Stanford

Anna Ratuski

Postdoctoral Scholar, Comparative Medicine

Bio

BIO

Dr. Ratuski is an animal welfare scientist specializing in laboratory animal welfare and behavior, with a particular interest in how housing and husbandry procedures impact the health and behavior of animals used in science. Dr. Ratuski completed her PhD dissertation at the University of British Columbia, where her research has focused on topics such as environmental enrichment for rodents housed in laboratories and refinement of euthanasia and anesthesia procedures for rodents. She has additionally served as an Animal Care Committee member reviewing research protocols and has taught undergraduate courses University of British Columbia on Research Methods in Applied Biology, and The Welfare and Ethics of Animal Use in Science. At Stanford, she is the inaugural Beyond3Rs Laboratory Animal Welfare Research Fellow researching topics related to mouse welfare and working behind the scenes on Beyond3Rs initiatives. She is particularly interested in the intersection between the well-being of animals used in science and the reproducibility or translation of preclinical research findings obtained from animals. Research topics at Stanford currently include: barbering in laboratory mice (including lead optimization of potential drug treatments for barbering and trichotillomania), the effects of transport stress on physiological, behavioral, and pathogenic outcomes in mice, effects of the environment on reproductive outcomes in laboratory mice, and biomarkers related to abnormal repetitive behavior.

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of British Columbia (2023)
- Bachelor of Science, Dalhousie University (2017)

STANFORD ADVISORS

- Joseph Garner, Postdoctoral Faculty Sponsor

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Anna Ratuski has published on refinement of euthanasia procedures for rodents and the use of environmental enrichment for rats and mice housed in laboratories. She is currently working on 3Rs initiatives for animals used in research, with a particular focus on mice.

LAB AFFILIATIONS

- Joseph Garner (11/1/2023)

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Laboratory Animal Science (Masters Program)

Publications

PUBLICATIONS

- **Oxytocin administration rescues the negative impacts of social isolation on wound healing in mice.** *Hormones and behavior*
  Steele, S. R., Ratuski, A. S., Hui, E. I., Mahoney, B. S., Geronimo, J. T., Huss, M. K., Parker, K. J., Garner, J. P.
  2025; 171: 105741

- **Risk factors for barbering in laboratory mice.** *Scientific reports*
  Ratuski, A. S., Theil, J. H., Ahloy-Dallaire, J., Gaskill, B. N., Pritchett-Corning, K. R., Felt, S. A., Garner, J. P.
  2025; 15 (1): 7456

- **Pebble to the Metal: A Boulder Approach to Enrichment for Danio rerio.** *PloS one*
  Byrd, K. A., Theil, J. H., Geronimo, J. T., Ahloy-Dallaire, J., Gutierrez, M. F., Hui, E. I., Felt, T. K., Coden, K. M., Ratuski, A. S., Felt, S. A., Chu, D. K., Garner, J. P.
  2024; 19 (5): e0298657

- **Environmental Enrichment for Rats and Mice Housed in Laboratories: A Metareview.** *Animals : an open access journal from MDPI*
  Ratuski, A. S., Weary, D. M.
  2022; 12 (4)

- **Implementing refinements: Attitudes, experiences, barriers, and solutions identified by laboratory animal professionals.** *Laboratory animals*
  Ratuski, A. S., Brunt, M. W., Schuppli, C. A., Weary, D. M.
  2026: 236772261476754

- **Effects of temporary access to environmental enrichment on measures of laboratory mouse welfare.** *Scientific reports*
  Ratuski, A. S., Améndola, L., Makowska, I. J., Weary, D. M.
  2024; 14 (1): 15143

- **Mouse isoflurane anesthesia using the drop method** *LABORATORY ANIMALS*
  Bodnar, M. J., Ratuski, A. S., Weary, D. M.
  2023; 57 (6): 623-630

- **Using approach latency and anticipatory behaviour to assess whether voluntary playpen access is rewarding to laboratory mice.** *Scientific reports*
  Ratuski, A. S., Makowska, I. J., Dvorack, K. R., Weary, D. M.
  2021; 11 (1): 18683

- **A break from the pups: The effects of loft access on the welfare of lactating laboratory rats.** *PloS one*
  Ratuski, A. S., Weary, D. M.
  2021; 16 (6): e0253020

- **Individual differences in rat sensitivity to CO₂** *PLOS ONE*
  Amendola, L., Ratuski, A., Weary, D. M.
  2021; 16 (1): e0245347

- **Variation in the onset of CO2-induced anxiety in female Sprague Dawley rats.** *Scientific reports*
  Améndola, L., Ratuski, A., Weary, D. M.
  2019; 9 (1): 19007