

STANDARD OPERATING PROCEDURE #602  
RODENT HEALTH MONITORING PROGRAM

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1. PURPOSE

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The intent of this Standard Operating Procedure (SOP) is the harmonization of practices to facilitate movement of animals between McGill facilities to accommodate the needs of collaborative research while protecting resident colonies from infectious contamination.

- 1.1. The critical components covered by this harmonization are:
  - 1.1.1. Bioexclusion practices
  - 1.1.2. Quarantine procedures
  - 1.1.3. Health monitoring program
- 1.2. Bioexclusion practices and Quarantine procedures will be addressed in separate SOPs.

2. RESPONSIBILITY

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Animal care staff, facility manager, veterinary care staff.

3. ENVIRONMENTAL SAMPLING PROCEDURES

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- 3.1. Sample the Individually Ventilated Caging (IVC) system rack exhaust plenums – Exhaust Air Duct (EAD) samples:
  - 3.1.1.



3.9. Agents monitored for rats:

PCRLevel 1	Rat parvoviruses (RPV, HKRV, RMV), Sialodacryoadenitis virus/Rat coronavirus (SDAV/RCV), Theilovirus (RTV), Fur mites (Myobia, Myocoptes, Radfordia), Pinworms (Aspicularis, Syphacia)
PCRLevel2	Rat parvoviruses (RPV, HKRV, RMV), Sialodacryoadenitis virus/Rat coronavirus (SDAV/RCV), Theilovirus (RTV), Pneumonia virus of mice (PVM), Sendai virus, Lymphocytic Choriomeningitis Virus (LCMV), Hantavirus, Mouse Adenovirus (MAV/MAV2), Reoviruses, CAR Bacillus, Clostridium piliforme (Tyzzer's), Mycoplasma pulmonis, Bordetella bronchiseptica, Citrobacter rodentium, Corynebacterium kutscheri, Klebsiella spp., Rodentibacter, Pseudomonas aeruginosa, Salmonella, Streptobacillus moniliformis, Streptococcus pneumoniae, Beta Hemolytic Streptococcus groups A, B, C, G, Fur mites (Myobia, Myocoptes, Radfordia), Pinworms (Aspicularis, Syphacia), Spironucleus muris

4. SENTINEL ANIMAL PROCEDURES

4.1. Sentinel animals:

- 4.1.1. Outbred females are used: CD-1, SW or ICR mice (4-6 weeks old) and SD or LE rats (4-6 weeks old).
- 4.1.2. At the discretion of the facility veterinarian, immunodeficient mice can be used in addition. They are recommended in areas where animals are produced for redistribution (e.g. transgenic core facility).
- 4.1.3. 3-5 sentinel mice are housed per cage. 2 sentinel rats are housed per cage.
- 4.1.4. Ratio: 1 cage of sentinels per approximately 70 to 100 cages.
- 4.1.5. Identify sentinel cages with a "SENTINEL" cage card.

4.2. Exposure:

4.2.1. Dirty bedding transfer for mice:

- 4.2.1.1. Transfer one plastic teaspoon (approximately 5mL) of dirty bedding from every cage monitored 1 (e)-aft

- 4.5.3. Collect fur/skin swab by thoroughly swabbing each animal on the head between ears, back/rump, inguinal area and perianal area. One swab can be used to sample more than one mouse, e.g., all the mice in one cage. Clip the swab head and place in the vial/tube.
- 4.5.4. Do not pool swabs and feces in the same vial/tube.
- 4.5.5. Collecting samples from sentinel animals:
  - 4.5.5.1. Sample each sentinel animal.
- 4.5.6. Collecting samples from index animals:
  - 4.5.6.2. Select 10 random cages (preferably weanlings) per housing room. Samples from the 10 selected cages will be pooled into one single sample for submission.
- 4.6. Helicobacter:
  - 4.6.1. Helicobacter testing is performed by PCR.
  - 4.6.2. Select 10 random cages (preferably weanlings) per housing room.
  - 4.6.3. Collect one fresh fecal pellet with no bedding material from one animal per cage selected.
  - 4.6.4. Fecal pellets can be submitted in the same vial/tube as one single sample.

4.9. Agents monitored for mice:

Serology Panel 1	Mouse rotavirus (EDIM), Mouse coronavirus (MHV), Murine norovirus (MNV), Mouse parvoviruses (MPV1, MPV2, MPV5, MVM, NS1), Mouse Theilovirus (TMEV, GDVII)
Serology Panel 2	Mouse rotavirus (EDIM), Mouse coronavirus (MHV), Murine norovirus (MNV), Mouse parvoviruses (MPV1, MPV2, MPV5, MVM, NS1), Mouse Theilovirus (TMEV, GDVII) CAR Bacillus Clostridium piliforme (Tyzzer's), Ectromella (Mousepox), Lymphocytic Choriomeningitis Virus (LCMV), Mycoplasma pulmonis, Mouse Adenovirus (MAV-1 & MAV2), Pneumonia Virus of Mice (PVM), Reovirus Sendai
Parasites/Protozoa/Fungi Panel 1	Fur mites (Myobia, Myocoptes, Radfordia), Pinworms (Aspicularis, Syphacia), Spironucleus muris, and Pneumocystis (immunodeficient mice)
Parasites/Protozoa/Fungi Panel 2	Cryptosporidium, Demodex, Entamoeba, Fur mites (Myobia, Myocoptes, Radfordia), Pinworms (Aspicularis, Syphacia), Giardia, Pneumocystis, Spironucleus muris, Tritrichomonas
Microbiology Panel 1	Helicobacter spp., Bordetella bronchiseptica, Citrobacter rodentium, Corynebacterium kutscheri, Klebsiella spp., Rodentibacter spp., Pseudomonas aeruginosa, Salmonella, Streptobacillus moniliformis, Streptococcus pneumoniae, Beta Hemolytic Streptococcus groups A, B, C, G, Corynebacterium bovis (immunodeficient mice)
Microbiology Panel 2	Helicobacter spp., Bordetella bronchiseptica, Bordetella hinzii, Campylobacter, Citrobacter rodentium, Corynebacterium bovis, Corynebacterium kutscheri, Klebsiella spp., Rodentibacter spp, Proteus mirabilis, Pseudomonas aeruginosa, Salmonella, Staphylococcus aureus, Streptobacillus moniliformis, Streptococcus pneumoniae, Beta Hemolytic Streptococcus groups A, B, C, G

4.10. Testing schedule for 5md ( ) Tj EMC ET /Artifact <</MCID 44 > -0. Tw 1.398 0 Td/MCID 44 > -0 0 9.96 187.68 484.44 Tm |

4.12. Testing schedule for hamsters

BIOEXCLUSION LEVEL 1 & 2	
INTERMEDIATE TESTING	<ul style="list-style-type: none"> <li>x Serology</li> <li>x Fur mites, pinworms (sentinels and index animals)</li> <li>x Replace sentinels</li> </ul>
YEARLY TESTING	<ul style="list-style-type: none"> <li>x Serology</li> <li>x Fur mites, pinworms, Spironucleus (sentinels and index animals)</li> <li>x Microbiology (optional)</li> <li>x Replace sentinels</li> </ul>

4.13. Agents monitored for hamsters:

Serology	Lymphocytic Choriomeningitis Virus
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## SOP REVISION HISTORY

DATE