



SJDAWC

SIR JAMES DUNN ANIMAL WELFARE CENTRE *at the Atlantic Veterinary College*



PROMOTING ANIMAL WELFARE THROUGH RESEARCH, SERVICE, AND EDUCATION

2023 ANNUAL REPORT

ATLANTIC VETERINARY COLLEGE
UNIVERSITY OF PRINCE EDWARD ISLAND
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SIR JAMES DUNN ANIMAL WELFARE CENTRE 2023 ANNUAL REPORT

Sir James Dunn Animal Welfare Centre, Atlantic Veterinary College, University of Prince Edward Island

MANDATE

The Sir James Dunn Animal Welfare Centre (SJDAWC) exists to promote animal welfare by generating and disseminating impartial and scientifically based knowledge and understanding of animal welfare issues. Our vision is “to be nationally and internationally recognized as a centre of excellence that advances animal welfare through research, service, and education.”

STRUCTURE

The SJDAWC is governed by a management board that reports to the Dean of the Atlantic Veterinary College (AVC) at the University of Prince Edward Island (UPEI).

MANAGEMENT BOARD

- » DR. JOHN VANLEEUWEN, Interim Dean, AVC, Management Board Chair (ex-officio)
- » DR. KATY PROUDFOOT, Director, SJDAWC (ex-officio)
- » DR. MICHAEL COCKRAM, Chair in Animal Welfare (ex-officio)
- » MS. APRYL MUNRO, AVC External Engagement Officer (ex-officio), replaced Ms. Rachel Cutcliffe in June 2023
- » MS. SHERRI PINEAU, Administrative Assistant, SJDAWC (ex-officio)
- » DEPARTMENTAL REPRESENTATIVES
 - » DR. GLENDA WRIGHT, Department of Biomedical Sciences, replaced Dr. Tammy Muirhead in June 2023
 - » DR. SONJA SAKSIDA, Department of Health Management, replaced Dr. Jennifer Burns in June 2023
 - » DR. CATE CREIGHTON, Department of Companion Animals
 - » DR. RUSSELL FRASER, Department of Pathology and Microbiology
- » DR. CAROLYN SANFORD, Assistant Deputy Minister, Agriculture and Land, Government of Prince Edward Island, external veterinarian representative
- » MR. RON MAYNARD, external community representative
- » MS. TESSA MCBURNEY, student representative

SJDAWC ACTIVITIES IN 2023

AVC Webinar Series (April/May)

The SJDAWC hosted a three-part webinar series focusing on animal welfare issues in veterinary behavioural medicine. The webinars featured Dr. Karen Overall, professor of behavioural medicine at AVC, who discussed the damaging effects of punishment on companion animals with a focus on using force and shock in dogs. The series ended with a review of new and exciting research in veterinary behaviour medicine.

These webinars were made available on our YouTube channel in September 2023: <https://upei.ca/youtube/awc>

Animal Welfare in Practice Symposium (September)

The 18th annual Animal Welfare in Practice symposium was presented on September 15 and 16, 2023, with a focus on end-of-life care for animals. This was the first symposium to be held in-person since 2019 and included a virtual option for participants.

Dr. Peter Foley, associate professor in small animal internal medicine at AVC, kicked off the symposium on Friday with a presentation on “End of life care for dogs and cats: Decision-making and options.”

Dr. Patricia Turner, professor emeritus at the University of Guelph, was the first speaker to present at the symposium on Saturday, focusing on “Animal welfare at the end of life: Decision-making and communications.” The symposium continued with the following speakers and topics:

- » Dr. Michael Cockram, Chair in Animal Welfare and professor in the Department of Health Management at AVC, presented “Welfare implications of end-of-life options for farm animals.”
- » Drs. Mitchell Carr and Katie MacDonald, clinicians in the AVC Community Practice Service, tag-teamed a presentation on “Empathic care in dying.”
- » Dr. Lianna Titcombe, international director and instructor for the Companion Animal Euthanasia Training Academy (CAETA), presented on “When

quality of life scales aren't enough: Counselling clients who can't let go.”



