

## Animal-based Research at MacEwan University

To better align with the Canadian Council on Animal Care (CCAC) priorities regarding transparency in animal use, MacEwan has committed to becoming more open and transparent regarding our animal-based scientific activities.

In 2024, MacEwan University had 4 active animal-based research protocols, and an on-campus zebrafish breeding colony. The research protocols largely focused on conservation and population diversity efforts, species-specific communication strategies, and behavioural studies. In total, 846 animals were used in research projects, and 2,786 zebrafish were held in the breeding colony.

The MacEwan University Animal Research Ethics Board (AREB) reviews and approves all proposals for research, testing, and teaching involving live animals in accordance with guidelines, policies and associated documents established by the CCAC, the national body responsible for setting, maintaining and overseeing animal ethics and care in science in Canada. All protocols were reviewed and approved by the MacEwan University AREB, and MacEwan's animal ethics and care program is recognized as in good standing with the CCAC, following an external audit of the institution.

The AREB ensures that all animal care and handling at the University is conducted in an ethical and humane manner and is responsible for reviewing animal use protocols and overseeing the post-approval monitoring of animal use projects. The AREB is composed of faculty members, health and safety personnel, community representatives, animal care staff, veterinarians, and students. In addition to ensuring that MacEwan University's Animal Care and Use Program follows all pertinent regulatory guidelines, the AREB members additionally verify that all personnel working with animals are appropriately trained and qualified to care for the animals under their supervision.

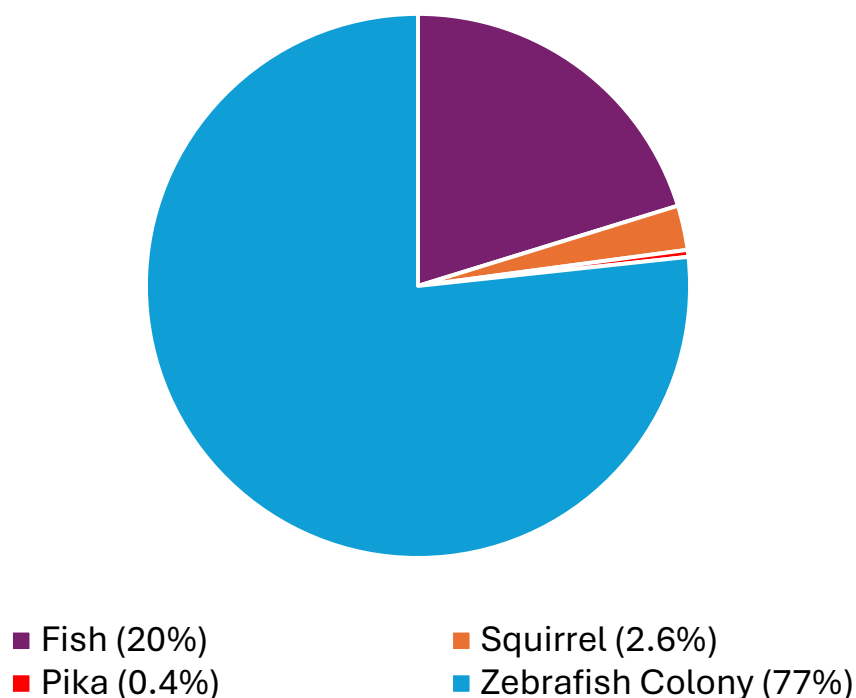
Protocols go through revisions and refinements to meet the satisfaction and approval of the AREB. Each approved protocol is subject to an annual review by the AREB as well as routine reviews through the post approval monitoring program. All procedures and facilities at MacEwan involving animal-based science are rigorously reviewed, inspected and regulated at federal, provincial and institutional levels.

The animal numbers below reflect both animals used for research at MacEwan University. These numbers include animals used in wildlife and field-based studies, and the on-campus zebrafish breeding colony.

## MacEwan Animal Use Numbers for 2024

Animal Type	Number Used	Percent
Fish	735	20
Squirrel	96	2.6
Pika	15	0.4
Zebrafish Colony	2786	77
<b>Total</b>	<b>3632</b>	<b>100</b>

### Animals Used in Research 2024



**Want to learn more about what our researchers are doing?** Check out the following episodes of [Research Recast\(ed\)](#), a MacEwan University podcast focused on breaking down research and reshaping the conversation.

#### [Addiction, Fish, and...Brains?](#)

Dr. Trevor Hamilton gives insight into why zebrafish are used to conduct medical research as he explains his own research with testing memory and addiction in the species

### [Nature vs Nurture: How Genetics Can Impact Conservation](#)

Dr. Joshua Miller shows us how genetics can play a large role in conservation techniques for many different species of animals.

### [Squirreling Around: Conservation and Community](#)

Dr. Jessica Haines, a wildlife biologist, joins us to discuss her research on Franklin's ground squirrels, a species in decline in Alberta.

### [A Conversation with Dr. Trevor Hamilton](#)

Today we go under the sea and get a crash course in Zebrafish with Dr. Trevor Hamilton, a neuroscientist and psychologist at MacEwan University. Trevor has a broad body of research involving Zebrafish, and how different substances and pharmacological compounds, like LSD or alcohol, modifies their behaviour. A visiting scholar from the Scripps Institution of Oceanography at the University of San Diego, Dr. Hamilton has also been studying the effects of increasing acidification of the oceans on fish behaviour.

## **The Conversation Canada Articles**

### [Allow me to introduce myself: Squirrels use rattle calls to identify themselves](#)

Dr. Shannon Digweed

### [Fish on acid? Microdosing zebrafish with LSD shows its potential benefits for humans](#)

Dr. Trevor Hamilton