

HORSE

AUTUMN 2007

HEALTH

L I N E S

BRINGING BETTER HEALTH TO YOUR HORSES



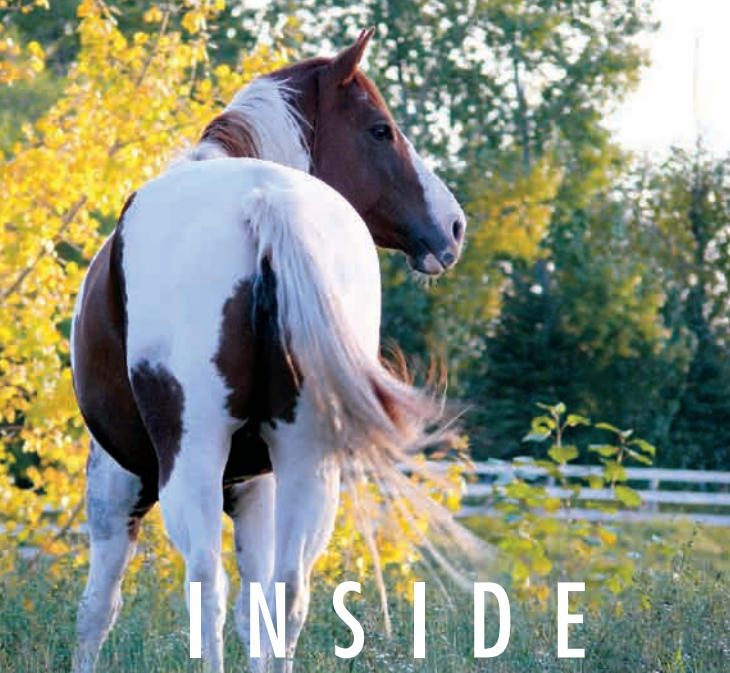
BIG HORSES ON CAMPUS

*A century of advancing
horse health at the University
of Saskatchewan*



UNIVERSITY OF
SASKATCHEWAN

WESTERN COLLEGE OF VETERINARY MEDICINE • EQUINE HEALTH RESEARCH FUND



INSIDE

4 Sarcoid Sleuths

A team of veterinary pathologists put an ugly problem under the microscope.

6 Academic Horse Power

Horses, their genetics and their health have been big on the University of Saskatchewan campus since the early 1900s.

9 College Growth Spurt

Brand new facilities are opening up all around WCVM as the veterinary college's four-year, \$57-million expansion moves into its final stages.

10 A Career-Inspiring Summer

WCVM student Hayley Lang enjoyed a variety-packed summer as the EHRF undergraduate research summer student.

12 The Testing of the Screw

Drs. David Wilson and Ryan Wolker test out a new design of titanium screw for potential use in pastern arthrodesis procedures.

16 Equine TLC

Dr. Meagan McBurney (WCVM '07) is the first recipient of the Dino and Dr. Ashburner Award in Equine Care.

FRONT COVER: W.J. Rutherford, the University of Saskatchewan's first dean of the College of Agriculture, stands with Rosalind, one of the university's most prized Clydesdale mares, and her foal, circa 1920s. Photo: U of S Archives, A-2109.

HORSE HEALTH LINES

Horse Health Lines is produced by the Western College of Veterinary Medicine's Equine Health Research Fund. Visit www.ehrf.usask.ca for more information. Please send comments to:



Dr. Hugh Townsend, Editor, *Horse Health Lines*
WCVM, University of Saskatchewan
52 Campus Drive, Saskatoon, SK S7N 5B4
Tel: 306-966-7453 • Fax: 306-966-7274
wcvm.research@usask.ca

For article reprint information, please contact sm.ridley@sasktel.net.

WCVM'S "PHILANTHROPIC MATCHMAKER": Patti Tweed has only had the chance to meet a handful of WCVM's donors since she became the College's new development officer on May 1. "But the donors I have met are just as I would have expected: very down to earth, genuine people with a strong commitment to their animals," says Tweed. "It's been a pleasure to get to know people who have that kind of connection and all that it entails."

For Tweed, meeting the College's supporters and learning more about what's behind their interest in supporting WCVM's research, clinical and educational activities is a vital aspect of her job: "Part of my role is to act as a conduit or a 'philanthropic matchmaker' between the work that's being done at the College and the interests of the donors. It's an ongoing — and fascinating — learning process for all of us."

Becoming WCVM's development officer was a natural progression for Tweed whose career has combined physical and spiritual health with development and philanthropy in a unique way. A 1972 graduate of the U of S College of Home Economics, Tweed practised as a dietitian for two decades — serving as director of the Royal University Hospital's dietetic internship program for 10 of those years.

In the early 1990s, Tweed shifted her focus from nutrition to studying theology at the University of Winnipeg. After earning her Certificate in Theology in 1995, she became the program's director for five years.

During that time, she became part of a development council that looked at possibilities for fund raising at the university. "I began to apprentice with some very fine people in the field, I started taking courses, and eventually, I moved into fund raising," explains Tweed, who helped to establish the University of Winnipeg Foundation in 2003.

Two years later, Tweed returned to the U of S and became the development officer at the College of Nursing — an experience that showed her the value of building strong networks between professions, private and public sectors and communities.

Those experiences will also be valuable in Tweed's new job where she will work closely with WCVM's family of donors to ensure that they see the results of their commitment.

For example, Tweed looks forward to meeting with the College's equine health researchers, learning about their research initiatives, and gaining a better understanding of how those projects could potentially benefit equine health care.

"I want to understand the high level of research that's going on at the College so I can talk about these research goals with our donors and heighten their awareness of the possibilities that we can achieve through their support of these kinds of exciting projects."



To reach Patti Tweed, call 306-966-7450 or email patti.tweed@usask.ca.



OVER THE FIRST HURDLE

Western Canadian horse people raise **\$100,000** for WCVM's matching gift incentive. The result: an additional **\$200,000** for horse health research.

The generosity of western Canadian horse owners has helped the Western College of Veterinary Medicine raise an additional \$200,000 for equine health research during the first year of a unique matching gift incentive program.

Half of the funding — \$100,000 — came from more than 100 individuals, organizations and companies whose contributions “triggered” a successful match from the fund raising incentive during its first 12 months of operation.

The second \$100,000 will come from the Heather Ryan and L. David Dubé Foundation — the organization that initiated the matching gift incentive program in August 2006. The Foundation will provide up to \$100,000 per year in matching funds for five years. That gives WCVM the chance to raise an additional \$1 million for its equine health research activities by 2011.

“We’re extremely grateful to all donors who increased their annual donations to WCVM’s equine research program — or made their very first contributions in support of the College’s horse health activities,” says Dr. Norman Rawlings, WCVM’s associate dean of research.

Rawlings especially commends the efforts of **Patricia and Mark Du Mont** — long-time supporters of the College’s Equine Health Research Fund. In August, the couple from Aldergrove, B.C., donated more than \$75,000 to ensure that WCVM maximized the fund raising incentive’s annual “match.” The Du Monts also hope that their contribution will inspire others in the industry to show a greater appreciation for their horses’ well-being by supporting horse health research at WCVM.

