM, REO3, Sendai, TMEV, *Encephalitozoon cuniculi*

PCR evaluation for: *Cryptosporidium* spp., *Helicobacter bilis*, *Helicobacter ganmani*, *Helicobacter hepaticus*, *Helicobacter mastomyrinus*, *Helicobacter rodentium*, *Helicobacter* spp., *Helicobacter typhlonius*, *Mycoplasma pulmonis*, *Streptobacillus moniliformis*, *Streptococcus* sp. beta hemolytic Group A, *Streptococcus* sp. beta

hemolytic Group B, *Streptococcus* sp. beta hemolytic Group C, *Streptococcus* sp. beta hemolytic Group G

Parasitologic evaluation for: fur mites, mesostigmatid mites, lice, *Spironucleus muris*, *Giardia muris*, large intestinal flagellates and amoeba, pinworms and tapeworms

Microbiologic evaluation for: *Bordetella bronchiseptica*, *Bordetella hinzii*, *Citrobacter rodentium*, *Corynebacterium bovis*, *Corynebacterium kutscheri*, *Klebsiella oxytoca*, *Klebsiella pneumoniae*, *Pasteurella multocida*, *Pasteurella pneumotropica* biotype Heyl, *Pasteurella pneumotropica* biotype Jawetz, *Salmonella enterica*, *Streptococcus pneumoniae*

General Comments: Discovery Ridge - 2020 Q3 'A' room mouse sentinel necropsies

Summary: All test results were negative. Please see the report for details.

NECROPSY

No gross lesions were detected in any of the body systems and organs examined.

SEROLOGY SUMMARY

	116-A	116-B	116-C	116-D	116-E	113-A	113-B	113-C	113-D	113-E
MTV	-	-	-	-	-	-	-	-	-	-
CAR bacillus	-	-	-	-	-	-	-	-	-	-
<i>Encephalitozoon cuniculi</i>	-	-	-	-	-	-	-	-	-	-
Ectromelia	-	-	-	-	-	-	-	-	-	-
EDIM	-	-	-	-	-	-	-	-	-	-
Hantaan	-	-	-	-	-	-	-	-	-	-
K virus	-	-	-	-	-	-	-	-	-	-
LCMV	-	-	-	-	-	-	-	-	-	-
LDEV	-	-	-	-	-	-	-	-	-	-
<i>Mycoplasma pulmonis</i>	-	-	-	-	-	-	-	-	-	-
MAV1	-	-	-	-	-	-	-	-	-	-
MAV2	-	-	-	-	-	-	-	-	-	-
MCMV	-	-	-	-	-	-	-	-	-	-
MHV	-	-	-	-	-	-	-	-	-	-
MNV	-	-	-	-	-	-	-	-	-	-
MPV	-	-	-	-	-	-	-	-	-	-
MVM	-	-	-	-	-	-	-	-	-	-
<i>Pneumocystis murina</i>	-	-	-	-	-	-	-	-	-	-
Polyoma	-	-	-	-	-	-	-	-	-	-
PVM	-	-	-	-	-	-	-	-	-	-
REO3	-	-	-	-	-	-	-	-	-	-
TMEV	-	-	-	-	-	-	-	-	-	-
Sendai	-	-	-	-	-	-	-	-	-	-
<i>Clostridium piliforme</i>	-	-	-	-	-	-	-	-	-	-
Mouse IgG	N	N	N	N	N	N	N	N	N	N

	114-D
MTV	-
CAR bacillus	-
<i>Encephalitozoon cuniculi</i>	-
Ectromelia	-
EDIM	-
Hantaan	-

	114-D
K virus	-
LCMV	-
LDEV	-
<i>Mycoplasma pulmonis</i>	-
MAV1	-
MAV2	-
MCMV	-
MHV	-
MNV	-
MPV	-
MVM	-
<i>Pneumocystis murina</i>	-
Polyoma	-
PVM	-
REO3	-
TMEV	-
Sendai	-
<i>Clostridium piliforme</i>	-
Mouse IgG	N

