2024 Annual Report

Animal Ethics Office

Dalhousie University

University Committee on Laboratory Animals – Halifax and DMNB campuses

Commitment to Animal Welfare, Research Excellence, and Transparency

Animal Ethics Office
Dalhousie University
Approved September 2025

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Introduction

The Dalhousie University Animal Ethics Office is pleased to present the 2024 Annual Report, highlighting the year's key activities, achievements, and developments in the ethical oversight of animal-based research and teaching. This report reflects our ongoing commitment to animal welfare, scientific excellence, and institutional transparency.

Throughout 2024, the Animal Ethics Office and the University Committee on Laboratory Animals (UCLA) worked collaboratively to support a culture of responsible animal care across Dalhousie's research community. By providing comprehensive protocol reviews, delivering targeted training programs, and aligning with evolving national standards, we continue to ensure that all animal use is conducted with the highest ethical and scientific standards.

This report aims to inform and engage all members of the Dalhousie research community—including senior administration, principal investigators, research staff, and graduate students—by offering a clear overview of our responsibilities, processes, and shared successes. As we look ahead, we remain dedicated to continuous improvement, regulatory alignment, and fostering a research environment grounded in compassion, integrity, and accountability.

Summary of 2024 Activities

The Animal Ethics Office is composed of the University Director of Animal Care (UDAC), Associate University Director of Animal Care (AUDAC), Training Coordinator, and Administrator. Together, this team supports the University Committee on Laboratory Animals (UCLA) and the broader research community in ensuring ethical and responsible animal use in research and teaching at Dalhousie.

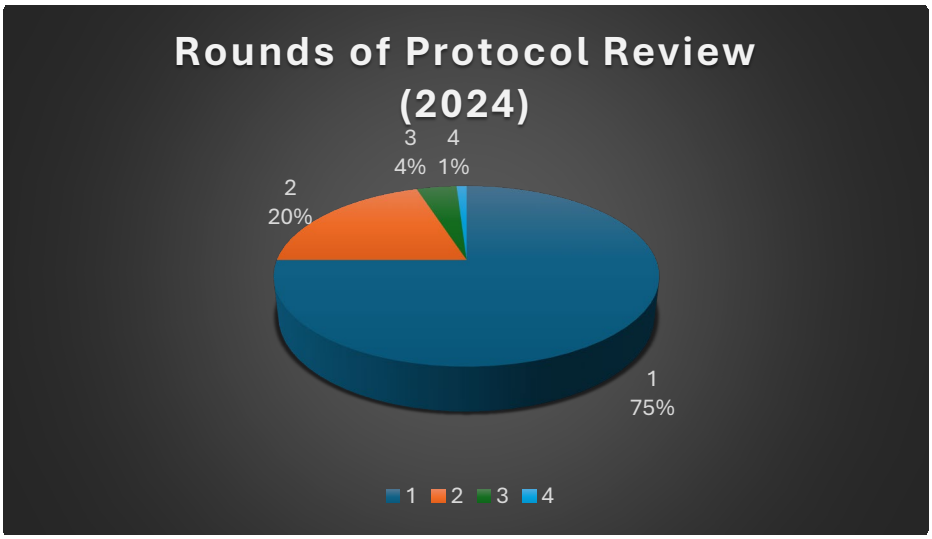
In 2024, the UCLA held 11 meetings, supported by a committed membership of 16 individuals drawn from across the university and community. Over the year, the committee reviewed more than 400 protocol files, including new animal use protocol (AUP) submissions, amendments, and renewals.

The Animal Ethics Office processed 12 release of funds (ROF) requests and submitted the institution's 2024 animal use data to the Canadian Council on Animal Care (CCAC), fulfilling national reporting requirements.

Protocol Reviews

In 2024, the Animal Ethics Office conducted approximately 400 protocol reviews for invasiveness categories B through E across the Halifax and DMNB campuses. This included Animal Use Protocols (AUPs), amendments, and renewals processed through first, second, third, and (in rare cases) fourth or subsequent rounds of review. *Note: In 2024 we also reviewed and approved 25 Category A proposals; the approval process is different for these proposals and thus they were not included in the data below.*

Summary of Rounds of Protocol Review required for category B though E protocols:



- 75% (264 protocols) were completed at the first-round review (1),
- 20% (72 protocols) required a second round (2) of review,
- 4% (15 protocols) proceeded to a third round (3), and
- Less than 1% (2 protocols) required a fourth or subsequent round (4) of review.