Rawlings says the additional funding will support multi-year, WCVM-based research projects that target critical horse health issues — similar to a trio of large-scale studies that began earlier this year. In March, the Heather Ryan and L. David Dubé Veterinary Health and Research Fund awarded \$410,000 to three research investigations of equine endotoxemia, neonatal *Rhodococcus equi* pneumonia and genetic ocular disorders. **H**

A Sampling of WCVM's DOUBLE DONORS

Mamie E. Bailey, Prince Albert, SK • B.C. Standardbred Breeders' Society, Surrey, BC • Elders Equine Clinic, Winnipeg, MB • Gordon Bryan Stables, Calgary, AB • James Killeen, Sherwood Park, AB • Panorama Ridge Riding Club, Surrey, BC.

DOUBLE YOUR DONOR DOLLARS AT WCVM

Q. What is WCVM's matching gift incentive program?

Through a new fund raising incentive, the Heather Ryan and L. David Dubé Foundation has pledged to match any “new” funding dollars to the College’s equine health research programs. The goal: to encourage more horse people to support vital equine health research at WCVM.

Q. How much money can be “matched”? In total, the Foundation will contribute as much as **\$500,000** in matching funds between 2006 and 2011.

Q. How can I ensure that my donation is matched?

1. BECOME a donor. As a first-time contributor to the Equine Health Research Fund, your gift will increase the Fund’s annual donations used to conduct cutting-edge research, to train equine specialists and to generate valuable horse health information.

2. BOOST your annual donation. Every dollar that you give to the Equine Health Research Fund over and above the amount of your usual contribution will be matched.

3. INVEST in major equine health research projects at WCVM. Besides its support of the EHRF, the Heather Ryan and L. David Dubé Foundation is investing in large-scale, collaborative research initiatives at WCVM over the next five years. The Foundation will donate one dollar for every dollar that you contribute to supporting these high-priority projects that focus on critical issues in horse health.

For more details, contact WCVM's Development Office at 306-966-7450 (wcvm.supportus@usask.ca).

They can be unsightly and potentially disfiguring — but equine sarcoids hold a special attraction for Dr. Bruce Wobeser of WCVM's Department of Veterinary Pathology. As the PhD student explains, the potential for finding a more effective way to treat equine sarcoids prompted his double-take of this ugly problem.

“In most cases, they're slow-growing tumours: some resolve spontaneously while some get worse. And then there's a proportion of equine sarcoids that just go wild and become huge. If they develop in a bad place, that can be very bad news. For example, a horse can go blind if a sarcoid grows around the eye area, and in some cases, you might even lose the horse,” says Wobeser.

Getting rid of sarcoids is challenging since tumours often come back after treatment. Even worse, conducting biopsies or surgically removing some types of tumours can trigger more rapid growth. “If nothing else, it would be good to be able to make a prognosis so you can decide which ones to leave alone and which ones to treat,” explains Wobeser. “If we could come up with other treatment options, it would be even better.”

But before better therapies can be developed, scientists need to do more homework: equine sarcoids are the most-commonly diagnosed skin tumours in horses around the world, but veterinary researchers know very little about them.

Answering some of equine sarcoids' “unknowns” is the goal for two new research studies that are supported by WCVM's Equine Health Research Fund. Dr. Andy Allen, a veterinary pathologist and Wobeser's graduate supervisor, is leading the investigations in collaboration with Wobeser and Dr. Beverly Kidney, a veterinary pathologist who has specialized expertise in investigating viral oncogenesis — particularly papillomaviruses.

Do sarcoids vary by region?

Although equine sarcoids are diagnosed in all parts of the world, Wobeser says there seems to be regional variations in the types of sarcoids diagnosed and in the types of horses most commonly affected by the skin tumours.

“When you look through the literature, you might find one study that says mostly young horses up to seven years of age are affected, while another will suggest the average age is nine, and yet another report says that horses of any age are susceptible,” explains Wobeser.

“Until now, no one has examined what's going on around here and that's what we want to do in our first study: we want to develop a ‘profile’ of the tumours in Western Canada.”

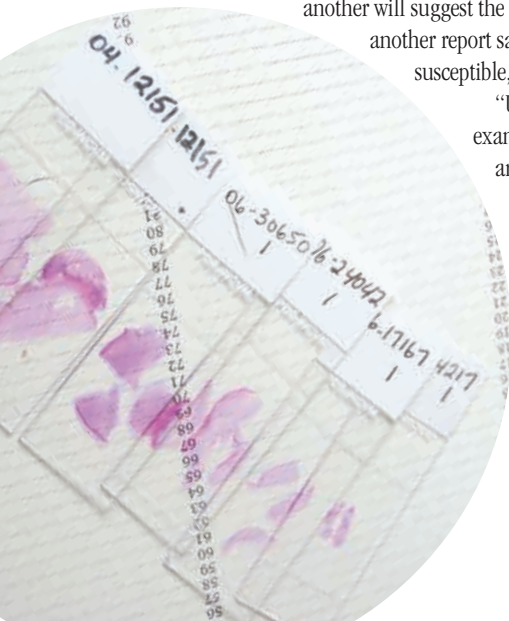
As a first step, WCVM researchers will go through 10 years' worth of records from western Canadian veterinary diagnostic laboratories and



Sarcoid Sleuths

By Roberta Pattison

An unattractive equine skin tumour is getting a lot of **second looks** from a team of WCVM veterinary pathologists.



collect information on equine sarcoid cases. Besides collecting statistics on the age, breed and sex of affected horses, the team will gather details about the tumours including the number, location and type of lesions for each case.

Another important piece of the epidemiological puzzle is whether affected horses live alongside cattle as well as other horses. “Previous research has shown a link between equine sarcoids and two different types of bovine papillomavirus (BPV), and the disease is presumed to be infectious. Initial evidence suggests that horses living alongside cattle are at greater risk, but so far, it’s not conclusive,” says Wobeser.

To explore that potential link even further, the research team will test for the presence of BPV and the disease type in archived tumour samples from the diagnostic laboratories. These findings may help researchers determine whether equine sarcoids in Western Canada have similarities to the disease identified in other parts of the world.

“In the western United States, it’s almost always Type 2 BPV that’s involved in equine sarcoid cases. But Type 2 BPV isn’t found in European sarcoid cases: only the Type 1 BPV virus. Are these equine sarcoids the same disease? We’d like to find out.”

While the disease’s epidemiological profile will address some immediate questions, the study’s key value is to establish a knowledge base for future sarcoid research — especially in Western Canada. Eventually, more specific studies will result in better modes of prevention and treatment for veterinarians in the field.

What makes sarcoids tick?

While sarcoids are a common problem in horses, little is known about what makes normal *fibroblasts* (the cells from which normal connective tissue derives) turn into sarcoid tumour cells.