Legend: + = positive - = negative blank = test not performed EQ = equivocal HE = hemolysis precluded testing I = insufficient W = weak positive WB = Western Blot confirmatory analysis pending NS = non-specific reactivity N = normal IgG L = less than normal IgG

PCR EVALUATION

feces	116-A	116-B	116-C	116-D	116-E	113-A	113-B	113-C	113-D	113-E
<i>Cryptosporidium</i> spp.	-	-	-	-	-	-	-	-	-	-
<i>Helicobacter</i> spp.	-	-	-	-	-	-	-	-	-	-
<i>Helicobacter bilis</i>	-	-	-	-	-	-	-	-	-	-
<i>Helicobacter ganmani</i>	-	-	-	-	-	-	-	-	-	-
<i>Helicobacter hepaticus</i>	-	-	-	-	-	-	-	-	-	-
<i>Helicobacter mastomyrinus</i>	-	-	-	-	-	-	-	-	-	-
<i>Helicobacter rodentium</i>	-	-	-	-	-	-	-	-	-	-
<i>Helicobacter typhlonius</i>	-	-	-	-	-	-	-	-	-	-

feces	114-D
<i>Cryptosporidium</i> spp.	-
<i>Helicobacter</i> spp.	-
<i>Helicobacter bilis</i>	-
<i>Helicobacter ganmani</i>	-
<i>Helicobacter hepaticus</i>	-

feces	114-D
<i>Helicobacter mastomyrinus</i>	-
<i>Helicobacter rodentium</i>	-
<i>Helicobacter typhlonius</i>	-

oral swab	116-A	116-B	116-C	116-D	116-E	113-A	113-B	113-C	113-D	113-E
<i>Mycoplasma pulmonis</i>	-	-	-	-	-	-	-	-	-	-
<i>Streptobacillus moniliformis</i>	-	-	-	-	-	-	-	-	-	-
<i>Streptococcus</i> sp. beta hemolytic Group A	-	-	-	-	-	-	-	-	-	-
<i>Streptococcus</i> sp. beta hemolytic Group B	-	-	-	-	-	-	-	-	-	-
<i>Streptococcus</i> sp. beta hemolytic Group C	-	-	-	-	-	-	-	-	-	-
<i>Streptococcus</i> sp. beta hemolytic Group G	-	-	-	-	-	-	-	-	-	-

oral swab	114-D
<i>Mycoplasma pulmonis</i>	-
<i>Streptobacillus moniliformis</i>	-
<i>Streptococcus</i> sp. beta hemolytic Group A	-
<i>Streptococcus</i> sp. beta hemolytic Group B	-
<i>Streptococcus</i> sp. beta hemolytic Group C	-
<i>Streptococcus</i> sp. beta hemolytic Group G	-

Legend: + = positive - = negative id:id = pooled sample range id+id+id = non-range pooled sample NT or blank = no test performed sus = suspect wps = weak positive XX = Testing in progress

PARASITOLOGY

	116-A	116-B	116-C	116-D	116-E	113-A	113-B	113-C	113-D	113-E
parasites	-	-	-	-	-	-	-	-	-	-

	114-D
parasites	-

MICROBIOLOGY

Specimen/Source: cecum

Isolate	116-A	116-B	116-C	116-D	116-E	113-A	113-B	113-C	113-D	113-E
<i>Citrobacter rodentium</i>	-	-	-	-	-	-	-	-	-	-
<i>Klebsiella oxytoca</i>	-	-	-	-	-	-	-	-	-	-
<i>Klebsiella pneumoniae</i>	-	-	-	-	-	-	-	-	-	-
<i>Salmonella enterica</i>	-	-	-	-	-	-	-	-	-	-

