**Aedes aegypti**, Strain Black Eye Liverpool, Infected with *Dirofilaria immitis*, Strain Missouri (Frozen)

**Catalog No. NR-48918**
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**For research use only. Not for human use.**

**Contributor:**
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**Manufacturer:**
Filariasis Research Reagent Resource Center supported by Contract HHSN272201000030I, NIH-NIAID Animal Models of Infectious Disease Program

**Product Description:**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Onchocercidae, Dirofilaria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
<td><em>Dirofilaria immitis</em></td>
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<tr>
<td>Strain</td>
<td>Missouri</td>
</tr>
<tr>
<td>Host</td>
<td><em>Aedes aegypti</em>, strain Black Eye Liverpool</td>
</tr>
<tr>
<td>Original Source</td>
<td><em>Dirofilaria immitis</em> (<em>D. immitis</em>), strain Missouri was originally obtained from TRS Laboratories in Athens, Georgia, USA.¹</td>
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</tbody>
</table>

*D. immitis* is a mosquito-borne filarial nematode that causes cardiopulmonary dirofilariasis in wild and domesticated canines and felines, and is the causative parasite of human pulmonary dirofilariasis.² Infection with *D. immitis* is commonly known as heartworm disease. In the case of canines, for which *D. immitis* is best adapted, mosquitoes deposit infective third stage larvae (L3) on the skin which penetrate the host. Maturation from stage L3 to L4 occurs between 3 and 12 days post-infection followed by a subsequent molt producing juvenile adult worms between 50 and 70 days post-infection. The first juvenile adult worms arrive in the pulmonary artery and right ventricle of the heart between 70 and 85 days post-infection and reach sexual maturity approximately 120 days post-infection. Adult females are able to produce and release microfilariae between 6 and 9 months post-infection, which can be taken up by mosquitoes during a blood meal.³

*Aedes aegypti* (*A. aegypti*) is an experimental vector for several filarial parasites, including *Wuchereria bancrofti* and *Brugia* species, that results in lymphatic filariasis when they are transferred to a human host during feeding.² It can also serve as the vector for the causative agent of canine heartworm (*D. immitis*).

**Material Provided:**
NR-48918 consists of up to 300 frozen *A. aegypti*, strain Black Eye Liverpool, infected with *D. immitis*, strain Missouri. If more material is required for your intended use, please contact BEI Customer Services at contact@beiresources.org to request the additional material.

**Packaging/Storage:**
NR-48918 is packaged in containers ranging from 2 mL microtubes to 50 mL conical vials, dependent on the number of mosquitoes requested. Mosquitoes will be flash frozen with liquid nitrogen or an ethanol/dry ice mixture and shipped in insulated boxes with approximately 2.5 kilograms of dry ice. The product should be stored at -20°C to -80°C or colder, depending on desired application.

**Citation:**
Acknowledgment for publications should read “The following reagent was provided by the NIH/NIAID Filariasis Research Reagent Resource Center for distribution by BEI Resources, NIAID, NIH: *Aedes aegypti*, Strain Black Eye Liverpool, Infected with *Dirofilaria immitis*, Strain Missouri (Frozen), NR-48918.”

**Biosafety Level:** 2

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