

**STANDARD OPERATING PROCEDURES**  
**DIVISION OF COMPARATIVE MEDICINE**  
**UNIVERSITY OF SOUTH FLORIDA**

SOP#: 807.1

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**TITLE:** **Zebrafish Health Surveillance**  
**SCOPE:** Research and Animal Care Personnel  
**RESPONSIBILITY:** Facility Manager, Professional and Administrative Staff, Research and Technical Staff  
**PURPOSE:** To Outline the Proper Procedures for the Zebrafish Sentinel Program

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**I. PURPOSE**

1. The Health Surveillance program is designed to detect and monitor the presence of fish pathogens in the main room fish facility and to assess the efficacy of the filtration system and UV lights at preventing the spread of disease. Sentinel tanks are set up at post-filtration locations on the water system. Samples are submitted semi-annually for diagnostic testing.

**II. RESPONSIBILITY**

1. The Facility Manager ensures that staff are aware of the correct sampling and testing procedures.

**III. SENTINEL TESTING INTERVALS**

1. Whole fish are tested every 6 months (January and July) for colony health evaluation. Water and detritus may also be submitted at the discretion of the Facility Veterinarian.
2. Fish who appear diseased may be euthanized and submitted for diagnostic testing at the discretion of the Facility Veterinarian.

**IV. SAMPLING PROCEDURE**

1. From each rack collect 1 mL of detritus (system debris) into a tube from the system tank by the sump and submit frozen with cold packs. Dry ice is not required.
2. Collect 100 mL of water from the system tank on each rack near the drum filter in a plastic container with a tight-fitting lid that will not leak in transit. Water samples are shipped with cold packs in an insulated container by overnight courier.
3. For submission of fish for PCR only: submit frozen fish with sufficient ice packs to ensure that fish remain frozen during transit. Dry ice is not required.

## V. SAMPLE SUBMISSION & TESTING PANELS

1. Submit samples to Facility Manager who will coordinate shipping with the Assistant Director.
2. Samples are tested using the **IDEXX Zebrafish Comprehensive PCR Panel which includes: Mycobacterium abscessus, Mycobacterium chelonae, Mycobacterium fortuitum, Mycobacterium hemophilum, Mycobacterium marinum, Mycobacterium peregrinum, Mycobacterium gordonae, Mycobacterium saopaulense, Edwardsiella ictaluri, Pseudocapillaria tomentosa, Pseudoloma neurophilia, Myxidium streisingeri, Flavobacterium columnare, Ichthyophthirius multifiliis, ISKNV, Piscinoodinium pillulare, Pleistophora hypheobryconis, Zebrafish Piconavirus.**
3. In addition, samples will be submitted for the **Zebrafish Microbiology Panel which includes: Aeromonas dhakensis, Aeromonas hydrophila, Edwardsiella ictaluri, Flavobacterium columnare, Plesiomonas shigelloides, Pseudomonas aeruginosa, Pseudomonas fluorescens, Saprolegnia spp.**

## VI. REFERENCES

1. <https://www.idexxbioanalytics.com/zebrafishsop>

Approved:

Date: