

**AQUATICS  
ZEBRA FISH  
PCR**

| AGENT  | SAMPLE TYPE               | MYCOBACTERIUM | CORE  | COMPLETE |
|--|---------------------------|---------------|-------|----------|
|  |                           | 10Z08         | 10Z13 | 10Z18    |
| <b>Mycobacterium abscessus</b>                             | Whole Fish, environmental | •             | •     | •        |
| <b>Mycobacterium chelonae</b>                              | Whole Fish, environmental | •             | •     | •        |
| <b>Mycobacterium fortuitum</b>                             | Whole Fish, environmental | •             | •     | •        |
| <b>Mycobacterium gordonae</b>                              | Whole Fish, environmental | •             | •     | •        |
| <b>Mycobacterium haemophilum</b>                           | Whole Fish, environmental | •             | •     | •        |
| <b>Mycobacterium marinum</b>                               | Whole Fish, environmental | •             | •     | •        |
| <b>Mycobacterium peregrinum</b>                            | Whole Fish, environmental | •             | •     | •        |
| <b>Mycobacterium saopaulense</b>                           | Whole Fish, environmental | •             | •     | •        |
| <b>Edwardsiella ictaluri</b>                               | Whole Fish, environmental |               | •     | •        |
| <b>Pseudocapillaria tomentosa</b>                          | Whole Fish, environmental |               | •     | •        |
| <b>Pseudoloma neurophilia</b>                              | Whole Fish                |               | •     | •        |
| <b>Myxidium streinsingeri</b>                              | Whole Fish                |               | •     | •        |
| <b>Flavobacterium columnare</b>                            | Whole Fish, environmental |               |       | •        |
| <b>Ichthyophthirius multifiliis</b>                        | Whole Fish                |               |       | •        |
| <b>ISKNV (Infectious spleen and kidney necrosis virus)</b> | Whole Fish                |               |       | •        |
| <b>Piscinoodinium pillulare</b>                            | Whole Fish                |               |       | •        |
| <b>Pleistophora hyphessobryconis</b>                       | Whole Fish                |               |       | •        |
| <b>Zebrafish Picornavirus</b>                              | Whole Fish                |               | •     | •        |

**INDIVIDUAL ZEBRAFISH PCR**

| CODE  | AGENT  | SAMPLE TYPE               |
|-------|--|---------------------------|
| 10551 | <b>Mycobacterium abscessus</b>                             | Whole Fish, environmental |
| 10552 | <b>Mycobacterium chelonae</b>                              | Whole Fish, environmental |
| 10553 | <b>Mycobacterium fortuitum</b>                             | Whole Fish, environmental |
| 10554 | <b>Mycobacterium gordonae</b>                              | Whole Fish, environmental |
| 10555 | <b>Mycobacterium haemophilum</b>                           | Whole Fish, environmental |
| 10556 | <b>Mycobacterium marinum</b>                               | Whole Fish, environmental |
| 10557 | <b>Mycobacterium peregrinum</b>                            | Whole Fish, environmental |
| 10558 | <b>Mycobacterium saopaulenses</b>                          | Whole Fish, environmental |
| 10577 | <b>Mycobacterium genus (spp.)</b>                          | Whole Fish, environmental |
| 10559 | <b>Edwardsiella ictaluri</b>                               | Whole Fish, environmental |
| 10560 | <b>Flavobacterium columnare</b>                            | Whole Fish, environmental |
| 10561 | <b>Ichthyophthirius multifiliis</b>                        | Whole Fish                |
| 10562 | <b>ISKNV (Infectious spleen and kidney necrosis virus)</b> | Whole Fish, environmental |
| 10563 | <b>Myxidium streinsingeri</b>                              | Whole Fish                |
| 10564 | <b>Piscinoodinium pillulare</b>                            | Whole fish                |
| 10565 | <b>Pleistophora hyphessobryconis</b>                       | Whole Fish, environmental |
| 10566 | <b>Pseudocapillaria tomentosa</b>                          | Whole Fish, environmental |
| 10567 | <b>Pseudoloma neurophilia</b>                              | Whole Fish                |

**ZEBRAFISH MICROBIOLOGY PANEL**

| AGENTS (CODE 80Z01)             | SAMPLE TYPE                                     |
|---------------------------------|---|
| <b>Aeromonas dhakensis</b>      | Aseptic swab, environmental, tissue, whole fish |
| <b>Aeromonas hydrophila</b>     | Aseptic swab, environmental, tissue, whole fish |
| <b>Edwardsiella ictaluri</b>    | Aseptic swab, tissue, whole fish                |
| <b>Flavobacterium columnare</b> | Skin swab, tissue, whole fish                   |
| <b>Plesiomonas shigelloides</b> | Aseptic swab, environmental, tissue, whole fish |
| <b>Pseudomonas aeruginosa</b>   | Aseptic swab, environmental, tissue, whole fish |
| <b>Pseudomonas fluorescens</b>  | Aseptic swab, environmental, tissue, whole fish |
| <b>Saprolegnia spp.</b>         | Skin swab, environmental, tissue, whole fish    |
| <b>Other Bacteria</b>           | Aseptic swab, environmental, tissue, whole fish |

**ZEBRAFISH PATHOLOGY SERVICES**

| SERVICE                         | SAMPLE PREPARATION   | SHIPPING CONDITION                                       |
|---------------------------------|--|--|
| <b>NECROPSY</b>                 | Ship live fish in heavy duty bladders or doubled plastic bags<br>Bags should be 1/3 water 2/3 air  | Overnight in insulated containers at ambient temperature |
| <b>HISTOPATHOLOGY</b>           | Open ventral cavity of euthanized fish. Place whole fish in 10%NBF, Davidsons, or Bouins fixative. | Overnight at ambient temperature                         |
| <b>HISTOPATHOLOGY &amp; PCR</b> | Flash freeze fish in liquid nitrogen. Flatten fish in foil wrap. Label foil.                       | Overnight on dry ice                                     |

**Zebrafish Necropsy** will include an external exam of the fish for malformities and lesions. The gills, heart, liver, kidney, intestines, swim bladder, gonads, and brain will be examined for lesions and parasites. Samples may be taken for bacterial cultures and/or PCR testing of infectious agents. Fish may be placed in 10% formalin, Davidson's fixative, or Bouin's if histopathology is required.

**Zebrafish Histopathology** routine services include whole fish processing, embedding, and slide production. Slides will be stained with H&E stain and include all major organs of the fish including the surrounding connective tissue. An acid-fast stain may be requested if a bacterial infection is suspected. A pathologist evaluation of each fish will be presented in a report format. Annotated microphotographs are available at an additional cost.