A horse’s body creates cells that live, die and are eventually replaced: a normal process that’s essential for good health. *Apoptosis*, or programmed cell death, eliminates old and unhealthy cells. But when this process is absent or not working properly, problems arise. Some tumours result from the rapid division of cells, while others appear when cells just live longer than expected.

Since earlier studies have shown that sarcoids don’t appear to be associated with excessive cell proliferation, the WCVM researchers will try to discover if sarcoid cells somehow escape apoptosis — or if apoptotic cells are absent in the tumours. In this second sarcoid study, the team will examine up to 90 archived tumour tissue samples that represent all six types of sarcoids seen in horses. The researchers will then use immunohistological markers to evaluate apoptosis in the tumour cells.

When veterinarians are dealing with sarcoids, one difficulty is differentiating the rapid-growing, problematic tumours from the slow-growing, innocuous type. “We want to find a marker that you can stain on a slide,” explains Wobeser. “Are the bad tumours expressing different markers — or do they express the same markers differently?”

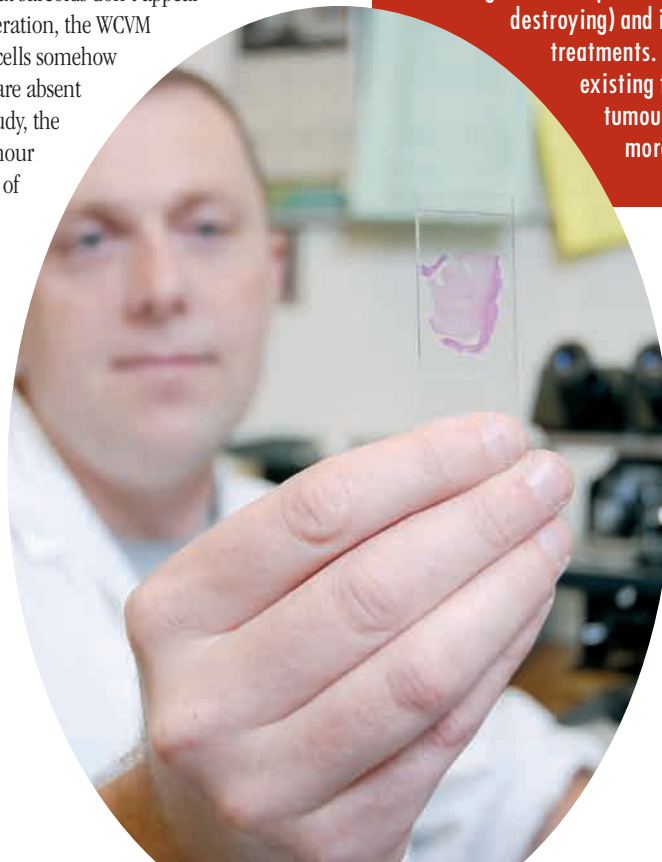
If this study’s findings show that the transformed cells express these markers, they may become potential

targets for novel therapies or markers that veterinarians could use to predict the prognosis for treated sarcoids. That’s a crucial part of dealing with sarcoids since these skin tumours often recur after treatment — or therapies can even trigger more rapid growth.

“It’s sequential: first, we need to know what are sarcoids? Second, how are they growing? Third, are there tumour markers? And after that, can we use these markers for treatment?” explains Wobeser, adding that tumour markers are regularly used in human and pet cancer cases. “If something unexpected happens along the way — as it so often does — then one possibility might lead to another.” **H**

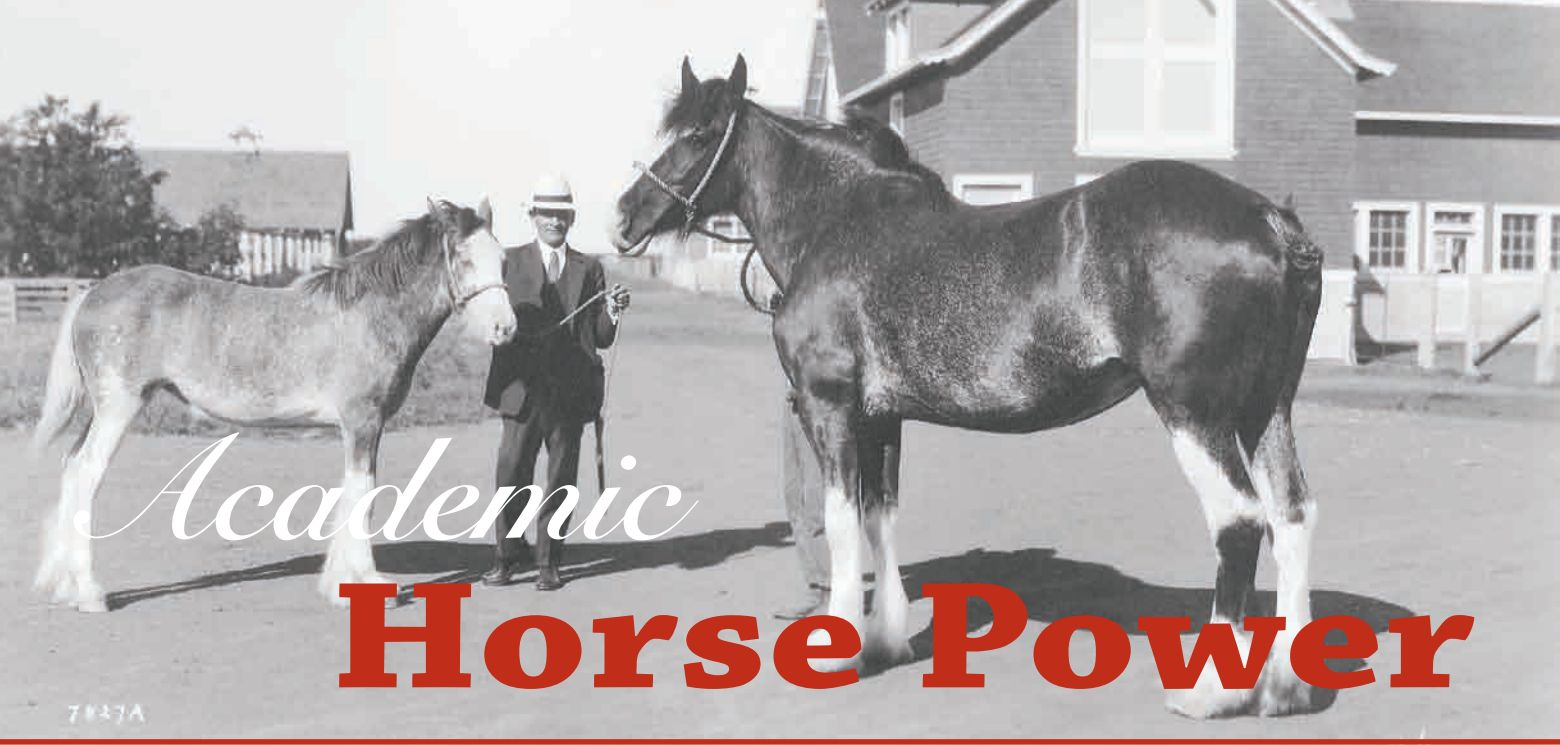
An Equine Enigma: QUICK FACTS ON SARCOIDS

