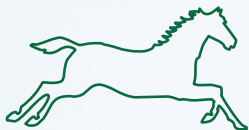


# HORSE



UNIVERSITY OF  
SASKATCHEWAN

# HEALTH LINES

WESTERN COLLEGE OF VETERINARY MEDICINE

FALL 2022

Dr. José Antonio Guerra  
leads Treasure, one of  
his equine patients.

📷 Christina Weese



## PRACTICAL VETERINARIAN

Coming to Canada for an equine residency meant starting over for Dr. José Antonio Guerra.

Guerra had already become a professor at Universidad Autónoma del Estado de México outside of Mexico City after earning a master's degree at the Universidad Nacional Autónoma de México (UNAM).

He oversaw a new equine hospital — and he finally owned the horses he had so badly wanted to ride as a young boy growing up outside of Mexico City.

Still, he wanted to learn more. Advancing his skills as an equine surgeon meant giving up the life he'd built and moving to Canada.

"It wasn't enough just to be a general equine vet," says Guerra, who had no further options for specialized training in Mexico. "I wanted to keep growing, going to school."

Driven to becoming a board-certified equine surgeon, Guerra began a rotating internship at the Ontario Veterinary College before being matched to the Western College of Veterinary Medicine (WCVN) for a large animal surgical residency program.

"I wanted to get top knowledge and that's why I decided to leave my comfort zone, [to] move to another country and leave everything behind," he says.

Guerra had never heard of Saskatchewan before coming to the WCVN in 2019. Since then, he and his wife Abril have built a life in Canada with their two-year-old son Mateo, who was born in Saskatoon.

While Guerra loves Canada and can see himself pursuing a career here, his experience working in a rural practice in Mexico continues to influence him as he works on his primary research project at the WCVN.

Guerra is testing a combination of easily accessible local block and sedative drugs, lidocaine and xylazine, to provide longer acting pain control during nerve

TOWNSEND EQUINE HEALTH RESEARCH FUND

## PRACTICAL VETERINARIAN

*continued*

blocking procedures on horses. Nerve blocks allow for pain control and help clinicians locate the origin of lameness in the limbs of horses. By testing different drugs in combination, Guerra and his supervisor Dr. Keri Thomas aim to extend the duration of pain control.

“We thought [this drug research was] pretty important because they’re cheap, everyone in the world can use them. I thought that it was pretty cool to do something that they can use in Mexico City, Namibia, Argentina — wherever you want,” he says.

While Guerra has access to cutting-edge drugs, treatments and diagnostic technologies at the WCV’s Veterinary Medical Centre (VMC), his experience working in rural Mexico makes him acutely aware of how equine practitioners in rural areas or with smaller budgets must adapt their work to suit their clients’ needs.

He also notes that medication shortages caused by supply chain disruptions have remained a continued barrier, which is another reason to diversify the range of drugs available to surgeons.

Guerra also participates in a handful of other research studies at the WCV including an investigation of inflammation markers in equine joints with Dr. Joe Bracamonte and a study on surgical techniques for cattle with Thomas.

Left to right: EFC representative Candas Rolls, Dr. Antonio Guerra and WCV dean Dr. Gillian Muir.

📷 Dave Stobbe



Guerra’s dedication to research has earned him accolades at the veterinary college. He has received tuition awards from the Townsend Equine Health Research Fund for the past three years, and in June, Guerra received a \$5,150 award from the Equine Foundation of Canada (EFC) in recognition of his demonstrated interest and scientific merit in equine research.

“Sometimes as an intern, [as a] a resident, your family has to go through a lot. I’m not taking this award on my own. It

was a huge family honour,” says Guerra, who spends many hours working and on call at the VMC while juggling his research work.

“Sometimes you think that you work hard and no one really cares. But having an award like this means so much. Professionally, it feels awesome, but economically it’s a relief. I just want them [the EFC] to know that I’m extremely grateful. Their generosity and the way they support this is just amazing, and I’m super thankful for it.” 🐾



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*Horse Health Lines* is the news publication for the Western College of Veterinary Medicine’s Townsend Equine Health Research Fund (TEHRF). Visit [tehrf.ca](http://tehrf.ca) for more information, Send comments and article reprint requests to:

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## ‘People helping people helping horses’

The Equine Foundation of Canada (EFC), whose fitting motto is “People helping people helping horses,” raises funds to support and promote equine health through science and direct action. Since 1984, the EFC has provided funds for projects, equipment and student support — including annual scholarships at three Canadian veterinary schools — to help improve the welfare of horses in Canada.

In 2013, the EFC established the Equine Foundation of Canada Graduate Student Scholarship at the WCV, which annually awards a graduate student who shows interest and scientific merit in equine research. Equipment purchases for the WCV also include

an equine simulation model as well as endoscopes and monitoring tools that have helped to expand diagnostic capabilities for the college’s equine team.

In the past four decades, EFC has contributed more than \$470,000 in scholarships to Canadian veterinary students and over \$806,000 in equipment purchases in support of equine health care.

To support this charitable foundation or to become a volunteer, contact EFC president Bob Watson (403-378-4823 or [cbwatson@ccwireless.ca](mailto:cbwatson@ccwireless.ca)). Tax-exempt donations can be made by cheque (c/o Susan Nelson, EFC treasurer, 326 Dyke Road, R.R. 2, Falmouth, N.S., B0P 1L0).



# Equine fund directs dollars to projects and people

This year, the Western College of Veterinary Medicine's Townsend Equine Health Research Fund (TEHRF) has targeted just over \$100,000 to support three new research projects as well as graduate scholarships and an undergraduate summer research position at the veterinary college.



## Research projects

Three equine health research studies, which involve scientists at the WCVM and their collaborators, received a total of \$51,607 in support from TEHRF.

### Is *Chlamydia psittaci* causing equine abortions in Canada?

**Drs. Bruce Wobeser and Madison Ricard, WCVM**

WCVM researchers are investigating the prevalence of *Chlamydia psittaci* (*C. psittaci*) in aborted horse placentas. This bacterial pathogen causes psittacosis, a disease that's transmitted by birds, and leads to reproductive problems and respiratory disease in horses, people and other mammals.

### Determining seasonality of baseline plasma ACTH and serum insulin in Saskatchewan horses

**Drs. Julia Montgomery, Paula Viviani, Valentina Ragno and Melissa Meachem, WCVM**

The WCVM research team are working to establish baseline measurements for adrenocorticotrophic hormone (ACTH) and insulin in normal horses living in Saskatchewan. These specific reference values will help western Canadian veterinarians diagnose horses suffering from equine metabolic syndrome

(EMS) and/or pituitary pars intermedia dysfunction (PPID) as early as possible.

### Exosomes and equine pregnancy

**Drs. Claire Card and Dr. Daniel McPhee, WCVM; Dr. Mariana Diel de Amorim, Cornell University; and Dr. Maria Suarez Lopez**

Exosomes are key regulators of physiologic, pathologic and immunologic processes in pregnancy, and so far, no one has investigated their role in horses. This research team will be the first to examine and compare the specific protein and lipid content of exosomes from the endometrium and embryo in mares.

## Graduate scholarships

Six WCVM graduate students whose research work focuses on equine health issues have received a total of \$40,000 in awards toward their tuition costs at the University of Saskatchewan.

**Dr. Maria Monar** is a Master of Science (MSc) candidate and resident in equine theriogenology who is working with Dr. Claire Card, WCVM Department of Large Animal Clinical Sciences.

**Dr. Paula Viviani** is a MSc candidate and resident in large animal internal medicine whose work is supervised by

Dr. Julia Montgomery, WCVM Department of Large Animal Clinical Sciences.

**Toni-Anne Saworski** is a MSc student who is working with Dr. Emily Jenkins, WCVM Department of Veterinary Microbiology.

**Dr. Antonio Guerra** is a resident in large animal surgery whose work is supervised by Dr. Keri Thomas, WCVM Department of Large Animal Clinical Sciences.

**Dr. Madison Ricard** is a MSc candidate of diagnostic anatomic pathology whose supervisor is Dr. Bruce Wobeser, WCVM Department of Veterinary Pathology.

**Dr. Nicole Van der Vossen** is a MSc candidate and resident in large animal medicine whose work is overseen by Dr. Julia Montgomery, WCVM Department of Large Animal Clinical Sciences.

## Undergraduate research

Each year, TEHRF provides \$8,900 in funding to support an equine-focused undergraduate summer research position at the WCVM. **Jaidyn Burton** of Assiniboia, Sask., is a third-year veterinary student at the WCVM who spent this past summer working with Drs. Bruce Wobeser and Madison Ricard on their investigation of chlamydial abortions among western Canadian mares. 



# Life after laminitis

By Jeanette Neufeld



Jessie, six months after her diagnosis of severe laminitis.

📷 Bob Wood

## A Saskatchewan horse survives laminitis, thanks to her owner's exceptional efforts and her health care team's dedication.

Before Bob Wood's mare Jessie got sick, he was usually found outdoors with his two horses, two dogs and cat by his side.

"We were the joke of the area ... 'cause all of us would be walking and hanging together in the pasture," says Wood, who lives near Delisle, Sask.

Now, while Wood and his other animals roam nearby, Jessie is in the paddock that Wood built during the 14-year-old mare's recovery from laminitis.

Last December, Dr. Valentina Ragno, a veterinarian with the Western College of Veterinary Medicine's (WCVm) equine field service, came to see Jessie, who had wedged herself between two round bales and a fence. Ragno soon realized Jessie was suffering from painful laminitis.

Laminitis is inflammation of the soft tissues called laminae, which attach the horse's coffin bone (wedge-shaped bone within the foot) to the hoof wall. In some cases, the coffin bone rotates away from the hoof wall — a painful process that causes severe lameness, often leading to euthanasia.

Jessie was overweight, and the WCVm clinicians suspected underlying metabolic conditions. But first, they gave her pain medication so she could be trailered to the WCVm's Veterinary Medical Centre (VMC).

Next, WCVm large animal medicine specialist Dr. Julia Montgomery and her residents swiftly implemented an inten-

sive therapeutic plan to control Jessie's pain and to correct her metabolism.

Wood, who works in British Columbia, returned to Saskatoon to be with Jessie. After nine days in hospital, Jessie was discharged and Wood began managing her daily care. Beginning at 4 a.m., Wood gathered up the hay he'd soaked overnight, then began preparing Jessie's medications.

"A lot of the drugs are formulated large and small animals — or humans. They come in a low concentration, so we need 30 pills of this, 70 pills of that. It can be a bit overwhelming," explains WCVm large animal internal resident Dr. Paula Viviani, who was part of Jessie's care team.

Wood crushed up more than 100 pills twice a day. Another daily chore was soaking her rations of hay to reduce the amount of sugars or nonstructural carbohydrates — which worsen symptoms of laminitis — in the forage. Feeding soaked hay with lower sugar content also contributes to weight loss.

Several weeks later, after the clinical team declared the mare sound enough, Wood started to walk his horse on a lead rope in a small outdoor pen. Throughout the process, he kept in close touch with the WCVm's equine field service team.

Wood also relied on Joule Tallman, a Saskatoon-area barefoot trimmer who

collaborated with the WCVm's clinical team. Guided by X-ray images, Tallman trimmed Jessie's hoofs to align the coffin bone at the proper angle to the ground.

Tallman also encouraged feed testing and customized nutritional supplements. Wood carefully followed the advice given by Jessie's care team — which included follow-up veterinary care, medications, hoof trims, diet and exercise.

During Jessie's latest check-up, clinicians found a horse in ideal body condition, running happily in her paddock. Jessie was diagnosed with equine metabolic syndrome and suspected pituitary pars intermedia dysfunction, and she continues to receive medication for the latter condition. But she no longer requires pain control.

"Everyone who was coming over to see her said she was looking great, but until you hear it from the doc — that kind of hit home," says Wood. He's reluctant to take any credit for Jessie's recovery, but his care team commends his exceptional efforts.

"Follow up and owner compliance are the key factors," says Viviani. "It's a lot of commitment and it's a lot of work."

But if he had to, Wood says he would do it all again.

"She's my girl. If it was one of the dogs, if it was the cat, it'd be the same. How can you kick one to the curb? You know, you can't — you can't." 🐾

Visit [tehrf.ca](http://tehrf.ca) to read the full story about Jessie's recovery.



# Equine abortions: *Chlamydia* a culprit?

By Jaidyn Burton

Western College of Veterinary Medicine (WCVM) researchers are investigating the prevalence of a zoonotic bacterial pathogen in aborted horse placentas.

*Chlamydia psittaci* (*C. psittaci*) causes *psittacosis*, a disease transmitted by birds, which can cause reproductive problems and respiratory disease in horses, people and other mammals.

Drs. Madison Ricard and Bruce Wobeser will test about 100 equine placenta tissue samples submitted to Prairie Diagnostic Services (Saskatchewan's veterinary diagnostic laboratory) between 2009 and 2020. If the WCVM study shows that *C. psittaci* caused a percentage of horse abortions in Western Canada, Ricard says more biosecurity is needed.

"If we have a potentially zoonotic pathogen in these reproductive tissues, we need to be more cautious when handling these tissues and use proper disposal to prevent contamination of the environment," says Ricard, an anatomic pathology resident at the WCVM.

When clinicians deal with abortions involving cattle, dogs and sheep, they wear full biosafety suits and gloves, or

WCVM resident Dr. Madison Ricard with her three horses.

📷 Supplied



they use a biosafety cabinet to examine tissues during post-mortem exams. But veterinary professionals aren't taking the same precautions for equine abortions.

Most diagnostic labs don't routinely test for *Chlamydia* because *Chlamydia*-induced abortions in horses are considered rare. But in 2014, an Australian research team confirmed that veterinary students and technicians who were in contact with the aborted tissues of a mare with *Chlamydia* contracted the infection. After examining archived cases, Australian researchers identified that *Chlamydia* had caused several equine abortions.

Ricard and Wobeser are conducting a similar study in Western Canada. But even if they find that chlamydial abortions are rare, *Chlamydia* exposure is an occupational hazard for veterinary team members as well as horse breeders and owners. Anyone handling the reproductive tissues of a horse that aborted due to *Chlamydia* is at risk without proper biosecurity measures and more awareness.



Jaidyn Burton of Assiniboia, Sask., is a third-year WCVM veterinary student. The Townsend Equine Health Research Fund (TEHRF) supported this study as well as Burton's summer research experience.

Visit [tehrf.ca](http://tehrf.ca) to read the full story.

## Melanoma and grey horses

By Whitney Jiricka

As a veterinary student and the owner of a grey horse, I'm worried about melanomas since the prevalence of these cancerous growths is much higher in grey horses.

WCVM equine field service veterinarian Dr. Michelle Husulak has similar concerns.

"It is very rare to find a grey horse over the age of 15 that has none. The vast majority of them have one or two little nodules somewhere on their body," says Husulak, who has a special interest in equine skin conditions. "In horses they [the growths] are usually benign, which is not the case in other species."

On average, grey horses have an 80 per cent chance of developing a mela-

noma (skin cancer) during their lives. Melanomas develop when skin cells that contain melanin deposit excessive pigment, leading to abnormal production.

Husulak adds that the main health implications of melanomas are completely situational. Areas with severe melanomas around the anus can lead to problems defecating, or tumours in areas where tack is rubbing can lead to discomfort. As well, tumours on or around the lip area can lead to issues with eating.

"As a vet, you try to alleviate concerns by horse owners, but there is not a whole



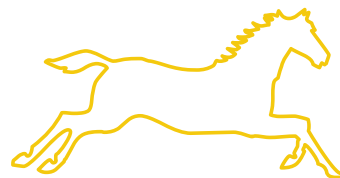
📷 Whitney Jiricka

lot we can do. If the masses become large or get in the way, removal is the best thing you can do for the horse," says Husulak.

Whitney Jiricka of Rosetown, Sask., is a WCVM veterinary student who worked as a summer research student in 2022.

Visit [tehrf.ca](http://tehrf.ca) to read the full story.

# GALLOPING GAZETTE



## ONLINE EQUINE TALKS RETURN THIS FALL

The WCVM's popular "EquineED Talks" online series will return this fall for a third season of horse health learning with the veterinary college's equine clinical team. While organizers are still confirming this season's lineup of speakers, the first session is scheduled for Nov. 8. This season's topic list includes equine skin conditions, equine behaviour, sports medicine, tying-up syndrome and more. The WCVM presentations, which are offered free to the public, will run from 7 to 8:15 p.m. CST on selected Tuesday evenings. Visit [wcvm.usask.ca](http://wcvm.usask.ca) and click on "EquineED Talks" under the "Education" tab to register for the listed sessions. The web page also includes links to all recorded horse health presentations from the past two seasons.

## EQUINE EXPO CELEBRATES 10 YEARS

After a one-year delay due to the COVID-19 pandemic, organizers of the Saskatchewan Equine Expo are preparing to celebrate their 10th show this fall from Thurs., Oct. 27, to Sunday, Oct. 30, at Saskatoon's Prairieland Park. This popular equine event, which debuted in 2012, is based on a longstanding partnership between the WCVM, Prairieland Park and the Saskatchewan Horse Federation (SHF), with the overall goal of showcasing equine health, technology and horsemanship.

In addition to the Trainers' Challenge, equine clinician Jonathan Field, the WCVM-SHF equine education area and other crowd favourites, this year's show will include a special WCVM EquineED Talk on Friday afternoon, Oct. 28, featuring American veterinarian-farrier Dr. Steve O'Grady of Keswick, Va. O'Grady, who trained and worked as a farrier for 10 years before going to veterinary school, is internationally known for his extensive work in equine podiatry and farrier education. Check the Expo website ([saskatchewanequineexpo.ca](http://saskatchewanequineexpo.ca)) for more information closer to the show's date.

## VETAVISION RETURNS

This fall, WCVM students will welcome people of all ages to explore the exciting world of veterinary medicine on Friday and Saturday, Sept. 23-24, during the 2022 edition of Vetavision — the WCVM's student-run open house. The two-day event opens up the WCVM to the public to showcase the veterinary profession and to highlight the many roles of veterinarians in animal health, public health, research, industry and community service. For more details, visit [wcvm.usask.ca](http://wcvm.usask.ca) and click on "Vetavision 2022" under the Education tab. Plus, make sure to follow @vetavision on Facebook and @wcvmvetavision on Instagram for the latest updates.

## LONGTIME EQUINE SURGEON RETIRES

Dr. Spencer (Spence) Barber, a professor and surgical specialist in the WCVM's Department of Large Animal Clinical Sciences, retired in June 2022 after a 45-year career at the WCVM. Barber grew up in southern Saskatchewan and graduated from the WCVM

in 1974. After graduating, he completed an equine internship at Purdue University. He went on to finish a surgical residency at Cornell University and University of California, Davis, and then became a board-certified specialist with the American College of Veterinary Surgeons (ACVS).

Barber joined the WCVM faculty in 1977 and was an integral part of the WCVM's large animal surgical team with many contributions to clinical services, teaching and research. Barber presented, published and conducted research on various aspects of orthopedic and soft tissue surgery, besides completing numerous clinical investigations. In recent years, he and his team members are best known for their innovative work in equine wound healing — including explorations of stem cells as therapy for wounds in horses.

In the Saskatchewan horse community, Barber was well known for his 23-year role as the regulatory veterinarian at Saskatoon's Marquis Downs racetrack and his previous involvement as a calf roper in rodeo competitions. As well, he trained running breed barrel prospects and ran a small horse breeding operation outside of Saskatoon for two decades. A few years ago, Barber and his wife Terry purchased a waterfront cabin north of Saskatoon — the ideal place for their grandchildren to visit.



Dr. Spencer Barber.  
Photo Supplied



WCVM student Lianne Price (left) gives bandaging tips at Vetavision.  
Photo Christina Weese



# RESEARCH IN PRINT

A round up of WCVN-related equine research articles that were recently published in peer-reviewed journals.

Chapuis RJJ, Becker AAMJ, Dowling PM, Weese SJ. "Characterisation of faecal microbiota in horses medicated with oral doxycycline hyclate." Feb. 2022. *Equine Veterinary Journal*. 00:1-13. <https://doi.org/10.1111/evj.13570>.