The symposium was funded by the SJDAWC in partnership with the Animal Welfare Foundation of Canada. Information about the speakers may be found at awc.upei.ca/2023-symposium-speaker-information/.

GRANTS AWARDED

Through an annual competition and other sources, the SJDAWC provides funding for research, integrated, and service projects.

RESEARCH

Research grants awarded in 2023

BERNARD P, SPEARS J, BIGELOW L. The effect of common laboratory ultrasounds on rat behaviour and physiology (2023–2024)

SAKSIDA S, FAST M, REYNOLDS K, WHYTE S. Environmental enrichment for stress reduction in land-based salmonid aquaculture (2023–2026)

VANLEEUEWEN J, HALL D, RITTER C, RAO J, MUUNDA E. Motivations and cost-effectiveness of improved cow comfort on smallholder dairy production systems in Kenya (2023–2026)

Ongoing or recently completed research projects

BERNARD P, SPEARS J, BIGELOW L. Identifying optimal experimenter handling and familiarization protocols that can be universally implemented to improve lab animal welfare

BERNARD P, SPEARS J. The effects of rearing in a shelved environment on behavioral and physiological markers of welfare

MELLISH M, PUCHALSKI S, LUCAS Z, DAOUST P-Y, STULL J. Assessment of welfare of Sable Island horses through morphometric and radiographic hoof evaluation

MELLISH M. Pilot project: Working donkey welfare assessment and owner education in Meru County, Kenya

OVERALL K, PROUDFOOT K, MONTELPARE B, MARTIN C. Effects of early life experiences on later problematic behaviours in homeless, rescue shelter kittens

OVERALL K, MONTELPARE W, PROUDFOOT K, SQUAIR C. Effects of veterinary handling on canine behaviour and physiology: Must we scare dogs?

PROUDFOOT K, MCKENNA S, MEAGHER R, GORDON M. Understanding the natural behaviour and stress response of newborn dairy calves

RITTER C, PROUDFOOT K, MACMILLAN K, ELSOHABY I, MCKENNA S. Assessment and improvement of horse welfare on Prince Edward Island through benchmarking and a better understanding of horse caretakers' decision-making

STOUGHTON WB, BRESSAN N. Development of an equine nasogastric intubation simulator as an aid or alternative to the use of animals in teaching

VANLEEUEWEN J, HEIDER L, KEEFE G, MCKENNA S, MUCKLE A, KARIUKI E, GITAU G. Prevention of bovine mastitis through a combination of cow comfort mastitis intervention on smallholder dairy farms in Kenya

Please visit <https://awc.upei.ca/research-projects/> for more information about these and other service projects.

INTEGRATED

Ongoing or recently completed integrated projects

CUSACK L, PROUDFOOT K, VANLEEUEWEN C. The impact of volunteering with a wildlife service on empathy in veterinary students

Please visit <https://awc.upei.ca/research-projects/> for more information about this integrated project.

SERVICE

Service grants awarded in 2023

GUNN MCQUILLAN H, FOLEY P, MACDONALD R, MACLEAN R, MACLEAN M. Medical and surgical care of homeless animals (2023–2024), with the PEI Humane Society (PEIHS)

Ongoing or recently completed service projects

CARR M, FOLEY P, HOPSON M. Neutering feral cats on PEI

CARR M, MACDONALD K. Pegasus feral cat neuter program

GUNN MCQUILLAN H, MACLEAN R. Pegasus Helping Hand Fund

HOPSON M, GILROY C, LANDRY S. Chinook Project (funded independently since 2011)

MUIRHEAD T, MACMILLAN K. Health management services for Handibear Hills Equine Sanctuary, Inc.

Please visit <https://awc.upei.ca/service-projects/> for more information about these and other service projects.