- Equine sarcoids are the most common tumour diagnosed in horses. About 90 per cent of skin neoplasms and a reported 20 per cent of all tumours in horses are sarcoids.
- Sarcoids are categorized as occult, verrucous, nodular, fibroblastic, mixed and malignant.
- The lesions produced by sarcoids range in appearance from small, relatively insignificant areas of skin roughness and hair loss to large, unsightly masses.
- Depending on their location, these skin tumours can seriously impair a horse’s comfort and performance. Sarcoids commonly occur near horses’ eyes or on their eyelids — leading to impaired vision or even blindness. Sarcoids can also limit a horse’s use if the tumours develop in the girth or bridle area.
- Veterinarians can try to remove sarcoids using a variety of surgical techniques. Other options include cytotoxic (cell-destroying) and immune therapies as well as radiation treatments. But one of the main difficulties with existing treatment options is that the skin tumours often recur or therapies can trigger more rapid growth.



Roberta Pattison is a freelance writer who is a regular contributor to the national publication, Dogs in Canada. Recently retired from grain farming, she still lives on her farm near Delisle, Saskatchewan.

PRECEDING PAGE (above): PhD student Dr. Bruce Wobeser’s long-term goal is to investigate novel treatments for equine sarcoids. Below: Histologic slides of equine sarcoid samples. **THIS PAGE:** Histologic slides from western Canadian equine sarcoid cases will supply scientists with novel information about the common skin tumours.



Academic

Horse Power

In celebration of the University of Saskatchewan's Centennial in 2007, *Horse Health Lines* looks back at the first few decades in the university's history when horses — along with the people who strived to improve their health and genetics — were very, very **big** on campus.

A farm worker and his three-horse team disc a field at the U of S, circa 1920s (U of S Archives, A-2220).

A MAGNIFICENT OBSESSION: When William J. Rutherford became the University of Saskatchewan's first dean of agriculture in 1909, he brought along his enduring fascination with the Clydesdale — one of several draft horse breeds that were crucial to Canada's agriculture industry in the early 1900s.

His preference for the Scottish draft horse wasn't always popular with western Canadian farmers, but as Grant MacEwan wrote in his book, *Heavy Horses*, Rutherford's defence to accusations of breed prejudice was that he only "favoured any horse possessing true Clydesdale quality."

Rutherford's push to improve the quality of draft horses in Western Canada gained momentum in 1919 when the Saskatchewan government purchased two Scottish-bred Clydesdale yearling stallions for the U of S farm. But even the forward-thinking Rutherford couldn't have predicted where his admiration for Clydesdales would lead him and the university a few years later.

In February 1923, Rutherford received a letter from George Cluett, an American businessman who owned some of the best foundation Clydesdales in the world. Cluett, whose business was hit by the postwar depression, offered Rutherford the chance to buy his entire Clydesdale herd and to continue his breeding program at the

U of S. What must have caused Rutherford's heart to race was the cost: Cluett offered to sell all 13 mares, stallions and foals at the bargain-basement price of \$10,000. Among the prized herd was *Rosalind* (pictured above with Rutherford and one of her foals) who was worth a reported \$15,000 alone.

Rosalind, along with her herd mates, served the university well during the next decade. U of S-owned Clydesdales won championship titles at Toronto's Royal Winter Fair and at the Chicago International. Back at home, the equine giants worked in the university farm's fields, took part in student training activities and educational displays, and produced some premium foals that were eventually sold to producers across Western Canada.

It must have been one of Rutherford's greatest joys to watch his beloved Clydesdales win praise wherever they pranced. But sadly, that pleasure was cut short when the talented teacher and director died unexpectedly on June 1, 1930. Introducing quality bloodstock to the country's draft horse population was only one of Rutherford's many contributions to western Canadian agriculture. But for a man whose appreciation for the noble Clydesdale was legendary, it must have been one of his life's greatest triumphs. *Above photo: U of S Archives (A-2109).*



Hoofprints in U of S History

1907: The University Act receives Royal Assent, leading to the creation of the University of Saskatchewan in Saskatoon.

1909: William Rutherford is appointed as dean of the College of Agriculture. That same year, construction begins on the university's working farm. It eventually becomes an agricultural centre where students, professors and local producers learn the best techniques in crop production, farm management, livestock breeding enhancement, animal health and veterinary medicine.

1912: Crews of men and horses complete construction on the university's main barn and livestock pavilion. The College of Agriculture opens in the fall of 1912.

1913: Instruction begins in veterinary science at the College of Agriculture.

1914: Rutherford initiates the "Better Farming Train," a travelling agricultural college that visits Saskatchewan communities every summer between 1914 and 1920. Through demonstration cars, lectures, exhibits and live animals, U of S representatives bring new products and practices to farmers across the province.

1923: U of S purchases 13 premium-bred Clydesdale horses for \$10,000. The horses help to improve draft horse genetics in Western Canada.

1926-29: Dr. John Fulton conducts research on "swamp fever" (equine infectious anemia) at the U of S.

Mid-1930s: The U of S becomes a focal point for western equine encephalitis research when Fulton isolates the virus, then develops and produces a preventive vaccine for horses and humans.

1939-1949: More than a half-million horses across the Prairies are vaccinated with the WEE vaccine that was produced at the U of S. The university uses profits from vaccine sales to construct a new virus laboratory. The J.S. Fulton Laboratory opens on February 28, 1949, at a total cost of \$100,000.

1965: The first class of veterinary students is admitted to the Western College of Veterinary Medicine at the U of S. The new college building officially opens in 1969.

1977: WCVM and representatives of Western Canada's horse industry create the Equine Health Research Fund to support the college's equine health research and training programs.

2007: The U of S celebrates its 100th anniversary while the EHRF turns 30 years old. During its history, the Fund has supported hundreds of significant horse health projects and contributed to the training of dozens of equine specialists.

Acknowledgments:

- *Heavy Horses: Highlights of their History* (1986) by Grant MacEwan.
- *WCVM: The First Decade and More* (1990) by Christopher H. Bigland.
- U of S Archives and Dr. Ernest Olfert for access to historical photos.

BIG BRONZE BONNIE: In 1999, former U of S president George Ivany commissioned Saskatchewan artist Joe Fafard to create a piece of art as his parting gift for the university. The result was *Bonnie Buchlyvie* (right), a nine-foot, 1,000-pound bronze sculpture that steadfastly stands in a grassy area between WCVM and the College of Agriculture and Bioresources.

And just who was the namesake for this sculpture? *Bonnie Buchlyvie*, whose sire was the legendary *Baron of Buchlyvie*, was one of Scotlands' most famous Clydesdale sires and winner of the Cawdor Cup in 1909. His son — *Bonnie Fyvie* — was one of two yearling stallions that were purchased for the U of S by the Saskatchewan government in 1919.