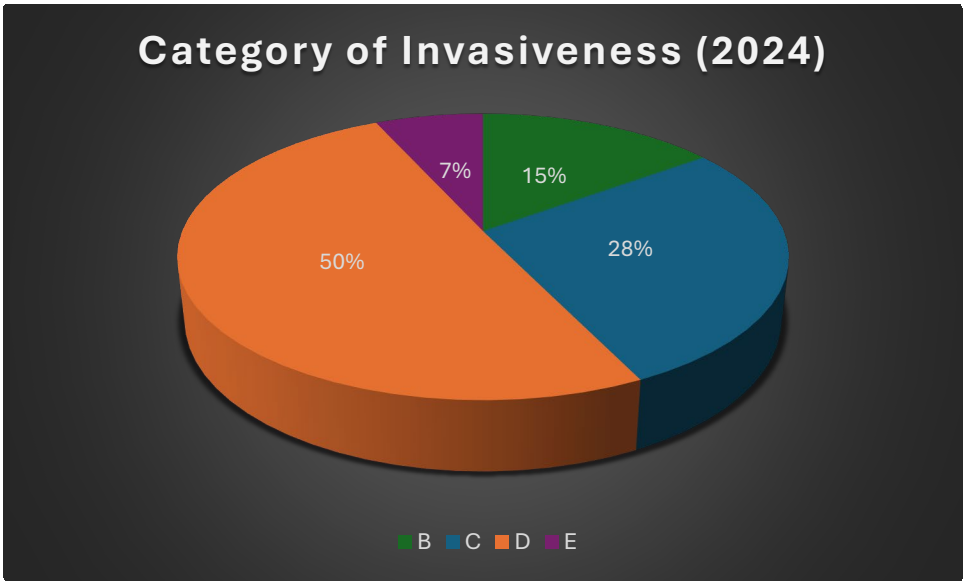
75% of protocols were approved after a single round of review, some of these protocols required minor revisions which were addressed promptly by the research teams and were thus approved before the next meeting cycle. Approximately 25% of protocols required additional rounds of review. The process involves questions and recommendations from the committee and responses from the applicants. Notably, 95% of protocols were moved through the review process at the time of the second review. Approximately 4% of protocols required a third round of review and fewer than 1% required four or more rounds of review.

Common reasons for additional rounds of review included:

- Higher category of invasiveness +/- perceived severity of specific interventions
- Identification of potential for unintended negative animal welfare impacts
- Incomplete protocol submissions, missing sections, missing attachments, etc.
- Protocol lacking sufficient methodological or ethical detail
- Introduction of contradictory information requiring further clarification

These review outcomes reflect the office's commitment to rigorous ethical oversight, the responsible conduct of research, and evolving animal care and use best practices.

The distribution of all protocols per the Canadian Council on Animal Care's (CCAC) level of invasiveness in research was:



- Category B (little or no discomfort or stress): 53 protocols (15%).
- Category C (minor stress or short-duration pain): 98 protocols (28%)
- Category D (moderate to severe distress or discomfort): 178 protocols (50%)
- Category E (severe pain near, at or above the pain tolerance threshold in unanesthetized animals): 24 protocols (7%)

