### Pathogens and Other Organisms - Excluded from All Barriers (Shipping Stopped)

If one of these organisms is found in any JMCRS area, all shipments are suspended and customers are notified.*

<table>
<thead>
<tr>
<th>Organism</th>
<th>Sample Tested</th>
<th>Test Method</th>
<th>Frequency</th>
<th>Dec '18</th>
<th>Oct '18</th>
<th>Sep '18</th>
<th>Jul '18</th>
<th>Previous 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Viruses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Ectromelia virus</td>
<td>Serum</td>
<td>MFI</td>
<td>6 weeks</td>
<td>0/14</td>
<td>0/13</td>
<td>0/17</td>
<td>0/18</td>
<td>0/155</td>
</tr>
<tr>
<td>GDVII (Theiler’s) virus</td>
<td>Serum</td>
<td>MFI</td>
<td>6 weeks</td>
<td>0/14</td>
<td>0/13</td>
<td>0/17</td>
<td>0/18</td>
<td>0/155</td>
</tr>
<tr>
<td>Hantaan virus</td>
<td>Serum</td>
<td>MFI</td>
<td>6 weeks</td>
<td>0/14</td>
<td>0/13</td>
<td>0/17</td>
<td>0/18</td>
<td>0/155</td>
</tr>
<tr>
<td>K virus</td>
<td>Serum</td>
<td>ELISA</td>
<td>annually</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0/19</td>
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<tr>
<td>LDH elevating virus (LDEV)</td>
<td>Serum</td>
<td>Enzyme</td>
<td>annually</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0/10</td>
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<tr>
<td>Lymphocytic choriomeningitis (LCMV)</td>
<td>Serum</td>
<td>MFI</td>
<td>6 weeks</td>
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<td>0/13</td>
<td>0/17</td>
<td>0/18</td>
<td>0/155</td>
</tr>
<tr>
<td>Mouse adenovirus (MADV)</td>
<td>Serum</td>
<td>MFI</td>
<td>6 weeks</td>
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<td>0/13</td>
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<td>0/155</td>
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<td>Mouse cytomegalovirus (MCMV)</td>
<td>Serum</td>
<td>MFI</td>
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<td>0/13</td>
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<td>0/18</td>
<td>0/155</td>
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<td>Mouse hepatitis virus (MHV)</td>
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<td>MFI</td>
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<td>0/13</td>
<td>0/17</td>
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<td>0/155</td>
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<td>Mouse minute virus (MMV)</td>
<td>Serum</td>
<td>MFI</td>
<td>6 weeks</td>
<td>0/14</td>
<td>0/13</td>
<td>0/17</td>
<td>0/18</td>
<td>0/155</td>
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<td>Mouse norovirus (MNV)</td>
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<td>MFI</td>
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<td>0/13</td>
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<td>0/155</td>
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<tr>
<td>Mouse parvovirus (MPV)</td>
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<td>0/13</td>
<td>0/17</td>
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<td>0/155</td>
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<td>Mouse parvovirus (MPV)*</td>
<td>Lymph node</td>
<td>PCR</td>
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<td>0/13</td>
<td>0/10</td>
<td>0/08</td>
<td>0/68</td>
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<td>Mouse thymic virus (MTV)</td>
<td>Serum</td>
<td>IFA</td>
<td>quarterly</td>
<td>0/14</td>
<td>-</td>
<td>-</td>
<td>0/18</td>
<td>0/84</td>
</tr>
<tr>
<td>Pneumonia virus of mice (PVM)</td>
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<td>MFI</td>
<td>6 weeks</td>
<td>0/14</td>
<td>0/13</td>
<td>0/17</td>
<td>0/18</td>
<td>0/155</td>
</tr>
<tr>
<td>Polyoma virus</td>
<td>Serum</td>
<td>ELISA</td>
<td>annually</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0/19</td>
</tr>
<tr>
<td>Reoovirus 3 (REO 3)</td>
<td>Serum</td>
<td>MFI</td>
<td>6 weeks</td>
<td>0/14</td>
<td>0/13</td>
<td>0/17</td>
<td>0/18</td>
<td>0/155</td>
</tr>
<tr>
<td>Rotavirus (EDIM)</td>
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<td>MFI</td>
<td>6 weeks</td>
<td>0/14</td>
<td>0/13</td>
<td>0/17</td>
<td>0/18</td>
<td>0/155</td>
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<tr>
<td>Sendai virus</td>
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<td>MFI</td>
<td>6 weeks</td>
<td>0/14</td>
<td>0/13</td>
<td>0/17</td>
<td>0/18</td>
<td>0/155</td>
</tr>
<tr>
<td><strong>Bacteria &amp; Mycoplasma</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bordetella spp.</td>
<td>Oropharynx</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/27</td>
<td>0/26</td>
<td>0/27</td>
<td>0/26</td>
<td>0/27</td>
</tr>
<tr>
<td>CAR bacillus</td>
<td>Serum</td>
<td>MFI</td>
<td>6 weeks</td>
<td>0/14</td>
<td>0/13</td>
<td>0/17</td>
<td>0/18</td>
<td>0/155</td>
</tr>
<tr>
<td>Citrobacter rodentium</td>
<td>Intestine or feces</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/183</td>
<td>0/185</td>
<td>0/152</td>
<td>0/141</td>
<td>0/1127</td>
</tr>
<tr>
<td>Clostridium piliforme</td>
<td>Serum</td>
<td>ELISA</td>
<td>quarterly</td>
<td>0/14</td>
<td>-</td>
<td>-</td>
<td>0/18</td>
<td>0/84</td>
</tr>
<tr>
<td>Corynebacterium bovis</td>
<td>Oropharynx/skin</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/40</td>
<td>0/39</td>
<td>0/37</td>
<td>0/34</td>
<td>0/344</td>
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<tr>
<td>Corynebacterium kutscheri</td>
<td>Oropharynx</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/27</td>
<td>0/26</td>
<td>0/27</td>
<td>0/26</td>
<td>0/284</td>
</tr>
<tr>
<td>Helicobacter spp.</td>
<td>Intestine or feces</td>
<td>PCR</td>
<td>6 weeks</td>
<td>0/06</td>
<td>0/06</td>
<td>0/06</td>
<td>0/06</td>
<td>0/54</td>
</tr>
<tr>
<td>Mycoplasma pulmonis</td>
<td>Serum</td>
<td>MFI</td>
<td>6 weeks</td>
<td>0/14</td>
<td>0/13</td>
<td>0/17</td>
<td>0/18</td>
<td>0/155</td>
</tr>
<tr>
<td>Pasteurella spp.</td>
<td>Oropharynx</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/27</td>
<td>0/26</td>
<td>0/27</td>
<td>0/26</td>
<td>0/27</td>
</tr>
<tr>
<td>Salmonella spp.</td>
<td>Intestine or feces</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/183</td>
<td>0/185</td>
<td>0/152</td>
<td>0/141</td>
<td>0/1127</td>
</tr>
<tr>
<td>Streptobacillus moniliformis</td>
<td>Oropharynx</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/27</td>
<td>0/26</td>
<td>0/27</td>
<td>0/26</td>
<td>0/27</td>
</tr>
</tbody>
</table>