Four years earlier, *Bonnie Buchlyvie* himself nearly came to live on the Prairies in 1915. That same year, the stallion was purchased for £5,000 by James Kilpatrick. The Scotsman bought the horse on behalf of his friend, W.H. ("Scotty") Bryce of Arcola, Sask., who had tried to buy the great sire in 1912. Ironically, Kilpatrick's exciting telegram to his friend arrived on the day of Bryce's funeral in Arcola. *Bonnie Buchlyvie*, who lived to the age of 21, never did step on Canadian soil.



EARLY EQUINE HEALTH ISSUES: Drs. Norman Wright, Seymour Hadwen and John Fulton were some of the university's first veterinarians who faced challenging horse health issues of the day. According to Dr. Chris Bigland's book, *WCVM: The First Decade and More*, some of the issues facing these clinician-researchers included swamp fever (equine infectious anemia), lockjaw, ticks, warble flies, poisoning of horses by the bracken *Pteris aquilina*, horse bot flies and intestinal worms.

When equine infectious anemia became prevalent in the mid-1920s, Fulton's investigations of the disease showed that it occurred in areas with sandy, loam-type soil and that horses developed swamp fever after drinking slough water in these areas. Fulton also developed a test that veterinarians could use to make a definitive diagnosis of equine infectious anemia.

Judging draft horses in the U of S Livestock Pavilion, circa 1920s (U of S Archives, A-3699).





Eleven teams of university-owned horses line up in front of the University of Saskatchewan barn, circa 1920s (A-69).



U of S Fights Killer Equine

Disease: During the mid- to late 1930s, thousands of western Canadian horses died from outbreaks of *western equine encephalitis (WEE)*— also known as “sleeping sickness” among Prairie farmers. With no vaccine or preventive therapy available, livestock producers could only watch helplessly as their horses succumbed to the disease’s severe clinical signs of fever, brain swelling and paralysis.

Hope finally came in 1935 when U of S veterinary researcher Dr. John S. Fulton isolated the WEE virus. After a number of trials, Fulton was successful in developing a vaccine that was effective in boosting horses’ immune systems enough to fight off the viral infection. When the demand exceeded the vaccine’s supply on the market, Fulton began large-scale production in his U of S laboratory — using fertilized eggs supplied by local poultry farms to manufacture the WEE vaccine.

It was an extremely busy time for the researcher and his technical team: “Part of the laboratory was transformed into a factory, equipment was bought or devised, and extra staff employed to cope with this challenge. We became proficient at inoculating fertile eggs, collecting membranes, processing and bottling,” recalled Dr. Jean Murray in Dr. Chris Bigland’s book, *WCVM — The First Decade and More*. Murray, who went on to join the Western College of Veterinary Medicine’s faculty in 1964, was a technician in Fulton’s lab from 1931 to 1939.

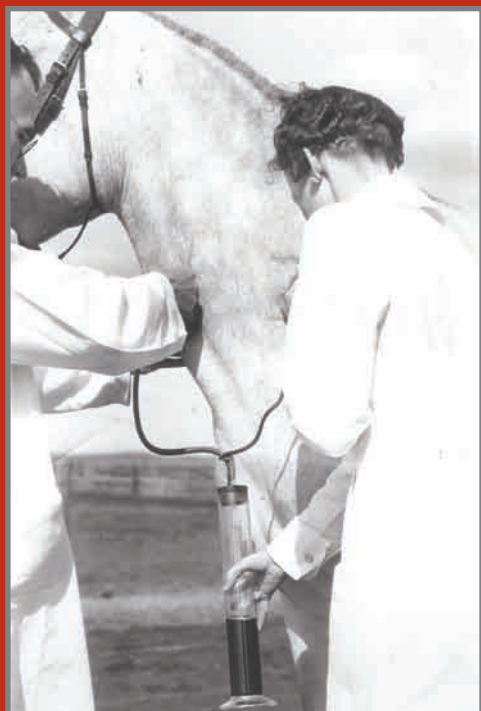
By 1947, the U of S had accumulated nearly \$110,000 in profits from the sale of WEE vaccines and other U of S-manufactured biologic products to veterinarians and producers across the Prairies. At the urging of Fulton, the university agreed to use the proceeds to build a new virus laboratory. The square building (above) opened in February 28, 1949, and was eventually renamed the J.S. Fulton Laboratory in 1964.

Fulton’s WEE-related research also contributed to human health knowledge when he confirmed that a number of Saskatchewan residents who were showing signs of mental illness were actually infected with WEE. In the mid-1940s, Fulton and his research colleague, Dr. Althea Burton, modified the equine WEE vaccine so it could be used in humans.

Like Murray, Burton initially worked as a technician in Fulton’s lab before completing her veterinary degree at the Ontario Veterinary College in 1947. After Fulton’s retirement in 1958, Burton continued the WEE studies in collaboration with other Saskatoon scientists — including professional and amateur entomologists. This collaborative team eventually confirmed that the WEE virus overwintered on the Prairies and was transmitted to birds, horses and humans through mosquito species. More than 40 years later, findings from those foundational studies in WEE became invaluable as public health teams in Western Canada learned to deal with the spread of West Nile virus — another mosquito-borne arbovirus that affects birds, horses and humans. **H**



The lab that vaccines built: The J.S. Fulton Laboratory. Photo courtesy of Dr. Ernest Olfert.



Above: Dr. John S. Fulton (U of S Archives, A-3253). **Left:** Two U of S clinical workers take blood from one of the university’s horses (U of S Archives, A-2242).

College GROWTH SPURT

This summer, project managers added another welcome check mark to their growing list of completed expansion and renovation projects at the Western College of Veterinary Medicine (WCVM). The latest project to open its doors in early July was the Veterinary Teaching Hospital's new two-storey addition. The structure is a major part of WCVM's \$57-million expansion that includes 8,000 square metres of new space and renovations to about 7,000 square metres in the college's existing facility.

Besides new examination rooms and designated areas for specialized clinical services, the expanded space includes new reception areas for the Large Animal and Small Animal Clinics, new offices and garage space for the hospital's Field Service and additional office space for WCVM faculty and administrative staff.

But as construction signs and safety barriers disappeared in front of the hospital, work continued to ramp up on other projects. Now, the most visible construction site is on the building's southeast side where crews are working in the expanded diagnostics facility — an area that will eventually include a new post mortem room and additional space for diagnostic laboratories and administrative offices.

Equipped with increased biosecurity and biosafety standards, the enhanced diagnostic facilities and equipment will enable WCVM to work with its partners in addressing major animal health issues including preparedness for foreign animal disease diagnostics.

David Humphreys of UMA Engineering Ltd., project manager for WCVM's expansion and renovation project, gives a quick overview of WCVM construction and upcoming plans:

- **Research wing:** Staff and students moved into the 1,468-square-metre, two-storey facility on April 30. The facility adds crucial office space and two multi-user research laboratories to WCVM — including the newly-dedicated Westgen Research Suite — an animal reproduction-oriented research centre.