GRADUATE STUDENTS FUNDED OR PARTIALLY FUNDED BY THE SJDWC

Current students

CAMILLE SQUAIR, Master of Science (MSc) student and resident. Effects of veterinary handling on canine behaviour and physiology: Must we scare dogs? (with Drs. Karen Overall and Katy Proudfoot). *Thesis successfully defended in August 2023.*

HANNAH SPITZER, MSc student. Understanding the natural behaviour and stress response of newborn dairy calves (with Dr. Katy Proudfoot). *Thesis successfully defended in May 2023.*

JENNIFER VERNICK, MSc student. Effects of early life experiences on later problematic behaviours in homeless, rescue shelter kittens (with Drs. Karen Overall and Tracy Doucette).

LOGAN BIGELOW, Doctor of Philosophy (PhD) student. Ultrasonic vocalizations analysis: A non-invasive ethologically relevant tool to assess home cage welfare in rats (with Dr. Paul Bernard).

MARIANA FONSECA, PhD student. Assessment of antimicrobial stewardship on animal welfare, animal health, and antimicrobial resistance on dairy farms (with Drs. Javier Sanchez and Luke Heider). *Thesis successfully defended in September 2023.*

MEGAN JEWELL, PhD student. Achieving meaningful improvements in dairy cow welfare by reducing lameness: Evaluating the effectiveness of herd performance benchmarking and integrated, web-based risk management (with Dr. Greg Keefe). *Thesis successfully defended in August 2023.*

MEGAN ROSS, PhD student. Assessment and improvement of horse welfare on Prince Edward Island through benchmarking and a better understanding of horse caretakers' decision-making (with Drs. Caroline Ritter and Katy Proudfoot).

MOLLY MILLS, MSc student and resident. Improving horse welfare on Prince Edward Island through assessment and benchmarking (with Drs. Kathleen MacMillan and Katy Proudfoot).

SHERRY KHODDAMI, MSc student. Exploring the relationship between veterinary student well-being and their perception of teaching animals' quality of life (with Drs. Caroline Ritter and Katy Proudfoot).

PUBLICATIONS

BAJUS A, RENAUD D, GOETZ H, STEELE M, KELTON D, PROUDFOOT K, CRUETZINGER K. 2023. The effect of transportation duration on lying behaviour in young surplus dairy calves. *Journal of Dairy Science*. 106(11):7932-7941. <https://doi.org/10.3168/jds.2023-23229>

BIGELOW L, POPE E, MACDONALD D, ROCK J, BERNARD P. 2023. Getting a handle on rat familiarization: The impact of handling protocols on classic tests of stress in *Rattus norvegicus*. *Laboratory Animals*. 57(3):259-269. <https://doi.org/10.1177/00236772221142687>

CIBIS T, BOIRE E, BRESSAN N. 2023. Designing immersive environments for extreme environments. In: *An Introduction to Veterinary Medicine Engineering*. Cham: Springer, Springer International Publishing. https://doi.org/10.1007/978-3-031-22805-6_7

HENDRICKS J, ROCHE S, PROUDFOOT K, VON KEYSERLINGK M. 2023. Livestock haulers' views about dairy cattle transport in Atlantic Canada. *Journal of Dairy Science*. 106(5):3548-3558. <https://doi.org/10.3168/jds.2022-22752>

