UNIVERSITY OF CALGARY

FACULTY OF VETERINARY MEDICINE

2024

Impact Report

Equine Health Fund

MESSAGE FROM

Dr. Renate Weller
Dean and Professor,
University of Calgary
Faculty of Veterinary
Medicine

With our school expanding, so does our impact—more students gaining hands-on experience, more research pushing boundaries, and more opportunities to improve animal and human health.

Change is on the horizon at the University of Calgary Faculty of Veterinary Medicine (UCVM), and 2024 has been a year of preparation. With our incoming **class set to double in 2025**, we've been working hard behind the scenes to ensure our students have the space, resources, and hands-on learning opportunities they need to succeed. Our expanded facilities remain on track and on budget to open in September 2025, marking a major milestone for our faculty and the future of veterinary medicine in Alberta.

This year has also been full of exciting initiatives and partnerships. Our plans for a permanent **Community Care Clinic** continue to take shape, addressing the growing need for accessible veterinary care while giving our students invaluable real-world experience.

At the same time, our researchers and emerging scholars remain at the forefront of tackling some of the most pressing challenges in veterinary medicine—from antimicrobial resistance to zoonotic diseases to animal welfare. As our school grows, so does our capacity to make an impact. Doubling our cohort means more students gaining critical skills, more research pushing boundaries, and more opportunities to improve both animal and human health.

Your kind support is more valuable than ever. Gifts made to our animal health funds directly help us train the next generation of veterinarians and drive forward discoveries that make a difference. Thank you for being part of this journey—I welcome you to visit anytime, my door is always open.

MESSAGE FROM

DR. GLENNA MAULDIN

Associate Dean,
Clinical Affairs
University of Calgary
Faculty of Veterinary
Medicine

2024 marked an exciting opportunity for me to lead the meaningful initiatives funded through UCVM's Animal Health Funds.

These funds are not for one single large project, they allow us to start something. These are meant to be bridge funds that allow projects to start as dreams to become a reality.

It is a true honour to see how these generous philanthropic gifts have impacted faculty, staff, students, animals, and research. I am aware of the vital need to promote and protect animal and human health and welfare through education, research, and service.

UCVM will only evolve into 2025, as we expand our Doctor of Veterinary Medicine (DVM) program, doubling student intake to 100 annually to meet the growing demand for veterinary expertise.

We also await the opening of UCVM's Community Care Clinic, which will offer students meaningful hands-on learning opportunities with small animals. This in turn will support vulnerable pet owners who are having to face heartbreaking decisions due to rising veterinary care costs, ultimately adding to strained veterinarians, bylaw services and shelters.

I would personally like to thank you for your support of the Health Funds. Your gift fuels the learning, innovation, and the meaningful work that helps UCVM make a lasting impact. Small and impactful funds!

Cancer is a devastating diagnosis for both the humans and animals we love. In horses, new findings are helping us understand one type of cancer that targets male horses. **Drs. Cameron Knight** and **John Soghigian** are investigating whether black flies (Simulium sp.) transmit Equus caballus papillomavirus type 2 (EcPV2), a virus linked to genital cancer in horses. Unlike high-risk human papillomaviruses (HPVs), EcPV2 may spread non-venereally, as horses with no breeding history or contact with others can still develop the disease. The team hypothesizes that flies mechanically transfer the virus between horses.

A 2024 pilot trial showed that laboratory-housed black flies can transport a related, harmless equine papillomavirus between feeding stations.

With Equine Health Fund support, a 2025 study will refine this trial using EcPV2.

If successful, this study will provide strong evidence that biting insects spread papillomaviruses. Researchers will trap and test insects near EcPV2-infected and EcPV2-free horses to identify potential vector species. If confirmed, these findings will impact EcPV2 vaccine strategies, as early-life infection by flies could narrow the vaccination window.

Dr. Cameron Knight thanks Equine Health Fund supporters, saying, "With this generous funding, we have supported a student from the Faculty of Science to continue to work on our project showing how the virus that causes genital cancer in horses is transmitted."