- **Veterinary Teaching Hospital renovations:** A new large animal chute system was completed and opened in January 2007. Workers completed renovations to the small animal surgery, anesthesia, intensive care and treatment rooms in mid-November 2006.

- **Veterinary Teaching Hospital expansion:** The two-storey addition opened to staff, faculty and the public in early July. Renovations to areas in the existing hospital will continue into early 2008.

- **Diagnostics area:** Expansion work on the structure began in the fall of 2006. Workers have completed the basement and main floor on the diagnostics expansion site. Work continues on the second floor and roof during the fall of 2007.

- **Room 2115 lecture theatre renovation:** These additional seats and room renovations prepare the College for an increased student enrollment in its undergraduate veterinary degree program. Renovations wrapped up in late August 2007.

- **Future design work** is ongoing on a number of academic facility improvements, additional large animal facility improvements and on the renovation of the existing diagnostics laboratory once the expansion is completed. Visit www.ucvm.com for further construction updates. **H**



The new Large Animal Clinic reception area at WCVM.



WCVM's new large animal chute system.



One of two multi-user laboratories in WCVM's new research wing.

ABOVE: Second floor windows of WCVM'S new Veterinary Teaching Hospital addition.

As soon as exams wrapped up in late April, Hayley Lang of Humboldt, Sask., jumped right into a new challenge: an undergraduate research position at the Western College of Veterinary Medicine.

During the summer-long experience, the first-year veterinary student worked closely with her mentor, Dr. Spencer Barber of WCVM's Department of Large Animal Clinical Sciences. She also teamed up with Dr. Luca Panizzi, a large animal surgery resident and an EHRF Research Fellow.

Throughout the summer, Lang worked with Barber and Panizzi to evaluate existing and novel *arthrodesis* (surgical fusion of a joint) techniques on the legs of equine cadavers. Her fact-finding investigation contributed valuable information to the main study that focuses on a new and minimally-invasive *arthrodesis* technique for treatment of carpal spavin.

Carpal spavin is a specific form of degenerative joint disease that affects a horse's carpometacarpal joint — the lower joint space of the knee (*carpus*). Although it's uncommon, this arthritic condition causes severe lameness — so severe that affected horses are usually euthanized within 12 to 18 months of diagnosis. So far, the only successful treatment for carpal spavin is an arthrodesis technique that was developed by Barber. Now, the WCVM research team's goal is to develop a less invasive arthrodesis technique that requires less time in surgery and can be more easily applied by other surgeons.

"Dr. Barber and Dr. Panizzi were awesome to work with, and I also got to work with horses every day — my biggest passion," says Lang, whose first hands-on research experience was supported by the Equine Health Research Fund. "For me, this summer really helped me to decide that I want to be a surgeon so it was definitely worthwhile."

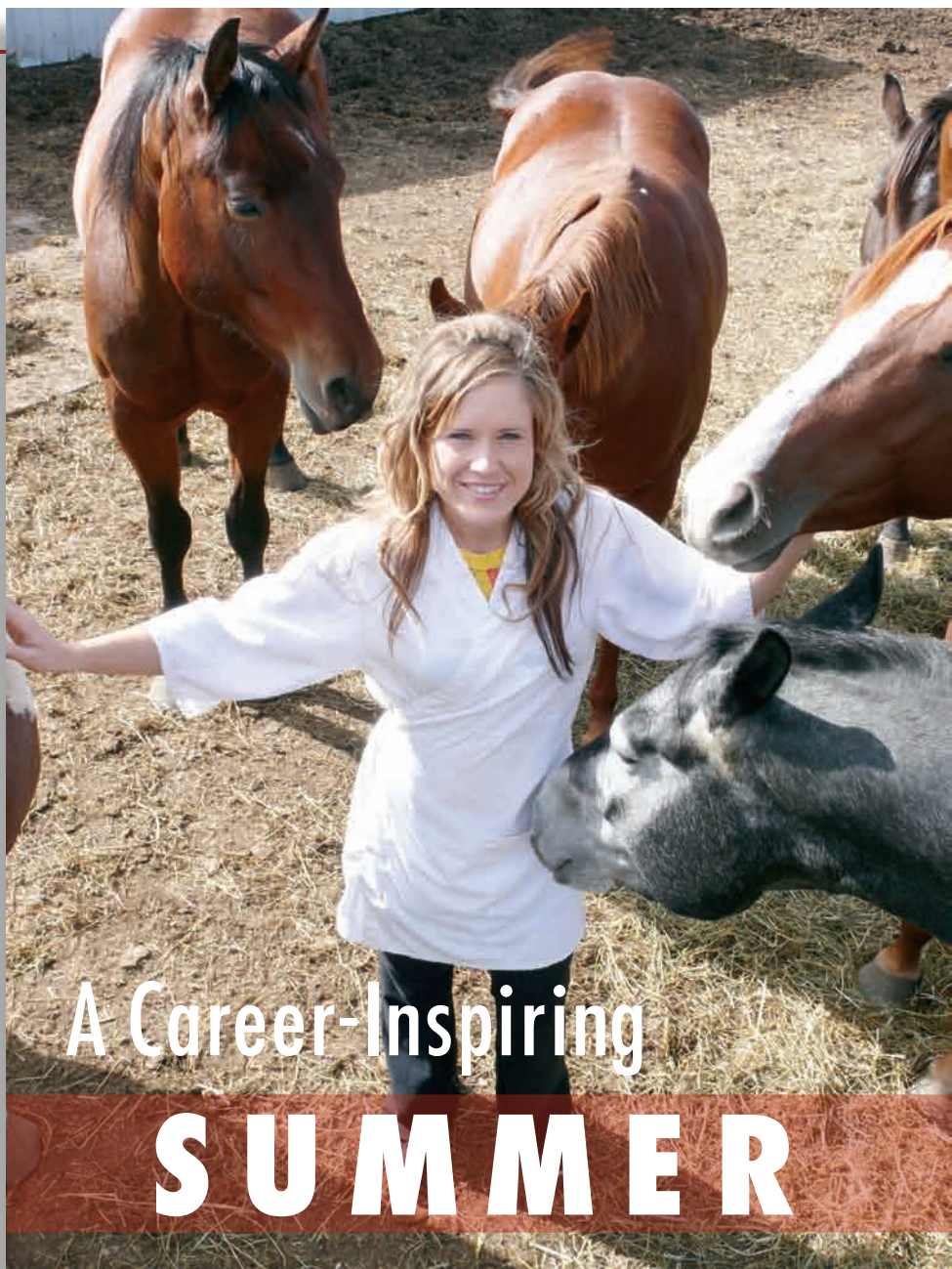
Q. What's your past experience with horses?

"I've been around horses my whole life, and I've had a summer job working with horses every year since Grade 5. Two years ago, I worked for an equine practitioner, then I spent last summer showing and training horses.

My mother and I have always had horses. I used to be involved in team roping and reining, but for the past few years, I've been showing Quarter horses. A real highlight came in 2004 when my mare (*Shooks Emma Lou*) and I won at the Canadian National Quarter Horse Show. I now have a new mare (*Memory of You*) that's doing really well. I also have a two-year-old Quarter horse filly (*Smooth Blueberry Te*) that I will begin showing this fall.