- JENSEN M, FRANCHI G, SCHUMACHER M, PROUDFOOT K. 2023. Do calves hide after birth? Postpartum behavior of dairy calves and their dams housed in individual calving pens. *Journal of Dairy Science Communications*. 4(6):474-478. <https://doi.org/10.3168/jdsc.2022-0364>
- JENSEN M, PROUDFOOT K. 2023. Welfare at calving and of the growing animals. In: *Cattle Welfare in Dairy and Beef Systems: A New Approach to Global Issues*. Cham: Springer International Publishing.
- KARIUKI E, VANLEEUEWEN J, GITAU G, HEIDER L, MCKENNA S, MUASYA D. 2023. Randomized control trial to investigate compliance with, and impacts of, cow comfort recommendations on smallholder dairy farms in Kenya. *Research in Veterinary Science*. 162:104954. <https://doi.org/10.1016/j.rvsc.2023.104954>
- MAGGARD H, HABING G, RENAUD D, PROUDFOOT K, ENGLAND Z, CHENG T, WILSON D, MORAN M, PEMPEK J. 2023. Condition of surplus dairy calves during marketing: A cross-sectional study. *Journal of Dairy Science*. In Press. <https://doi.org/10.3168/jds.2023-23625>
- MELLISH M, LUCAS Z, LANCASTER L, STULL J, FLOYD A. 2023. Visual and morphometric description of feral horse hooves from Sable Island National Park Reserve. *Canadian Veterinary Journal*. 64(11):1028-1034. PMID: 37915781; PMCID: PMC10581359.
- PROUDFOOT K. 2023. ADSA Foundation Scholar Award: What makes for a good life for transition dairy cows? Current research and future directions. *Journal of Dairy Science*. 9:5896-5907. <https://doi.org/10.3168/jds.2022-23194>
- ROBBINS J, PROUDFOOT K, STRAND E, HEMSWORTH L, COLEMAN G, HEMSWORTH P, SKUSE J, KRAWCZEL P, VAN OS J. 2023. Perceptions of dairy cattle handling situations: A comparison of public and industry samples. *Journal of Dairy Science*. In Press. <https://doi.org/10.3168/jds.2023-23496>
- ROSS M, PROUDFOOT K, MERKIES K, MILLS M, ELSOHABY I, MITCHELL J, MACMILLAN K, MCKENNA S, RITTER C., 2023. Horse owners' perspectives of horse weight management. *Journal of Equine Veterinary Science*. 124:104393. <https://doi.org/10.1016/j.jevs.2023.104393>
- ROSS M, PROUDFOOT K, MERKIES K, ELSOHABY I, MILLS M, MACMILLAN K, MCKENNA S, RITTER C. 2023. Horse housing on Prince Edward Island, Canada: Attitudes and experiences related to keeping horses outdoors and in groups. *Animals*. 13(2):275. <https://doi.org/10.3390/ani13020275>
- SQUAIR C, PROUDFOOT K, MONTELPARE W, OVERALL K. 2023. Effects of changing veterinary handling techniques on canine behaviour and physiology Part 1: Physiological measurements. *Animals*. 13(7):1253. <https://doi.org/10.3390/ani13071253>
- WILSON D, PEMPEK J, HABING G, PROUDFOOT K, RENAUD D. 2023. Serum total protein concentrations in surplus dairy calves in British Columbia. *The Canadian Veterinary Journal*. 64(5):451-456. PMID: 37138707; PMCID: PMC10150556
- WILSON D, PEMPEK J, CHENG T, HABING G, PROUDFOOT K, WINDER C, RENAUD D. 2023. A survey of male and female dairy calf care practices and opportunities for change. *Journal of Dairy Science*. 106(1):703-717. <https://doi.org/10.3168/jds.2022-22238>
- WILSON D, ROCHE S, PEMPEK J, HABING G, PROUDFOOT K, RENAUD D. 2023. How benchmarking motivates colostrum management practices on dairy farms: A realistic evaluation. *Journal of Dairy Science*. 106(12):9200-9215. <https://doi.org/10.3168/jds.2023-23383>
- WILSON D, SARACENI J, ROCHE S, PEMPEK J, HABING G, PROUDFOOT K, RENAUD D. 2023. How can better calf care be realized on dairy farms? A qualitative interview study of veterinarians and farmers. *Journal of Dairy Science*. In Press. <https://doi.org/10.3168/jds.2023-23703>

