Staphylococcus aureus investigation in Room AX11 successfully completed

November 2, 2018

On October 12, a positive finding for Staphylococcus aureus had been made in oropharyngeal cultures from several mice in the same box in The Jackson Laboratory-Bar Harbor room AX11. The affected animals had been culled, and a more comprehensive investigation was undertaken to determine the extent of the presence of this organism in the room, and to remove any other affected animals. A total of 9 positive boxes were found. The animals in these boxes were culled and several rounds of additional testing were performed in the area. After at least three rounds of negative findings in the affected sections, the investigation was concluded. The current health report for AX11 lists all the positive findings that had been made, and the subsequent testing that was performed after the publication of this health report found no additional positives. You can view the current health report at http://jaxmice.jax.org/health/ax11.pdf.

The Jackson Laboratory is committed to producing the healthiest, most genetically stable and well-defined research mice possible. Our Biosecurity Program is designed to ensure the health and well-being of our animal colonies by preventing the entry and spread of infectious agents and by rapidly eliminating any contaminants we have committed to excluding. We are also committed to full disclosure of information to users of JAX Mice. Please see http://jaxmice.jax.org/genetichealth/health_program.html for more information on our Animal Health Program and communications policies.

If you have any questions, please contact our veterinary staff at 1-207-288-6205.

Statement Prepared by:

Raymond A. Vonder Haar, Ph.D.
Senior Manager, Biosecurity
Comparative Medicine & Quality
The Jackson Laboratory
Tel: 207-288-6590
**Organism** | **Sample Tested** | **Test Method** | **Frequency** | **Oct 22 '18** | **Sep 10 '18** | **Jul 30 '18** | **Jun 18 '18** | **Previous 12 months**
--- | --- | --- | --- | --- | --- | --- | --- | ---
**VIRUSES**
Ectromelia virus | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
GDVII (Theiler’s) virus | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Hantaan virus | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/18 | 0/143
K virus | Serum | ELISA | annually | - | - | - | - | 0/30
LDH elevating virus (LDEV) | Serum | Enzyme | annually | - | - | - | - | 0/10
Lymphocytic choriomeningitis (LCMV) | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Mouse adenovirus (MAV) | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Mouse cytomegalovirus (MCMV) | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Mouse hepatitis virus (MHV) | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Mouse minute virus (MMV) | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Mouse norovirus (MVN) | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Mouse parvovirus (MPV) | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Mouse parvovirus (MPV)† | Lymph node | PCR | 6 weeks | 0/07 | 0/06 | 0/06 | 0/06 | 0/61
Mouse thymic virus (MTV) | Serum | IFA | quarterly | - | - | 0/18 | 0/14 | 0/58
Pneumonia virus of mice (PVM) | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Polyoma virus | Serum | ELISA | annually | - | - | - | - | 0/30
Reovirus 3 (REO 3) | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Rotavirus (EDIM) | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Sendai virus | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135

**BACTERIA & MYCOPLASMA**
Bordetella spp. | Oropharynx | Culture | 6 weeks | 0/319 | 0/22 | 0/24 | 0/22 | 0/198
CAR bacillus | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Citrobacter rodentium | Intestine or feces | Culture | 6 weeks | 0/200 | 0/198 | 0/191 | 0/250 | 0/1768
Clostridium piliforme | Serum | ELISA | quarterly | - | - | 0/18 | 0/14 | 0/58
Corynebacterium bovis | Oropharynx or skin | Culture | 6 weeks | 0/321 | 0/25 | 0/25 | 0/26 | 0/225
Corynebacterium kutscheri | Oropharynx | Culture | 6 weeks | 0/319 | 0/22 | 0/24 | 0/22 | 0/198
Helicobacter spp. | Intestine or feces | PCR | 6 weeks | 0/06 | 0/06 | 0/06 | 0/06 | 0/54
Mycoplasma pulmonis | Serum | MFI | 6 weeks | 0/18 | 0/16 | 0/18 | 0/14 | 0/135
Pasteurella spp. | Oropharynx | Culture | 6 weeks | 0/319 | 0/22 | 0/24 | 0/22 | 0/198
Salmonella spp. | Intestine or feces | Culture | 6 weeks | 0/200 | 0/198 | 0/191 | 0/250 | 0/1768
Streptobacillus moniliformis | Oropharynx | Culture | 6 weeks | 0/319 | 0/22 | 0/24 | 0/22 | 0/198

