

FINAL REPORT OF LABORATORY EXAMINATION

4011 Discovery Drive, Columbia, MO 65201

1-800-669-0825 1-573-499-5700

idxxbioanalytics@idexx.com

www.idxxbioanalytics.com

IDEXX BioAnalytics Case # 37943-2021

Received Date: 12/14/2021

Completed: 12/17/2021

Submitted By

Resource Center Animals-RRRC Resource Center
Animals-RRRC
University of Missouri-RRRC
Columbia, MO 65201

Phone: 573-884-7970

Email:

brydae@missouri.edu;oneilla@missouri.edu;oconnore@missouri.edu;dewitta@missouri.edu;sharmaabh@missouri.edu;RRRC@missouri.edu;listerb@missouri.edu;kavb3v@missouri.edu

Referred By

Craig Franklin
University of Missouri-Franklin
Veterinary Pathobiology
4011 Discovery Drive
Columbia, MO 65201

Fax: 573-884-7521

Email: FranklinC@missouri.edu

Specimen Description

Species: rat
Description: Feces; Pelt Swab
Number of Specimens/Animals: 4
Building/Facility: Discovery Ridge

Client ID	Investigator	Room #	Species	Sex
W112 Pelt swab and fecal pool sample racks 1-4a -1	Bryda	W112	rat	M/F
W112 Pelt swab and fecal pool sample racks 4b-7- 2	Bryda	W112	rat	M/F
W113 Pelt swab and fecal pool sample	Bryda	W113	rat	M/F
W114 Pelt swab and fecal pool sample	Bryda	W114	rat	M/F

Services/Tests Performed: Pinworm and Fur Mite Panel (1-4)

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

General Comments: Quarterly pinworm and furmite testing; W112, W113, W114; rats; n=4 pooled fecal samples; n=4 pelt swab samples; AMD

Summary: All test results were negative.

PCR EVALUATION

feces	W112 Pelt swab and fecal pool sample racks 1-4a -1
<i>Aspiculuris tetraptera</i>	-
<i>Syphacia muris</i>	-
<i>Syphacia obvelata</i>	-

feces	W112 Pelt swab and fecal pool sample racks 4b-7- 2
<i>Aspiculuris tetraptera</i>	-
<i>Syphacia muris</i>	-
<i>Syphacia obvelata</i>	-

feces	W113 Pelt swab and fecal pool sample
<i>Aspiculuris tetraptera</i>	-
<i>Syphacia muris</i>	-
<i>Syphacia obvelata</i>	-

feces	W114 Pelt swab and fecal pool sample
<i>Aspiculuris tetraptera</i>	-
<i>Syphacia muris</i>	-
<i>Syphacia obvelata</i>	-

pelt swab	W112 Pelt swab and fecal pool sample racks 1-4a -1
<i>Myocoptes</i>	-
<i>Radfordia/Myobia</i>	-

pelt swab	W112 Pelt swab and fecal pool sample racks 4b-7- 2
<i>Myocoptes</i>	-
<i>Radfordia/Myobia</i>	-

pelt swab	W113 Pelt swab and fecal pool sample
<i>Myocoptes</i>	-
<i>Radfordia/Myobia</i>	-

pelt swab	W114 Pelt swab and fecal pool sample
<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

FINAL REPORT OF LABORATORY EXAMINATION

4011 Discovery Drive, Columbia, MO 65201

1-800-669-0825 1-573-499-5700

idxbioanalytics@idexx.com

www.idxbioanalytics.com

IDEXX BioAnalytics Case # 37350-2021

Received Date: 12/16/2021

Completed: 12/21/2021

Submitted By

Justin Wilson (RRRC)

University of Missouri-RRRC

University of Missouri-RRRC

Columbia, MO 65201

Phone: 573-884-2524

Email:

wilsonjus@missouri.edu;KorteS@missouri.edu;oconnore@missouri.edu;FranklinC@missouri.edu;oneill-blaira@missouri.edu

Specimen Description

Species: rat

Breed/Strain: HET RNU

Description: Whole Animal

Number of Specimens/Animals: 11

Building/Facility: Discovery Ridge

Client ID	Investigator	Room #	Species	Strain /Breed	Sex	Rack	Date Placed
113-F	Bryda	W113	rat	HET RNU	F	1	9/20/2021
114-C	Bryda	W114	rat	HET RNU	F	1	9/20/2021
114-D	Bryda	W114	rat	HET RNU	F	2	9/20/2021
114-E	Bryda	W114	rat	HET RNU	F	3	9/20/2021
112-A	Bryda	W112	rat	HET RNU	F	1	9/20/2021
112-B	Bryda	W112	rat	HET RNU	F	2	9/20/2021
112-C	Bryda	W112	rat	HET RNU	F	3	9/20/2021
112-D	Bryda	W112	rat	HET RNU	F	4	9/20/2021
112-E	Bryda	W112	rat	HET RNU	F	5	9/20/2021
112-F	Bryda	W112	rat	HET RNU	F	6	9/20/2021
112-G	Bryda	W112	rat	HET RNU	F	7	9/20/2021