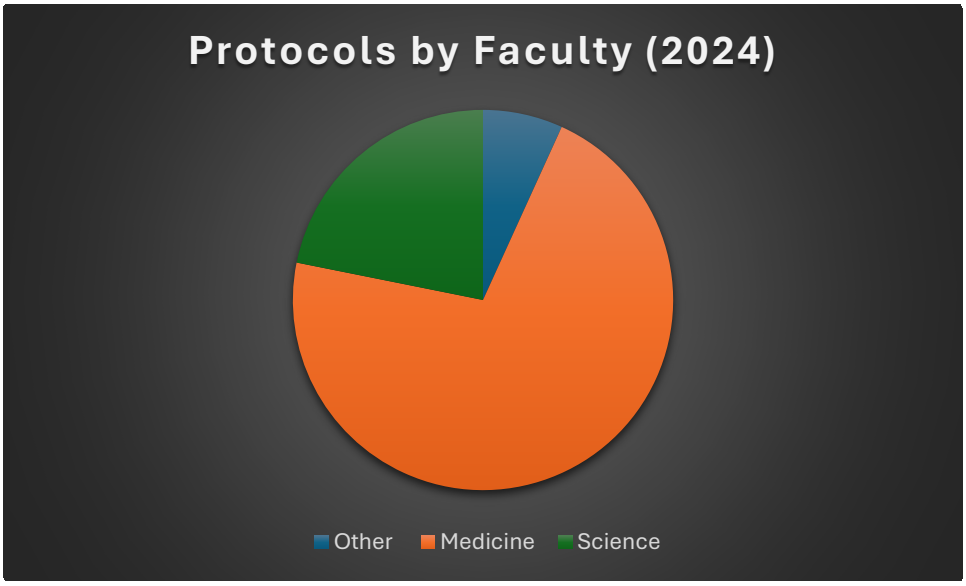
Protocols are placed into these categories based on either the single most significant intervention, or the anticipated cumulative impact of all interventions, whichever is higher.

Category D and E protocols require more intensive ethics review and are subject to additional requirements to ensure that animal monitoring, welfare assessments, intervention points, and humane endpoints are rigorous enough both to justify animal use and reduce animal suffering.

Category A (experiments on most invertebrates, live isolates, animal tissue): 25 protocols (note: this data is not included in percentages because it is captured and tracked differently than live animal use)

Distribution of Work Across Faculties/Units

In 2024, the Animal Ethics Office and UCLA processed approximately 400 AUPs including new submissions, amendments, and renewals, across six faculties and administrative units at Dalhousie University. The distribution of protocol files by faculty and units was as follows

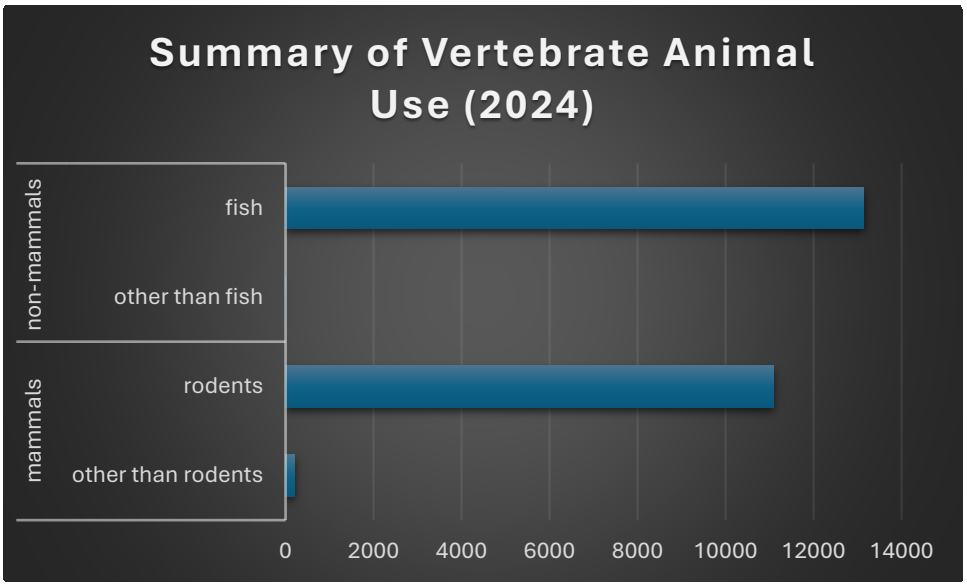


- Medicine: 294 files (71%)
- Science: 90 files (22%)
- Other: Agriculture 10 files (2%)*: Dentistry 10 files (2%): Engineering 2 files (<1%): Operational (Aquatron and UDAC) protocols (6%)

The Faculty of Medicine submitted 71% of the UCLA's total AUPs reflecting the university's strong focus on biomedical research. The Faculty of Science submitted 22% of total AUP submissions, reflecting the university's commitment to conservation, wildlife and aquatics

teaching and research. Together the faculties of Agriculture, Dentistry, Engineering, and core operational units (Aquatron and UDAC) submitted approximately 6% of AUPs during the 2024 year.