PRESENTATIONS

- BIGELOW L, POPE E, MACDONALD D, ROCK J, BERNARD P. 2023. Getting a handle on rat familiarization: The impact of handling protocols on classic tests of stress in *Rattus norvegicus*. Canadian Association for Neuroscience. Montreal, Canada. Poster presentation.
- BIGELOW L, POPE E, MACDONALD D, ROCK J, BERNARD P. 2023. Getting a handle on rat familiarization: The impact of handling protocols on classic tests of stress in *Rattus norvegicus*. International Brain Research Organization World Congress of Neuroscience. Granada, Spain. Poster presentation.
- COCKRAM M. 2023. Welfare implications of end-of-life for farm animals. SJDABC Animal Welfare in Practice Symposium. Charlottetown, Canada. Invited oral presentation.
- EAGAN B. 2023. Design and fabrication of equine nasogastric intubation simulator as teaching aid for large animals. Engineering in Medicine and Biology Conference. Sydney, Australia. Poster presentation.
- ENWRIGHT D, KHODDAMI S, STEWART K, MACMILLAN K, KNIGHT J, STRYHN H, PROUDFOOT K. 2023. Development of an equine welfare assessment for teaching animals. The Atlantic Veterinary College Summer Research and Leadership Program Poster Presentations. Charlottetown, Canada. Poster presentation (2nd place award).
- ENWRIGHT D, KHODDAMI S, STEWART K, MACMILLAN K, KNIGHT J, STRYHN H, PROUDFOOT K. 2023. Developing and evaluating an equine welfare assessment for teaching animals. Canadian Emerging Veterinary Scholars Summit (CEVSS). Calgary, Canada. Oral presentation.
- HABING G, PEMPEK J, RENAUD D, WILSON D, PROUDFOOT K, ENGLAND Z, BELLO N, CHENG T. 2023. The effect of benchmarking reports on the health of surplus dairy calves. American Dairy Science Association Annual Meeting. Ottawa, Canada. Oral presentation.
- KAUFMAN M, KHODDAMI S, HEIDER L, MCKENNA S, BIGELOW L, PROUDFOOT K. 2023. Investigating the soundscape of dairy farms in Prince Edward Island. The Atlantic Veterinary College Summer Research and Leadership Program Poster Presentations. Charlottetown, Canada. Poster presentation.
- NG'ANG'A EK, VANLEEUWEN J, GITAU GK, MCKENNA SL, HEIDER LC, KEEFE GP, MUASYA DW. 2023. Investigating compliance with cow comfort and mastitis control recommendations and their subclinical mastitis outcomes on smallholder dairy farms in central Kenya. Kenyan Veterinary Association 2023 Conference. Kakamega, Kenya.
- PROUDFOOT K, HUAYAMAVE M, AMENDOLA L, VENTURA B, PAIRIS-GARCIA M, MILLMAN S. 2023. Veterinary student perspectives on differing viewpoints after role-play case study. International Teaching and Learning Cooperative Lilly Conference. San Diego, USA. Poster presentation.
- PROUDFOOT K. 2023. Hiding behaviour of newborn dairy calves kept with their dams. Saputo Dairy Cow Welfare Forum. Guelph, Canada. Invited oral presentation.
- PROUDFOOT K. 2023. Case studies of sleep in dairy cows and calves. Course on sleep in domesticated animals. University of Helsinki, Finland. Invited oral presentation (virtual).
- PROUDFOOT K. 2023. What is animal welfare? Dr. Tim Ogilvie AVC Vet Camp. Charlottetown, Canada. Oral presentation.
- PROUDFOOT K. 2023. Social housing and development of pre-weaned dairy calves. Presentation to the Atlantic Bovine Practitioners Association. Moncton, New Brunswick. Invited oral presentation.
- ROBBINS J, COLEMAN G, HEMSWORTH P, HEMSWORTH L, SKUSE J, PROUDFOOT K, STRAND E, KRAWCZEL P, VAN OS J. 2023. A comparison of industry and public perceptions of dairy cow handling scenarios. The International Society for Applied Ethology. Tallinn, Estonia. Oral presentation.
- ROSS M, PROUDFOOT K, MERKIES K, MITCHELL J, RITTER C. 2023. Management of overweight horses in Prince Edward Island, Canada: Horse owner perspectives. 32nd International Society for Anthrozoology Conference. Edinburgh, Scotland. Oral presentation.

ROSS M, PROUDFOOT K, MERKIES K, MILLS M, ELISOHABY I, MITCHELL J, MACMILLAN K, MCKENNA S, RITTER C. 2023. Horse owners' perspectives of horse weight management. Equine Science Society Symposium. Dallas, USA. Oral presentation.

SIGL S, PROUDFOOT K, DANN H, KRAWCZEL P, CREUTZINGER K. 2023. The effect of the social environment on labor duration and dystocia of dairy cows housed in group maternity pens. American Dairy Science Association Annual Meeting. Ottawa, Canada. Poster presentation.

