

CONFIDENTIAL

GUIDELINES ON THE USE OF ZEBRAFISH AND MEDAKA EMBRYOS/LARVAE

The use of live vertebrate animals for research, teaching and testing (scientific purposes) is regulated by the Animals and Birds Act – Animals and Birds (Care and Use of Animals for Scientific Purposes) Rules 2004 and the NACLAR Guidelines 2022.

The Act and NACLAR Guidelines cover all live vertebrates; including fish, amphibians, reptiles, birds and non-human mammals, as well as cephalopods. As a general guide, when the embryos and fetuses of these animals are at the developmental stage where they begin to feel pain, they become covered by the NACLAR Guidelines. NACLAR does not prescribe this exact day or stage of development. The Principal Investigator (PI) and the Institutional Animal Care and Use Committee (IACUC) are responsible for developing policies in line with current best practices and scientific literature.

Eggs must be destroyed before hatching, unless hatching is a requirement of the experiment. The IACUC must approve the arrangements made for hatchlings.

Zebrafish embryo or hatched larva in the yolk sac stage up to and including 5 days post-fertilization and medaka embryo or hatched larva up to and including 3 days post-hatching are not considered “live vertebrate animals” based on the molecular development of the zebrafish and medaka embryo. The following guidelines address the use of zebrafish and medaka embryos and larvae and should be appropriately adjusted for other fish species according to the rate of embryonic / larval development.

Researchers using zebrafish and/or medaka embryos and larvae must inform the IACUC by means of the “Notice of Intent - Use of Embryos for Scientific Purposes” form if the zebrafish and/or medaka embryos/larvae will be euthanized up to and including 5 days post-fertilization and 3 days posthatching respectively. The research will not be subjected to IACUC review, unless specifically requested by the researcher. If zebrafish and medaka larvae are to be euthanized beyond 5 days post-fertilization and 3 days post-hatching respectively, the research must be subjected to IACUC review.

Revision	Author	IACUC approval date
Last reviewed	Dr Foo Tet Wei, John	18 August 2014
P303.01. Reviewed to: 1. ensure policies are in compliance with the NACLAR Guidelines 2022 and the updated Animals and Birds (Care and Use of Animals for Scientific Purposes) Rules 2004; and 2. up-to-date with current practices	Dr Chew Li Li IACUC	3 January 2023
Changes made to include “and the NACLAR Guidelines 2022 Eggs must be destroyed before hatching, unless hatching is a requirement of the experiment. The IACUC must approve the arrangements made for hatchlings.		
P303-02. Administrative correction to indicate “up to and including 5 days post-fertilization” for zebrafish and “up to and including 3 days post-hatching” for medaka.	Dr Lois Zitzow Dr Chew Li Li	18 March 2024