Summary of Animal Use (Vertebrates)



The table above provides an overview of the number of vertebrate animals used in research and teaching over the 2024 year. Fish (including domestic, aquaculture, and wild types) account for approximately 53% of all animal use. This data reflects the central role of fish in biomedical, aquatic, and conservation research. Rodents (mice and rats) represent approximately 45% of the total number of vertebrate animals in research which reflects the importance of these species in many areas of biomedical and scientific research.

Other vertebrate animals, such as whales, rabbits, cats, dogs, and snakes, account for less than 2% of animal use at Dalhousie for conservation, environmental, biomedical, and behavioural research.

This data highlights the diversity of vertebrate species in research and teaching, and underscores Dalhousie's commitment to transparency and responsible animal care and use in all research and teaching activities.

Training Activities Summary

In 2024, the Animal Ethics Office supported a robust program of training and certification to ensure all researchers and personnel working with animals are equipped with the necessary skills and knowledge to meet ethical and regulatory standards. Key activities are included below.

1. Ethics Certification Exams: A total of 240 ethics exams written across three customized streams:
    - Lab Animal Ethics Exams (101)
    - Wildlife Ethics Exams (96)
    - Fish Ethics Exams (43)

2. Workshops: The office delivered 125 workshops covering essential handling and procedural skills, with group sizes ranging from 1 to 6 participants. Topics included:
    - Mouse Handling
    - Rat Handling
    - Rabbit Handling
    - Guinea Pig Handling
    - Hamster Handling
    - Anesthesia
    - Surgery I
    - Surgery II

3. Individual Training Sessions: A total of 47 one-on-one training sessions were provided, tailored to various specialized procedures.

4. Surgical Proficiencies: 18 surgical proficiency assessments were completed to support researcher qualifications for surgical procedures.

These training activities are a key component of institutional oversight, ensuring that all individuals working under approved AUPs are properly trained and that best practices are maintained across research programs.

CCAC Guidelines and News

In 2024, the Canadian Council on Animal Care (CCAC) introduced several important updates and initiatives that reflect a growing emphasis on transparency, ethical refinement, and the evolving understanding of animal welfare in science.

- February 1, 2024 – The CCAC published the *CCAC guidelines: Categories of welfare impact*, offering a new framework for assessing and categorizing the impact of research procedures on animal welfare. These guidelines aim to enhance clarity and consistency in protocol review and ethical oversight.

- June 6, 2024 – The CCAC hosted its National Workshop, bringing together researchers, ethics professionals, and institutional representatives to discuss best practices, emerging challenges, and collaborative solutions in animal care and use.

- June 2024 – The CCAC released its Annual Report 2023–2024, titled *"Redefining Our View of Animal Welfare in Science"*. This publication highlights the CCAC's strategic direction, emphasizing the integration of welfare science into ethical review and institutional practices.

- July 2024 – The CCAC published Revised Facilities Guidelines, updating standards for the design, operation, and maintenance of animal care facilities to better support animal welfare and research integrity.

- September 2024 – The CCAC launched its Transparency Initiative, aimed at increasing public understanding of animal-based research and strengthening institutional accountability through improved communication and reporting.

These developments underscore the CCAC's commitment to advancing ethical standards and supporting institutions in maintaining responsible animal care practices. Dalhousie University continues to align its policies and procedures with CCAC guidance to ensure compliance and uphold the highest standards of animal welfare.

For more information, visit the CCAC website: https://ccac.ca

Conclusion

The 2024 Annual Report reflects the continued dedication of the Dalhousie University Animal Ethics Office and the University Committee on Laboratory Animals (UCLA) to fostering a culture of ethical and responsible animal care in research. Through dedicated protocol reviews, comprehensive training programs, and transparent reporting, the office has worked to uphold the highest standards of animal welfare and scientific integrity.

With over 400 protocol reviews, extensive training initiatives, and active engagement across multiple faculties, the Animal Ethics Office has demonstrated its commitment to continuous improvement and collaboration. The data presented underscores the diversity of research activities and the importance of maintaining ethical oversight in all aspects of animal use.

As we look ahead, the office remains focused on enhancing support for researchers and research excellence, refining review processes, fostering a culture of continuous improvement, and promoting education to ensure that Dalhousie University continues to lead in responsible animal research practices.