*Additional details regarding our health monitoring program and shipping policy.

†The indicated tests are only performed in rooms that house immunodeficient mice.
<table>
<thead>
<tr>
<th>Organism Sample Tested</th>
<th>Test Method</th>
<th>Frequency</th>
<th>Dec 3 ’18</th>
<th>Oct 22 ’18</th>
<th>Sep 10 ’18</th>
<th>Jul 30 ’18</th>
<th>Previous 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PARASITES &amp; PROTOZOA</strong></td>
<td>Encephalitozoon cuniculi</td>
<td>Serum MFI</td>
<td>6 weeks</td>
<td>0/14</td>
<td>0/13</td>
<td>0/17</td>
<td>0/18</td>
</tr>
<tr>
<td>Ectoparasites (fleas, lice, mites)</td>
<td>Fur Visual</td>
<td>6 weeks</td>
<td>0/06</td>
<td>0/06</td>
<td>0/06</td>
<td>0/06</td>
<td>0/48</td>
</tr>
<tr>
<td>Endoparasites (tapeworms, pinworms, and other helminths)</td>
<td>Intestine or cecum Visual</td>
<td>6 weeks</td>
<td>0/06</td>
<td>0/06</td>
<td>0/06</td>
<td>0/06</td>
<td>0/48</td>
</tr>
<tr>
<td>Follicle mites</td>
<td>Subcutis Visual</td>
<td>6 weeks</td>
<td>0/27</td>
<td>0/26</td>
<td>0/27</td>
<td>0/26</td>
<td>0/233</td>
</tr>
<tr>
<td>Opportunistic protozoa (e.g., Giardia, Spironucleus)</td>
<td>Intestine Microscopy</td>
<td>6 weeks</td>
<td>0/06</td>
<td>0/06</td>
<td>0/06</td>
<td>0/06</td>
<td>0/48</td>
</tr>
</tbody>
</table>