SPITZER H, MEAGHER R, MONTELPARE W, MCKENNA S, GORDON M, PROUDFOOT, K. 2023. The use and effect of a hiding space on the lying and sleep-like behaviour of newborn dairy calves during temporary separation from their dams. International Society for Applied Ethology. Tallin, Estonia. Poster presentation.

SQUAIR C, PROUDFOOT K, MONTELPARE W, DOUCETTE T, OVERALL K. 2023. Effects of changing veterinary handling on canine behaviour and physiology. Veterinary Behavior Symposium. Philadelphia, USA. Oral presentation (RK Anderson Resident Award for the best research paper).

VERNICK J, MONTELPARE W, MARTIN C, DOUCETTE T, OVERALL K. 2023. The effects of early life stressors on kitten behavior. Veterinary Behavior Symposium. Philadelphia, USA. Oral presentation.

WILSON D, ROCHE S, PEMPEK J, HABING G, PROUDFOOT K, RENAUD D. 2023. How benchmarking motivates improved calf care: A realistic evaluation. American Dairy Science Association Annual Meeting. Ottawa, Canada. Oral presentation.

EDUCATION

PROUDFOOT K. Coach for the AVC student teams in the veterinary division of the 2023 annual Animal Welfare Assessment Contest, University of Wisconsin River Falls, River Falls, WI. November 2023.

COCKRAM M. VHM 890 and VHM 990, course organizer, Department of Health Management student oral and poster seminar sessions.

PROUDFOOT K. VHM 1030: Animal Behaviour and Welfare, course for first-year veterinary students at the AVC.

PROUDFOOT K. VHM 4230: Food Animal Health Management, one day of teaching animal welfare to fourth-year veterinary students during a two-week clinical rotation.

COMMITTEE/BOARD MEMBERSHIPS

DR. MICHAEL COCKRAM

» Section Editor: Welfare and Behaviour, *Animal: The International Journal of Animal Bioscience* and member of the Scientific Board

DR. KATY PROUDFOOT

» Member of the Animal Welfare Committee at the American Veterinary Medical Association, representing the American Association of Veterinary Medical Colleges
» Member of the Council for Agricultural Science and Technology Animal Working Group, representing the American Dairy Science Association
» Section Editor: Health, Welfare and Behavior, *Journal of Dairy Science*

AWARDS

» 2023 Sir James Dunn Animal Welfare Summer Research Award
 » Tsukasa Iwamoto, AVC Class of 2026
» 2023 Christofor Award in Animal Welfare
 » Jamie Kennedy, AVC Class of 2024
» 2023 Dr. Tom A. W. Taylor Scholarship
 » Tessa McBurney, AVC Class of 2024

FUNDING

» Sir James Dunn and Christofor Foundations: founding and sustaining funding
» Multi-year donors: Mr. Glenn Loranger, Drs. Stephen and Tina McCarthy
» Project funding:
 » Research support: Natural Sciences and Engineering Research Council of Canada (NSERC), and Canadian Agricultural Partnership (CAP) funding
 » Pegasus feral cat neuter program: Dr. Eric Butler and Ms. Suzanne Rocca-Butler
 » Pegasus Helping Hand Fund: Dr. Eric Butler and Ms. Suzanne Rocca-Butler, Ms. Eva MacNeill, Bernard Family (Tignish, PEI), Ms. Fran Mercier, Ms. Vanessa MacArthur

- » Handibear Hills Equine Sanctuary, Inc. project: Mr. Derek Mathers
 - » SJDAWC Grant Competition Fund: Ms. Janet Mah, Mr. Kevin Kane, Ms. Maria Rodriguez, and Ms. Erin Lynch
 - » Chinook Project: Victoria City Kennel Club, Rathlyn Foundation, Ms. Twyla Fradsham
 - » Universities Federation of Animal Welfare, UK (student initiatives)
 - » Many other generous individual supporters in memoriam
- Many other generous individual supporters
in memoriam

CONTACT INFORMATION

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