Services/Tests Performed: MU RRRC Rat Annual Sentinel Profile (1-11)

Serologic evaluation for antibodies to: *Clostridium piliforme*, *Mycoplasma pulmonis*, *Pneumocystis carinii*, CAR bacillus, H1, Hantaan, IDIR, KRV, LCMV, MAV1, MAV2, PVM, RCV/SDAV, REO3, RMV, RPV, RTV, Sendai, *Encephalitozoon cuniculi*

PCR evaluation for: *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*, *Corynebacterium kutscheri*, *Pasteurella multocida*, *Pasteurella pneumotropica* biotype Heyl, *Pasteurella pneumotropica* biotype Jawetz, *Salmonella enterica*, *Streptococcus pneumoniae*

General Comments: Discovery Ridge - 2021 Q4 'A' room rat 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

	113-F	114-C	114-D	114-E	112-A	112-B	112-C	112-D	112-E
CAR bacillus	-	-	-	-	-	-	-	-	-
<i>Encephalitozoon cuniculi</i>	-	-	-	-	-	-	-	-	-
IDIR	-	-	-	-	-	-	-	-	-
Hantaan	-	-	-	-	-	-	-	-	-
LCMV	-	-	-	-	-	-	-	-	-
<i>Mycoplasma pulmonis</i>	-	-	-	-	-	-	-	-	-
MAV1	-	-	-	-	-	-	-	-	-
MAV2	-	-	-	-	-	-	-	-	-
<i>Pneumocystis carinii</i>	-	-	-	-	-	-	-	-	-
RPV	-	-	-	-	-	-	-	-	-
RMV	-	-	-	-	-	-	-	-	-
KRV	-	-	-	-	-	-	-	-	-
H1	-	-	-	-	-	-	-	-	-
PVM	-	-	-	-	-	-	-	-	-
RCV/SDAV	-	-	-	-	-	-	-	-	-
REO3	-	-	-	-	-	-	-	-	-
RTV	-	-	-	-	-	-	-	-	-
Sendai	-	-	-	-	-	-	-	-	-
<i>Clostridium piliforme</i>	-	-	-	-	-	-	-	-	-
Rat IgG	N	N	N	N	N	N	N	N	N

	112-F	112-G
CAR bacillus	-	-
<i>Encephalitozoon cuniculi</i>	-	-
IDIR	-	-
Hantaan	-	-
LCMV	-	-
<i>Mycoplasma pulmonis</i>	-	-
MAV1	-	-
MAV2	-	-
<i>Pneumocystis carinii</i>	-	-
RPV	-	-
RMV	-	-
KRV	-	-

	112-F	112-G
H1	-	-
PVM	-	-
RCV/SDAV	-	-
REO3	-	-
RTV	-	-
Sendai	-	-
<i>Clostridium piliforme</i>	-	-
Rat IgG	N	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	113-F	114-C	114-D	114-E	112-A	112-B	112-C	112-D	112-E
<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	112-F	112-G
<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>	-	-

oral swab	113-F	114-C	114-D	114-E	112-A	112-B	112-C	112-D	112-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	-	-	-	-	-	-	-	-	-

oral swab	113-F	114-C	114-D	114-E	112-A	112-B	112-C	112-D	112-E
<i>Streptococcus</i> sp. beta hemolytic Group G	-	-	-	-	-	-	-	-	-

oral swab	112-F	112-G
<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

	113-F	114-C	114-D	114-E	112-A	112-B	112-C	112-D	112-E
parasites	-	-	-	-	-	-	-	-	-

	112-F	112-G
parasites	-	-

MICROBIOLOGY

Specimen/Source: cecum

Isolate	113-F	114-C	114-D	114-E	112-A	112-B	112-C	112-D	112-E
<i>Salmonella enterica</i>	-	-	-	-	-	-	-	-	-

Specimen/Source: cecum

Isolate	112-F	112-G
<i>Salmonella enterica</i>	-	-

Specimen/Source: oral swab

Isolate	113-F	114-C	114-D	114-E	112-A	112-B	112-C	112-D	112-E
<i>Bordetella bronchiseptica</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	112-F	112-G
<i>Bordetella bronchiseptica</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>	-	-

