

# IACUC Guidelines for Zebrafish Health Surveillance

*Last Approved: 08/25/23*

*Last Review: 08/25/23*

*Revision History:*

## Standard Operating Procedures

### Overview

The Health Surveillance Program is designed to detect and monitor the presence of fish-borne pathogens in all zebrafish colonies within the University of Wisconsin – Milwaukee facilities. The objective is to assess the efficacy of the filtration system and Ultra-Violet (UV) lights in recirculating systems at preventing the spread of disease as well as to protect the research.

### Use of Sentinels

Sentinels are collected to establish a baseline disease prevalence and to monitor colony health. These tanks are set up at post filtration locations on the water system or fish are collected from the sump or individual tanks as required. Attempts are made to collect a wide variety of ages and disease status. Environmental samples may also be included at the veterinarian's discretion (e.g. live feed, dry feed, pre-filtration, detritus, etc.). Samples can be pooled at the discretion of the veterinarian. Positive pooled samples may require additional testing.

### Veterinarian Responsibilities

Whole fish are tested in-house every six (6) months for colony health evaluation. Environmental samples may also be submitted at the discretion of the facility veterinarian. PI's have the option of also sending the samples to an approved outside laboratory for testing or confirmation. Fishes who appear diseased may be euthanized and submitted for diagnostic testing at the discretion of the facility veterinarian.

## **In-House Testing**

The following pathogens will be tested using Polymerase Chain Reaction (PCR) Testing. During an epidemic, samples may be sent to an outside laboratory for further testing or verification\*.

Mycobacterium abscessus
Mycobacterium chelonae
Mycobacterium fortuitum
Mycobacterium haemophilum
Mycobacterium marinum
Mycobacterium peregrinum
Mycobacterium saopaulense
Mycobacterium gordonae
Edwardsiella ictaluri
Pseudocapillaria tomentosa**
Pseudoloma neurophilia
Myxidium streisingeri***

\*: Charles River Laboratories, IDEXX Laboratories, or VRL Diagnostics

\*\* : May also be manually checked annually with an in-house sucrose fecal float

\*\*\*: expect to receive primers by 2024

If a Principal Investigator (PI) elects not to take part in semi-annual health testing, that colony will be considered low-health status and the veterinarian will not be able to verify colony health status for the purposes of transport or collaboration.

## **Pathogens that are Present in the Facility**

In select isolated areas, *M. chelonae* is present. Room order entry is dictated by room pathogen status. This remains a pathogen we will exclude for when animals are imported.

Picornavirus is considered endemic in all colonies and is not an excluded pathogen. PI's performing gastrointestinal studies should consult with the veterinarian regarding the affects of this pathogen on their research.

## **Necropsies**

A necropsy may be performed with or without histopathology both in-house and/or sent to outside laboratories at the discretion of the veterinarian.

## **Approved Vendors:**

ZIRC

Aquatic Research Organisms

Note: Zebrafish are not to be moved from one UW-Milwaukee/SFS lab to another without veterinary approval.