Q. How did you become interested in a research-related job?

After I finish my veterinary degree, I want to do a clinical internship and a residency in large animal surgery. While you're a resident, you



A Career-Inspiring SUMMER

also work on a MVSc (Master of Veterinary Science) degree that requires a research project, so I wanted to see what research was like.

I heard about Dr. Barber's carpal spavin research project when he talked to our class and invited students to apply for the summer research. After he interviewed a few people, I found out I got the job. I think my past experience with horses definitely helped since Dr. Barber and Dr. Panizzi needed some help in halter breaking the project's six horses and getting them used to walking and trotting over the force plate — one of the ways we analyzed the horses' gait during the research project.

Q. What was the focus of your research project?

My project evaluated three different arthrodesis techniques for the carpometacarpal joint in the legs of equine cadavers. Dr. Barber initially designed the project, and he and Dr. Panizzi perfected the surgical techniques on the cadaver legs. But other than the actual surgeries, I was involved in everything else: positioning the legs, helping set up the drill bits, photographing the different techniques, taking measurements, analyzing the results, and describing our findings.

Besides Drs. Barber and Panizzi, Dr. Murray Woodbury helped me with the project's statistics and Dr. Andy Allen helped me with the analysis of the cadaver legs, and the photography and radiography preparations.

Q. Will you eventually publish your findings?

I've completed a rough draft of my research article, and once others have had a chance to review and edit it, I hope to submit it to a peer-reviewed publication. I also presented my research poster during WCVM's undergraduate student research poster day in September 2007.

Q. How were you involved in the research work with live horses?

I actually scrubbed in for all of the surgeries. Dr. Panizzi and I had worked out a system for positioning the legs and preparing for arthrodesis during the procedures on cadaver legs so we just did the same for the live horses. I also had the chance to assist Dr. Panizzi while using the new, less-invasive arthrodesis technique on a clinical case of carpal spavin.

Q. What intrigued you most about this area of research?

It's not very often that you can see what happens after a horse's carpometacarpal joint has been fused, so that was really interesting to examine the cadaver legs after the surgeries.

The minimally-invasive arthrodesis technique is new, so there will be quite a bit of interest in our research once the findings are published. In fact, very little information has been published about any arthrodesis treatment of carpal spavin, so it's exciting to be part of new research in this area.

Q. How valuable was this summer for you?

It was a great summer with so many interesting experiences besides the research work. Dr. Barber let me scrub in to watch some other surgeries up close, I had the chance to meet all of the residents, clinicians and interns in the Large Animal Clinic — plus I got to see some very interesting cases that came in to the hospital over the summer. It really gave me a totally different view of the College than what we see as a first-year student.

Q. Do you think research may play a role in your future plans?

This experience will be extremely helpful when I apply for internships and a surgical residency. It definitely shows that I've had a chance to gain some exposure to research.

If I do become a board-certified surgeon, I'd like to eventually work at a university so I could work as a clinician and have the opportunity to do clinical research. I really enjoy how clinical research gives you the chance to follow the entire span of things — right from a specific idea or technique to evaluating it in a clinical case. **H**

Want to learn more about the Equine Health Research Fund's undergraduate student summer research program? Visit www.ehrf.usask.ca and click on "Education."



GALLOPING GAZETTE

WEEKEND IN BLUEGRASS COUNTRY: In September, 25 third-year WCVM students immersed themselves in the world of equine health during the Opportunities in Equine Practice Seminar (OEPS) 2007 in Lexington, Ky. The western Canadians were among 527 North American students who attended the annual seminar that offers students a broad view of the equine veterinary field.

Organizers introduced the visiting students to all aspects of equine practice through a range of exhibits and a series of speakers, says Tamara Quaschnick, one of the weekend's participants from WCVM. Tours through local clinics and Lexington-based horse farms — plus a stop at the internationally-known Keeneland racetrack — were also highlights.

"This event was a real eye-opener — there's just so much to do in equine practice," says Quaschnick. "I'm definitely more enthusiastic about pursuing further training in equine veterinary medicine as a result of this weekend."

The annual OEPS is open to students who are members of their school's student chapter of the American Association of Equine Practitioners (AAEP). OEPS sponsors and a U of S student travel award sponsored the WCVM group's travel expenses. For more information, visit www.oeps.com.

EHRF ON THE ROAD: In mid-October, a team of WCVM representatives had the chance to meet with hundreds of horse enthusiasts from B.C., Alberta, Saskatchewan, the Yukon and Washington during the **Mane Event Equine Education and Trade Fair** (www.maneeventexpo.com) in Chilliwack, B.C. Throughout the three-day event, the WCVM team gave visitors more details about the College's equine health research and training programs that are supported by the Equine Health Research Fund (www.ehrf.usask.ca). The WCVM team included large animal residents Drs. Tal Raz and Luca Panizzi — two of the Fund's three EHRF Fellows for 2007-08. Hayley Lang, the 2007 EHRF undergraduate research student also attended the event along with Patti Tweed, WCVM's development officer.

Early in 2008, another WCVM team will take part in the **Horse Industry Association of Alberta's Horse Breeders and Owners Conference** — a popular continuing education event that will take place from January 11 to 13 in Red Deer, Alta. Each year, some of North America's top equine experts give valuable presentations on a range of topics including horse health, training and current issues in the horse industry.

The Horse Breeders and Owners Conference, which celebrated its 25th year in 2007, is a long-time supporter of the Fund and of WCVM's equine research group. For more information, visit www.albertahorseindustry.ca.

Above: ZF Mocha and Dr. Trisha Dowling (right) compete alongside teammates Bardos Grey Fonyx and Crystal Fulcher in the 100-mile Zone Team Endurance Challenge that was held in southeastern Montana from Sept. 22-23. Mocha is a 10-year-old mare whose dam and sire were part of a wound-healing research study at WCVM in the 1990s. Dowling and Mocha were one of four horse-and-rider teams from Western Canada that were qualified to compete in the Fédération Equestre Internationale (FEI)-sanctioned endurance race. The duo finished 15th out of 62 teams in Mocha's sixth 100-mile race — maintaining the mare's perfect completion record. To read Mocha's full story, visit www.ehrf.usask.ca and download a copy of *Horse Health Lines* (Autumn 2006).

The Testing of the Screw

A headless, tapered screw made out of tough, lightweight metal may put a new twist on surgical implants used in pastern arthrodesis.

By David Shield

For years, riders in western performance events such as reining, cutting and barrel racing have encountered a serious problem with their horses' pastern joints. Thanks to all those quick starts and stops that are required in western-style events, older horses can develop a condition known as *chronic osteoarthritis* of the pastern joint.

Much like arthritis in humans, the condition causing chronic inflammation in the pastern joint — the joint that connects the long and small pastern bones. Horses that suffer from chronic osteoarthritis of the pastern joint experience a great deal of pain, and in many cases, the condition can end a horse's performance career.