Specimen/Source: cecum

Isolate	114-D
<i>Citrobacter rodentium</i>	-
<i>Klebsiella oxytoca</i>	-
<i>Klebsiella pneumoniae</i>	-
<i>Salmonella enterica</i>	-

Specimen/Source: oral swab

Isolate	116-A	116-B	116-C	116-D	116-E	113-A	113-B	113-C	113-D	113-E
<i>Bordetella bronchiseptica</i>	-	-	-	-	-	-	-	-	-	-
<i>Bordetella hinzii</i>	-	-	-	-	-	-	-	-	-	-
<i>Corynebacterium kutscheri</i>	-	-	-	-	-	-	-	-	-	-
<i>Pasteurella multocida</i>	-	-	-	-	-	-	-	-	-	-
<i>Pasteurella pneumotropica</i> biotype Heyl	-	-	-	-	-	-	-	-	-	-
<i>Pasteurella pneumotropica</i> biotype Jawetz	-	-	-	-	-	-	-	-	-	-
<i>Streptococcus pneumoniae</i>	-	-	-	-	-	-	-	-	-	-

Specimen/Source: oral swab

Isolate	114-D
<i>Bordetella bronchiseptica</i>	-
<i>Bordetella hinzii</i>	-
<i>Corynebacterium kutscheri</i>	-
<i>Pasteurella multocida</i>	-
<i>Pasteurella pneumotropica</i> biotype Heyl	-
<i>Pasteurella pneumotropica</i> biotype Jawetz	-
<i>Streptococcus pneumoniae</i>	-

Specimen/Source: skin swab

Isolate	116-A	116-B	116-C	116-D	116-E	113-A	113-B	113-C	113-D	113-E
<i>Corynebacterium bovis</i>	-	-	-	-	-	-	-	-	-	-

Specimen/Source: skin swab

Isolate	114-D
<i>Corynebacterium bovis</i>	-

Legend: + = agent recovered - = agent not recovered blank = test not performed n = no growth X = Preliminary

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IDEXX BioAnalytics Case # 24366-2020

Received: 9/17/2020

Completed: 9/22/2020

SEROLOGY DETAILS

	Baseline	116-A	116-B	116-C	116-D	116-E	113-A	113-B	113-C	113-D	113-E
MTV											
MTV	MFI > 3.000	-	-	-	-	-	-	-	-	-	-
CAR bacillus											
CAR bacillus purified bacteria	MFI > 3.750	-	-	-	-	-	-	-	-	-	-
Encephalitozoon cuniculi											
<i>E. cuniculi</i> purified antigen	MFI > 1.200	-	-	-	-	-	-	-	-	-	-
Ectromelia											
Ectromelia purified virus	MFI > 2.000	-	-	-	-	-	-	-	-	-	-
EDIM											
EDIM purified virus	MFI > 4.000	-	-	-	-	-	-	-	-	-	-
EDIM VP6 recombinant	MFI > 2.500	-	-	-	-	-	-	-	-	-	-
Hantaan											
Hantaan NP	MFI > 4.000	-	-	-	-	-	-	-	-	-	-
K virus											
K purified virus	MFI > 4.500	-	-	-	-	-	-	-	-	-	-
LCMV											
LCMV recombinant	MFI > 3.000	-	-	-	-	-	-	-	-	-	-
LDEV											
LDEV	MFI > 4.500	-	-	-	-	-	-	-	-	-	-
Mycoplasma pulmonis											
<i>M. pulmonis</i> purified bacteria	MFI > 4.250	-	-	-	-	-	-	-	-	-	-
MAV1											
MAV1 purified virus	MFI > 3.750	-	-	-	-	-	-	-	-	-	-
MAV2											
MAV2 purified virus	MFI > 4.500	-	-	-	-	-	-	-	-	-	-

	Baseline	116-A	116-B	116-C	116-D	116-E	113-A	113-B	113-C	113-D	113-E
MCMV											
MCMV purified virus	MFI > 3.500	-	-	-	-	-	-	-	-	-	-
MHV											
MHV purified virus	MFI > 2.500	-	-	-	-	-	-	-	-	-	-
MHV NC recombinant	MFI > 2.500	-	-	-	-	-	-	-	-	-	-
MNV											
MNV purified virus	MFI > 3.000	-	-	-	-	-	-	-	-	-	-
MNV VP1 recombinant	MFI > 4.000	-	-	-	-	-	-	-	-	-	-
MPV											
MPV VP2 recombinant	MFI > 2.000	-	-	-	-	-	-	-	-	-	-
NS1 ¹	MFI > 3.750	-	-	-	-	-	-	-	-	-	-
MVM											
MVM VP2 recombinant	MFI > 2.000	-	-	-	-	-	-	-	-	-	-
NS1 ¹	MFI > 3.750	-	-	-	-	-	-	-	-	-	-
<i>Pneumocystis murina</i>											
<i>P. murina</i>	MFI > 0.750	-	-	-	-	-	-	-	-	-	-
Polyoma											
Polyoma purified virus	MFI > 3.750	-	-	-	-	-	-	-	-	-	-
PVM											
PVM purified virus	MFI > 2.500	-	-	-	-	-	-	-	-	-	-
REO3											
REO3 purified virus	MFI > 4.900	-	-	-	-	-	-	-	-	-	-
TMEV											
TMEV purified virus	MFI > 2.250	-	-	-	-	-	-	-	-	-	-
RTV purified virus	MFI > 2.750	-	-	-	-	-	-	-	-	-	-
Sendai											
Sendai purified virus	MFI > 3.750	-	-	-	-	-	-	-	-	-	-
<i>Clostridium piliforme</i>											
<i>Clostridium piliforme</i> purified bacteria	MFI > 4.950	-	-	-	-	-	-	-	-	-	-

	Baseline	114-D
MTV		
MTV	MFI > 3.000	-
CAR bacillus		
CAR bacillus purified bacteria	MFI > 3.750	-
<i>Encephalitozoon cuniculi</i>		
<i>E. cuniculi</i> purified antigen	MFI > 1.200	-
Ectromelia		

	Baseline	114-D
Ectromelia purified virus	MFI > 2.000	-
EDIM		
EDIM purified virus	MFI > 4.000	-
EDIM VP6 recombinant	MFI > 2.500	-
Hantaan		
Hantaan NP	MFI > 4.000	-
K virus		
K purified virus	MFI > 4.500	-
LCMV		
LCMV recombinant	MFI > 3.000	-
LDEV		
LDEV	MFI > 4.500	-
Mycoplasma pulmonis		
<i>M. pulmonis</i> purified bacteria	MFI > 4.250	-
MAV1		
MAV1 purified virus	MFI > 3.750	-
MAV2		
MAV2 purified virus	MFI > 4.500	-
MCMV		
MCMV purified virus	MFI > 3.500	-
MHV		
MHV purified virus	MFI > 2.500	-
MHV NC recombinant	MFI > 2.500	-
MNV		
MNV purified virus	MFI > 3.000	-
MNV VP1 recombinant	MFI > 4.000	-
MPV		
MPV VP2 recombinant	MFI > 2.000	-
NS1 ¹	MFI > 3.750	-
MVM		
MVM VP2 recombinant	MFI > 2.000	-
NS1 ¹	MFI > 3.750	-
Pneumocystis murina		
<i>P. murina</i>	MFI > 0.750	-
Polyoma		
Polyoma purified virus	MFI > 3.750	-
PVM		
PVM purified virus	MFI > 2.500	-
REO3		

	Baseline	114-D
REO3 purified virus	MFI > 4.900	-
TMEV		
TMEV purified virus	MFI > 2.250	-
RTV purified virus	MFI > 2.750	-
Sendai		
Sendai purified virus	MFI > 3.750	-
<i>Clostridium piliforme</i>		
<i>Clostridium piliforme</i> purified bacteria	MFI > 4.950	-

NS1¹: NS1 protein is highly conserved among rodent parvoviruses and thus serves as a generic assay for parvovirus seroconversion.