Diel de Amorim M, Klein C, Foster R, Dong L, Fernanda Lopez-Rodriguez M, Card C. "Expression of oxytocin/neurophysin I and oxytocinase in the equine conceptus from day 8 to day 21 post-ovulation." Mar. 2022. *Animals*. 12:799. <https://doi.org/10.3390/ani12070799>.

Kingsley NB, Sandmeyer L, Bellone RR. "A review of investigated risk factors for developing equine recurrent uveitis." *Veterinary Ophthalmology*. 2022; 00:1-15. doi: 10.1111/vop.13002.

Ricard RM, St-Jean G, Duizer G, Atwal H, Wobeser BK. "A 13-year retrospective study of equine abortions in Canada." *Canadian Veterinary Journal*. July 2022. 63(7):715-721. PMID: 35784776; PMCID: PMC9207963.



Carmalt JL, Pimentel KL. "The equine temporomandibular joint: comparisons between standard and needle arthroscopic examination of cadaver specimens and standing horses." *Frontiers in Veterinary Science*. Apr. 2022. 26;9:876041. doi: 10.3389/fvets.2022.876041.

Visit [tehrf.ca](http://tehrf.ca) for more news updates.

## EQUINE INTERNSHIPS FOR WCVN GRADUATES

After graduating from the WCVN's Doctor of Veterinary Medicine (DVM) degree program in June, seven members of the WCVN's Class of 2022 began one-year clinical internships at equine-focused veterinary practices in Western Canada and the United States.

- **Dr. Chantel Dunlop** of Seven Sister Falls, Man., is interning at Moore Equine Veterinary Centre in Calgary, Alta.
- **Dr. Sarah Thomas** of Calgary, Alta., is interning at Burwash Equine Services in Cochrane, Alta.
- **Dr. Taylor Davies** of Langley, B.C., is interning at Paton and Martin Veterinary Services in the Fraser Valley, B.C.
- **Dr. Megan Puzey** of Cochrane, Alta., is interning at Pioneer Equine Hospital in Oakdale, Calif.
- **Dr. Alexandra Hiemstra** of Big Valley, Alta., is interning at Idaho Equine Hospital in Nampa, Idaho.
- **Dr. Matthew Woodman** of Calgary, Alta., is interning at Cornell Ruffian Equine Specialists, Cornell University in Ithaca, N.Y.
- **Dr. Alannah Friedlund** of Fiske, Sask., is a large animal (equine) surgical intern at the WCVN in Saskatoon, Sask.

Two WCVN graduates who interned at Moore Equine Veterinary Centre in 2021 have moved on to exciting opportunities in veterinary care. Dr. Anna Henderson (DVM'21) began an anesthesia residency at Ontario Veterinary College while Dr. Jane Westendorf (DVM'20) joined the team at Total Equine Veterinary Services in Langley, B.C. Another



2022 WCVN graduate  
Dr. Taylor Davies.  
© Christina Weese

recent WCVN graduate, Reina Fennell (DVM'21), completed her internship at Veterinary Associates Equine LP in Auckland, New Zealand, and returned to Canada in September to become an equine veterinarian with Swiftsure Equine Veterinary Services in Victoria, B.C. 

# HONOUR THEIR LIVES WITH THE GIFT OF EQUINE HEALTH

Pay tribute to the lives of your patients, clients and loved ones by making a donation to the Townsend Equine Health Research Fund (TEHRF) through its memorial program. Each time you give to the fund, we will send a letter to the client or loved one's family acknowledging your gift to the equine health fund.

"Our practice (Paton & Martin Veterinary Services) began to make contributions to the fund on behalf of clients when their horses passed away. We have found this to be a gratifying contribution and have been humbled by the responses that we have received from many of our clients. I think that it is very helpful for them to know that their horses have been honoured in such a fashion. The fund gives horse owners the additional opportunity to contribute to this very worthwhile cause: supporting vital research in the areas of equine health."

**Dr. David Paton (DVM'78)**  
WCVM alumnus and TEHRF donor

## Questions?

[wcvm.supportus@usask.ca](mailto:wcvm.supportus@usask.ca) | 306-966-7268

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