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

FINAL REPORT OF LABORATORY EXAMINATION

4011 Discovery Drive, Columbia, MO 65201

1-800-669-0825 1-573-499-5700

idxxbioanalytics@idexx.com

www.idexxbioanalytics.com

IDEXX BioAnalytics Case # 37350-2021

Received Date: 12/16/2021

Completed: 12/21/2021

SEROLOGY DETAILS

	Baseline	113-F	114-C	114-D	114-E	112-A	112-B	112-C	112-D	112-E
CAR bacillus										
CAR bacillus purified bacteria	MFI > 3.750	-	-	-	-	-	-	-	-	-
Encephalitozoon cuniculi										
<i>E. cuniculi</i> purified antigen	MFI > 1.200	-	-	-	-	-	-	-	-	-
IDIR										
IDIR VP6 recombinant	MFI > 4.000	-	-	-	-	-	-	-	-	-
Hantaan										
Hantaan NP	MFI > 4.000	-	-	-	-	-	-	-	-	-
LCMV										
LCMV recombinant	MFI > 3.000	-	-	-	-	-	-	-	-	-
Mycoplasma pulmonis										
<i>M. pulmonis</i> purified bacteria	MFI > 4.250	-	-	-	-	-	-	-	-	-
MAV1										
MAV1 purified virus	MFI > 3.750	-	-	-	-	-	-	-	-	-
MAV2										
MAV2 purified virus	MFI > 3.500	-	-	-	-	-	-	-	-	-
Pneumocystis carinii										
<i>P. carinii</i>	MFI > 1.500	-	-	-	-	-	-	-	-	-
RPV										
RPV purified virus	MFI > 2.500	-	-	-	-	-	-	-	-	-
NS1 ¹	MFI > 3.750	-	-	-	-	-	-	-	-	-
RMV										
RMV VP2 recombinant	MFI > 2.000	-	-	-	-	-	-	-	-	-
NS1 ¹	MFI > 3.750	-	-	-	-	-	-	-	-	-
KRV										
KRV purified virus	MFI > 4.250	-	-	-	-	-	-	-	-	-

If you have questions, please call our toll free number at 1-800-669-0825 or e-mail us at IdxBioAnalytics@idexx.com.

	Baseline	113-F	114-C	114-D	114-E	112-A	112-B	112-C	112-D	112-E
NS1 ¹	MFI > 3.750	-	-	-	-	-	-	-	-	-
H1										
H1 purified virus	MFI > 1.750	-	-	-	-	-	-	-	-	-
NS1 ¹	MFI > 3.750	-	-	-	-	-	-	-	-	-
PVM										
PVM purified virus	MFI > 2.500	-	-	-	-	-	-	-	-	-
RCV/SDAV										
RCV/SDAV purified virus	MFI > 3.750	-	-	-	-	-	-	-	-	-
RCV/SDAV Spike	MFI > 3.750	-	-	-	-	-	-	-	-	-
REO3										
REO3 purified virus	MFI > 4.900	-	-	-	-	-	-	-	-	-
RTV										
RTV purified virus	MFI > 2.000	-	-	-	-	-	-	-	-	-
TMEV purified virus	MFI > 2.000	-	-	-	-	-	-	-	-	-
Sendai										
Sendai purified virus	MFI > 3.750	-	-	-	-	-	-	-	-	-
<i>Clostridium piliforme</i>										
<i>Clostridium piliforme</i> purified bacteria	MFI > 4.950	-	-	-	-	-	-	-	-	-

	Baseline	112-F	112-G
CAR bacillus			
CAR bacillus purified bacteria	MFI > 3.750	-	-
<i>Encephalitozoon cuniculi</i>			
<i>E. cuniculi</i> purified antigen	MFI > 1.200	-	-
IDIR			
IDIR VP6 recombinant	MFI > 4.000	-	-
Hantaan			
Hantaan NP	MFI > 4.000	-	-
LCMV			
LCMV recombinant	MFI > 3.000	-	-
<i>Mycoplasma pulmonis</i>			
<i>M. pulmonis</i> purified bacteria	MFI > 4.250	-	-
MAV1			
MAV1 purified virus	MFI > 3.750	-	-
MAV2			
MAV2 purified virus	MFI > 3.500	-	-
<i>Pneumocystis carinii</i>			
<i>P. carinii</i>	MFI > 1.500	-	-

	Baseline	112-F	112-G
RPV			
RPV purified virus	MFI > 2.500	-	-
NS1 ¹	MFI > 3.750	-	-
RMV			
RMV VP2 recombinant	MFI > 2.000	-	-
NS1 ¹	MFI > 3.750	-	-
KRV			
KRV purified virus	MFI > 4.250	-	-
NS1 ¹	MFI > 3.750	-	-
H1			
H1 purified virus	MFI > 1.750	-	-
NS1 ¹	MFI > 3.750	-	-
PVM			
PVM purified virus	MFI > 2.500	-	-
RCV/SDAV			
RCV/SDAV purified virus	MFI > 3.750	-	-
RCV/SDAV Spike	MFI > 3.750	-	-
REO3			
REO3 purified virus	MFI > 4.900	-	-
RTV			
RTV purified virus	MFI > 2.000	-	-
TMEV purified virus	MFI > 2.000	-	-
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.