Legend: + = positive - = negative blank = test not performed EQ = equivocal HE = hemolysis precluded testing I = insufficient W = weak positive WB = Western Blot confirmatory analysis pending NS = non-specific reactivity N = normal IgG L = less than normal IgG
Positive MFI results are reported as "+" followed by a number from 1 to 33 in thousands rounded off to the nearest thousand.

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IDEXX BioAnalytics Case # 24626-2020

Received: 9/17/2020

Completed: 9/21/2020

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Specimen Description

Species: mouse

Description: Feces; Pelt Swab

Number of Specimens/Animals: 10

Building/Facility: Discovery Ridge

Client ID	Investigator	Room #	Species
W113 mouse pin worm fecal sample	Bryda	W113	mouse
W114 mouse pin worm fecal sample	Bryda	W114	mouse
W116 mouse pin worm fecal sample	Bryda	W116	mouse
W116 GM-1 pin worm fecal sample	Bryda	W116	mouse
W116 GM-4 pin worm fecal sample	Bryda	W116	mouse
W113 mouse fur mite swab	Bryda	W113	mouse
W114 mouse fur mite swab	Bryda	W114	mouse
W116 mouse fur mite swab	Bryda	W116	mouse
W116 GM-1 fur mite swab	Bryda	W116	mouse

Client ID	Investigator	Room #	Species
W116 GM-4 fur mite swab	Bryda	W116	mouse

Services/Tests Performed: Pinworms (1-5); Fur Mite (6-10)

PCR evaluation for: *Aspiculuris tetraptera*, *Myocoptes*, *Radfordia/Myobia*, *Syphacia muris*, *Syphacia obvelata*

General Comments: 5 fecal samples for pin worm testing and 5 pelt swabs for fur mite testing. For MMRRC quarterly pin worm and fur mite testing.

Summary: All test results were negative.

PCR EVALUATION

feces	W113 mouse pin worm fecal sample
<i>Aspiculuris tetraptera</i>	-
<i>Syphacia muris</i>	-
<i>Syphacia obvelata</i>	-

feces	W114 mouse pin worm fecal sample
<i>Aspiculuris tetraptera</i>	-
<i>Syphacia muris</i>	-
<i>Syphacia obvelata</i>	-

feces	W116 mouse pin worm fecal sample
<i>Aspiculuris tetraptera</i>	-
<i>Syphacia muris</i>	-
<i>Syphacia obvelata</i>	-

feces	W116 GM-1 pin worm fecal sample
<i>Aspiculuris tetraptera</i>	-
<i>Syphacia muris</i>	-
<i>Syphacia obvelata</i>	-

feces	W116 GM-4 pin worm fecal sample
<i>Aspiculuris tetraptera</i>	-
<i>Syphacia muris</i>	-
<i>Syphacia obvelata</i>	-

pelt swab	W113 mouse fur mite swab
<i>Myocoptes</i>	-
<i>Radfordia/Myobia</i>	-

pelt swab	W114 mouse fur mite swab
<i>Myocoptes</i>	-
<i>Radfordia/Myobia</i>	-

pelt swab	W116 mouse fur mite swab
<i>Myocoptes</i>	-
<i>Radfordia/Myobia</i>	-

pelt swab	W116 GM-1 fur mite swab
<i>Myocoptes</i>	-
<i>Radfordia/Myobia</i>	-

pelt swab	W116 GM-4 fur mite swab
<i>Myocoptes</i>	-
<i>Radfordia/Myobia</i>	-

Legend: + = positive - = negative id:id = pooled sample range id+id+id = non-range pooled sample NT or blank = no test performed sus = suspect wps = weak positive XX = Testing in progress