Investigating the role of black flies in transmission of Equus caballus papillomavirus type 2

Principal Investigators
Dr. Cameron Knight
Dr. John Soghigian

"Your support is helping us answer a fundamental question about a devastating disease in older horses, and we are excited to share our findings and future plans."

Antimicrobial Resistance in Alberta Horses

Principal Investigators
Dr. Brielle Rosa
Dr. Marie-France Roy

Building on support from the Equine Health Fund in 2023, **Drs. Brielle Rosa** and **Marie-France Roy** continued their research into antimicrobial resistance (AMR) in Alberta's horse populations, analyzing E. coli from fecal samples collected from feral horses and co-grazing cattle in the Sundre Equine Management Zone. Findings confirmed low levels of resistance in these populations compared to domestic horses, likely due to differences in antimicrobial exposure.

However, an unexpected discovery emerged—a small herd of feral horses was found carrying a multidrug-resistant E. coli strain never previously identified in feral horses.

This herd had wandered outside the management zone onto private land, suggesting potential exposure to domestic animals or contaminated environments.

To further investigate these patterns, sampling and comparative AMR analysis will continue in 2025. The project aims to provide critical insights into AMR transmission pathways across species and environments, contributing to a broader One Health approach to antimicrobial resistance.

"We are incredibly grateful for the support from the Equine Health Fund, which allowed us to hire a summer student to assist with this important research. Their contributions were invaluable in collecting and analyzing samples, helping us uncover new insights into antimicrobial resistance in Alberta's horse populations", said Dr. Rosa.

Her research extended into a fourth-year Investigative Medicine (IM) project on equine placentas, where she analyzed placental characteristics in relation to mare and foal health records.

Melanie also participated in a two-week equine rotation, assisting with lameness assessments, dental care, radiographs, and ultrasound evaluations for UCVM's teaching herd and horses from a local summer camp. Throughout these projects, she gained valuable experience in research and clinical work, deepening her understanding of equine health.

A "Jill of all trades"

The Equine Health Fund not only supports research, but allows our next generation of veterinarians and researchers once in a lifetime opportunities to learn in the field. Through the generous support of donors like you, DVM student **Melanie Jarbeau** gained hands-on experience in a wide range of equine health projects.

At a busy stable, she developed educational resources on deworming practices, teaching horse owners how to measure their horse's weight and properly administer dewormers to improve equine health and minimize antibiotic resistance.

Reflecting on her experience, Melanie shares, "I worked on a few projects related to different aspects of equine health. This experience allowed me to read numerous research articles which was incredibly beneficial as I progress through the DVM program."

2023 UPDATES:

Your support for projects funded through the Equine Health Fund doesn't end with your gift. See where previously funded projects are today:

1 Horse Racing Alberta Supports Groundbreaking Research on Racehorse Injury Prevention with $185,000 Donation

Dr. Thilo Pfau's first investment in his research came from the Equine Health Fund. Through ground-breaking initial discoveries made in his first phase of research, Dr. Pfau has been able to continue his work through a partnership with Horse Racing Alberta (HRA). HRA has generously committed $185,000 over four years to support pioneering research by Dr. Pfau and his team at UCVM and the Faculty of Kinesiology. This significant contribution will fund research aimed at improving the prediction and prevention of racehorse injuries, a critical area of focus for the safety and protection of equine athletes.

Conducting research that addresses issues of importance to our animal industries at the interface of animal and human health, we are coming up with innovative solutions and training the next generation of clinicians and researchers.

For over 10 years, UCVM has worked to support a shortage of veterinarians serving Alberta.

As an internationally recognized and accredited provider of high-quality veterinary education, we are an acknowledged leader in comparative biomedical, veterinary and population health research.

Our research, graduate education and clinical training programs advance animal and human health — **where innovation meets community.**

Contact us to learn more:

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These projects were made possible by our 2024 Equine Health Fund donors:

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