**OPPORTUNISTIC ORGANISMS MONITORED (SHIPPING NOT STOPPED)**

All of these organisms are excluded from JMCRS maximum and high barriers, and most are excluded from standard barrier areas. When a confirmed finding of an excluded organism is made, an investigation is undertaken to identify and eliminate all infected mice from the barrier. Positive results—including results from investigations—are noted in this report, but shipping from the area is not suspended.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Sample Tested</th>
<th>Test Method</th>
<th>Frequency</th>
<th>Dec 3 ’18</th>
<th>Oct 22 ’18</th>
<th>Sep 10 ’18</th>
<th>Jul 30 ’18</th>
<th>Previous 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Klebsiella pneumoniae</td>
<td>Oropharynx, intestine, or feces</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/183</td>
<td>0/185</td>
<td>0/152</td>
<td>0/141</td>
<td>0/1144</td>
</tr>
<tr>
<td>Klebsiella spp. other than K. pneumoniae</td>
<td>Oropharynx, intestine, or feces</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/183</td>
<td>0/185</td>
<td>0/152</td>
<td>0/141</td>
<td>0/1144</td>
</tr>
<tr>
<td>Nonpathogenic protozoa (e.g., Trichomonads)</td>
<td>Intestine Microscopy</td>
<td>6 weeks</td>
<td>0/06</td>
<td>0/06</td>
<td>0/06</td>
<td>0/06</td>
<td>0/48</td>
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</tr>
<tr>
<td>Pneumocystis murina †</td>
<td>Lung PCR</td>
<td>6 weeks</td>
<td>0/13</td>
<td>0/13</td>
<td>0/10</td>
<td>0/08</td>
<td>0/68</td>
<td></td>
</tr>
<tr>
<td>Proteus mirabilis</td>
<td>Oropharynx, intestine, or feces</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/183</td>
<td>0/185</td>
<td>0/152</td>
<td>0/141</td>
<td>0/1144</td>
</tr>
<tr>
<td>Pseudomonas spp.</td>
<td>Intestine or feces</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/183</td>
<td>0/185</td>
<td>0/152</td>
<td>0/141</td>
<td>0/1127</td>
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<tr>
<td>Staphylococcus aureus</td>
<td>Oropharynx</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/27</td>
<td>0/26</td>
<td>0/27</td>
<td>0/26</td>
<td>0/281</td>
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<tr>
<td>Streptococcus pneumoniae</td>
<td>Oropharynx</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/27</td>
<td>0/26</td>
<td>0/27</td>
<td>0/26</td>
<td>0/281</td>
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<tr>
<td>Beta-hemolytic Streptococcus spp. (non-group D)</td>
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<td>Culture</td>
<td>6 weeks</td>
<td>0/27</td>
<td>0/26</td>
<td>0/27</td>
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<table>
<thead>
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<th>Gross Pathology</th>
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<th>Oct 22 ’18</th>
<th>Sep 10 ’18</th>
<th>Jul 30 ’18</th>
<th>Previous 12 months</th>
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<tbody>
<tr>
<td>Necropsy findings</td>
<td>Exam, histopath</td>
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<td>0/27</td>
<td>0/26</td>
<td>0/27</td>
<td>0/26</td>
<td>0/229</td>
</tr>
</tbody>
</table>

All tests were performed by The Jackson Laboratory

James R. Fahey, MS, PhD, DVM, DACVM
Chief of Diagnostic Services & Associate Director
Comparative Medicine & Quality

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