

	POLICY	Policy on Zebrafish Housing Density Requirements
	Approved by:	CMRC IACUC Committee
	Date Issued: 3/16/10	Approved: 3/16/10
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	Date Last Revised: Initial Issue	Page 1 of 2

TITLE	:	Policy on Zebrafish Housing Density Requirements
SCOPE	:	All CMRC animal users working with zebrafish in research.
SOP OWNER	:	IACUC
PURPOSE	:	To describe criteria by which the IACUC will consider zebrafish tanks to be over the density requirements.
RELATED SOPS	:	None

I. General

Overcrowding in zebrafish tanks can be detrimental to the animals' health due to a decrease in water quality and elevated ammonia levels in the tanks. Further, overcrowding can result in increased stress, susceptibility to disease and fish injury.

Housing densities for zebrafish are based on recommendations published in *The Guide for the Care and Use of Laboratory Animals (The Guide)*¹ and the Zebrafish International Resource Center². All institutions that receive funds from the National Institutes of Health (NIH) and other Public Health Service Agencies (PHS) are required to follow the recommendations of *The Guide*. In addition to jeopardizing the animals' health and well being, zebrafish housing densities in excess of these standards is considered noncompliance with federal regulations.

II. Policy

Definition of Overcrowding

Tanks are considered to be overcrowded if the number of fish for each age group exceeds the maximum density as follows:

Age	Small tank (1.6 L)	Small tank (1.8 L) room 259	Medium tank 2.8 L	Large tank 6 L
5 to 30 days old larvae	80	90	140	-
1 to 4 month old fish	20	23	35	-
Adults	7	8	14	30

Resolution of Overcrowding

In an effort to maintain a healthy fish housing environment, sick (as determined by the PI, such as sluggish, swollen zebrafish), and old fish (more than two years old) must be euthanized in accordance with approved methods in the IACUC protocol, unless they are part of a long term research protocol. Overcrowded tanks over the maximum density standards indicated above, must be separated by the principal investigator.

The Research Support Facility, (RSF), staff and fish facility users are required to notify the Director, RSF on overcrowded tanks based on the above density table. Investigators will be notified at least by email of

tanks that are determined to be over the density standards. The investigator will have two full business days to resolve the overcrowding. If the overcrowding is not addressed by the PI by the morning after the second full business day, RSF staff will perform the separation and the investigator will again be notified and charged a fee.

In cases where the severity of the overcrowding represents an imminent threat to the animals' health or well-being (as determined by a veterinarian), the animals in the tank will be separated immediately.

References

1. National Research Council (1996) *Guide for the Care and Use of Laboratory Animals*. National Academy Press, Washington, D.C.
2. *Matthews M, Trevarrow B, Ph D, Matthews JDVM, Ph D. 2002. A virtual tour of the Guide for zebrafish users. *Lab Anim (NY)* 3:34-40.