*Additional details regarding our health monitoring program and shipping policy.
†The indicated tests are only performed in rooms that house immunodeficient mice.
### Organism Sample Tested

**PARASITES & PROTOZOA**

<table>
<thead>
<tr>
<th>Organism</th>
<th>Sample Tested</th>
<th>Test Method</th>
<th>Frequency</th>
<th>Oct 22 '18</th>
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<th>Jun 18 '18</th>
<th>Previous 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encephalitozoon cuniculi</td>
<td>Serum</td>
<td>MFI</td>
<td>6 weeks</td>
<td>0/18</td>
<td>0/16</td>
<td>0/18</td>
<td>0/14</td>
<td>0/135</td>
</tr>
<tr>
<td>Ectoparasites (fleas, lice, mites)</td>
<td>Fur</td>
<td>Visual</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>Endoparasites (tapeworms, pinworms, other helminths)</td>
<td>Intestine or cecum</td>
<td>Visual</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>Follicle mites</td>
<td>Subcutis</td>
<td>Visual</td>
<td>6 weeks</td>
<td>0/25</td>
<td>0/22</td>
<td>0/24</td>
<td>0/22</td>
<td>0/198</td>
</tr>
<tr>
<td>Opportunistic protozoa (e.g., Giardia, Spironucleus)</td>
<td>Intestine</td>
<td>Microscopy</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>
</tbody>
</table>

### OPPORTUNISTIC ORGANISMS MONITORED (SHIPPING NOT STOPPED)

All of these organisms are excluded from GRS 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>
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</tr>
</thead>
<tbody>
<tr>
<td>Klebsiella pneumoniae</td>
<td>Oropharynx, intestine, or feces</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/494</td>
<td>0/198</td>
<td>0/191</td>
<td>0/250</td>
<td>0/1768</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>0/494</td>
<td>0/198</td>
<td>0/191</td>
<td>0/250</td>
<td>0/1768</td>
</tr>
<tr>
<td>Nonpathogenic protozoa (e.g., Trichomonads)</td>
<td>Intestine</td>
<td>Microscopy</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>Pneumocystis murina †</td>
<td>Lung</td>
<td>PCR</td>
<td>6 weeks</td>
<td>0/07</td>
<td>0/06</td>
<td>0/06</td>
<td>0/08</td>
<td>0/61</td>
</tr>
<tr>
<td>Proteus mirabilis</td>
<td>Oropharynx, intestine, or feces</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/494</td>
<td>0/198</td>
<td>0/191</td>
<td>0/250</td>
<td>0/1768</td>
</tr>
<tr>
<td>Pseudomonas spp.</td>
<td>Intestine or feces</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/200</td>
<td>0/198</td>
<td>0/191</td>
<td>0/250</td>
<td>0/1768</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>Oropharynx</td>
<td>Culture</td>
<td>6 weeks</td>
<td>9/319*</td>
<td>0/22</td>
<td>0/24</td>
<td>0/32</td>
<td>42/4001**</td>
</tr>
<tr>
<td>Streptococcus pneumoniae</td>
<td>Oropharynx</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/319</td>
<td>0/22</td>
<td>0/24</td>
<td>0/22</td>
<td>0/198</td>
</tr>
<tr>
<td>Beta-hemolytic Streptococcus spp. (non-group D)</td>
<td>Oropharynx</td>
<td>Culture</td>
<td>6 weeks</td>
<td>0/319</td>
<td>0/22</td>
<td>0/24</td>
<td>0/22</td>
<td>0/198</td>
</tr>
</tbody>
</table>

### Gross Pathology

<table>
<thead>
<tr>
<th>Necropsy findings</th>
<th>Test Method</th>
<th>Frequency</th>
<th>Oct 22 '18</th>
<th>Sep 10 '18</th>
<th>Jul 30 '18</th>
<th>Jun 18 '18</th>
<th>Previous 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exam, histopath</td>
<td>6 weeks</td>
<td>0/25</td>
<td>0/22</td>
<td>0/24</td>
<td>0/22</td>
<td>0/198</td>
</tr>
</tbody>
</table>

* A test & cull effort was initiated to eliminate this organism from this barrier. No additional positives were found, and as of 10/29/18 the investigation was concluded.

** A test & cull effort was initiated to eliminate this organism from this barrier. The testing included sampling of all the currently occupied cages in the room. No additional positives were found, and the investigation was concluded.

For additional information call 207-288-6205.

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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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