

**Zebrafish and Xenopus Inclusion in  
IACUC Protocols**  
IACUP Policy  
Effective Date: November 2019



**I. Purpose**

UCSF is committed to ensuring that all animals used in research receive adequate oversight. This policy has been developed to ensure that UCSF complies with the PHS Policy on the Care and Use of Laboratory Animals.

**II. Regulatory or Accreditation Authority**

*PHS Policy on the Care and Use of Laboratory Animals, III. A. **Animal*** - Any live, vertebrate animal used or intended for use in research, research training, experimentation, or biological testing or for related purposes.

**III. Scope**

This policy applies to all research conducted on Zebrafish and Xenopus at UCSF.

**IV. Policy**

Public Health Service policy requires that all live vertebrate animals be included in the UCSF IACUC approved protocol. The NIH Office of Laboratory Animal Welfare (OLAW) considers fish species to be "live vertebrate animals" at "hatching." Although this is an imprecise stage in zebrafish, OLAW considers zebrafish hatching to occur at 72 hours/3 days post fertilization (dpf).

1. Zebrafish 0-3 days post fertilization (dpf) are not considered live vertebrate animals and do not need to be included in Section C of your IACUC protocol. Description of their use may nonetheless be necessary as part of the justification for numbers of adult breeding zebrafish (Section C: Animals).
2. Zebrafish  $\geq 3$  dpf (i.e. 72 hours or older) are considered live vertebrate animals and must be included with their numbers justified in the IACUC protocol.
3. Xenopus at stage 44 (e.g. 3 days, 20 hours post-fertilization at 23° C for *x. laevis* <sup>A</sup>) are considered live vertebrate animals and must be included with their numbers justified in the IACUC protocol.

**SPECIAL CONSIDERATIONS FOR PAIN CATEGORIZATION OF ZEBRAFISH**

1. Zebrafish from 3-8 dpf are all considered Category C animals, as these stages have not been shown to perceive pain or distress.

2. Zebrafish >8 dpf are categorized based on the specific procedures described in the protocol.