Specialists have developed a number of different treatments to help relieve the pain. One of the most successful is *arthrodesis* (joint fusion) that's based on techniques used in human medicine. Veterinary surgeons generally use a combination of small screws and plates to fuse the horse's pastern joint.

However, the exact combination of surgical implants has been the subject of a considerable amount of debate in veterinary surgery circles. "Early on, there really wasn't any objective biomechanical assessment of these implants available to equine practitioners," explains Dr. David Wilson.

The large animal surgical specialist at WCVM is a veteran researcher who has conducted a number of biomechanical studies on surgical implants with research teams in Canada and the U.S. "We got involved in testing these products because we wanted to shed some objective light on what we can expect mechanically from these different repairs."

Screws: going headless

Over the past several months, Wilson and his surgical resident, Dr. Ryan Wolker, have been evaluating the strength and effectiveness of one particular implant: a headless, tapered titanium screw.

With the use of equine cadaver legs and biomechanical testing equipment at the University of Saskatchewan's College of Engineering, the researchers have been examining whether these new screws are comparable to other screws with heads that are available to surgical specialists.

If they stand up to the strain, that could be a good thing for horse owners. Wolker says studies have shown that titanium causes less inflammation inside the body than traditional stainless steel screws. As well, he says headless, tapered screws have been shown to decrease tissue irritation.

"Some reports in the 1980s and mid-1990s have suggested that with the two parallel screw technique (one of the recommended techniques for pastern arthrodesis), you get some irritation of the soft tissues around the joint and that can lead to excess bone deposition," explains Wolker.

"Our thought is that if we can bury the headless screws entirely within the bone so there's nothing exposed, we might be able to avoid those problems. The headless screws might turn out to be a good alternative to the traditional ones."

Wilson agrees. "Because the screw is buried below the surface of the bone, there may be less potential for the tendon to be interfered with as it passes over the screws. It's one suggestion that often comes up when people talk about why some horses don't do well after pastern arthrodesis surgery."





However, because of the conical shape of the screws, the procedure for drilling the holes to insert them can be challenging. “The traditional screws are basically cylinders, so they have the same diameter from top to bottom. But these tapered screws are conical, so the hole you drill is conical. There’s a bit of a learning curve to perfect that procedure, and it’s something that will need to be worked out when these screws are used in live horses,” says Wolker.

Limiting factor: bone density

Wilson and Wolker have finished the trial portion of their study, and after conducting a preliminary analysis of their data, the bending strength and stiffness of the tapered screws are not statistically different from other screws.

While he’s satisfied with their study’s preliminary findings, Wilson admits that he’s become skeptical of any “stronger and better” claims after testing a range of surgical implant products. Instead, he points to the density of horses’ bones as a possible limiting factor when it comes to the stability of bone fusion surgeries — not the screws themselves.

“Some of the screws have greater holding power: the screws are stiffer, they’re stronger and there should be a difference. Yet when we test our samples biomechanically, the screw type doesn’t appear to make a difference. The implant may be better constructed, but since everything relies on the strength of the horse’s bone, that’s the limiting consideration.”

As preliminary results of this study indicate, headless titanium screws appear to be similar to other screws in terms of bending strength and stiffness. But if this particular screw reduces inflammation and tissue irritation in clinical cases after pastern arthrodesis procedures, that would definitely attract more interest in the surgical implant, acknowledges Wilson.

Can the headless titanium screw deliver on those benefits? Answering that question will take more time — plus future studies involving live horses — to determine whether these screws have more to offer than a unique shape. **H**

David Shield has written for many Saskatchewan-based publications including Planet S Magazine, U of S On Campus News, Pulsepoint Magazine and Eagle Feather News. He works as a casual reporter for CBC Radio News in Saskatoon, Sask.

PREVIOUS PAGE: An enlargement of the headless titanium screw that underwent biomechanical testing at the U of S. Bottom left: Dr. Ryan Wolker indicates on a patient’s leg where he placed traditional screws during the horse’s pastern arthrodesis procedure. **Above:** Large animal surgery resident Dr. Ryan Wolker (left) and Dr. David Wilson with one of the headless titanium screws.

Wolker’s Constants: Horses and Surgery

Horses — especially horses in action — are at the heart of what Dr. Ryan Wolker likes about his work in the profession of veterinary medicine.

“Basically, I like sports medicine, and that fits in well with my interest in horses,” says Wolker, who is originally from Wawanese, Man. “I like all the different western performance sports and the Thoroughbred racing, and I just think it’s amazing that these animals can perform so well.”

Wolker studied animal science for three years at the University of Manitoba before coming to WCVN in 2000. During his fourth-year clinical rotations, Wolker worked alongside equine surgeon Dr. Peter Fretz — an experience that heightened his interest in horses over other large animals. After finishing his veterinary degree in 2004, Wolker’s penchant for horses led to a one-year clinical internship at Moore & Company, a private equine referral clinic in Calgary, Alta.

“That was where I decided that (a) I just wanted to work with horses, and (b) I just wanted to do surgery,” he says. Once his internship

was done, Wolker headed south for a clinical fellowship at Oregon State University and then returned to WCVN in 2006 to begin his residency in large animal surgery.

As part of his Master of Veterinary Science degree program, Wolker is focusing his research on joint problems experienced by horses — but he’s also interested in minimally-invasive therapies.

The two fit together nicely in another pastern arthrodesis project that he’s working on with Dr. David Wilson, his residency supervisor. With this approach, researchers inject ethyl alcohol into the affected joint to dissolve the cartilage in the joint. Afterwards, veterinary surgeons would only need to make two stab incisions for placement of the screws — a less invasive approach to pastern arthrodesis.

What’s next after Wolker completes his residency and a Master’s degree in 2008? A PhD program might be in his future, perhaps with a focus on minimally invasive procedures in laparoscopic surgery.

Wolker’s future plans may take him elsewhere, but one thing he knows for sure: horses and surgery will remain the constants in his career.



Our Contributors

A list of contributors to the Equine Health Research Fund during the period between September 1, 2006, and August 31, 2007. Visit www.ehrf.usask.ca for donation information.

\$25,000 and over

Heather Ryan and L. David Dubé Foundation, Saskatoon, SK • Du Mont, Mark and Patricia, Aldergrove, BC.

\$10,000 to \$24,999

Saskatchewan Liquor and Gaming Authority, Regina, SK.

\$1,000 to \$9,999

British Columbia Standardbred Breeders' Society, Surrey, BC • Chouinard, Lynn, De Winton, AB • McKague, Ross and Brenda, Brandon, MB • McKenzie, Neil, Surrey, BC • North American Equine Ranching Information Council, Inc., Louisville, KY • Saskatchewan Horse Federation Inc., Regina, SK • Summers, Terry, Saskatoon, SK.

\$1,000 to \$2,499

Anderson, M, North Vancouver, BC • Big Hill Veterinary Services, Cochrane, AB • Bridlewood Veterinary Clinic, Calgary, AB • Bryne, Linda, Calgary, AB • Calgary Trail Pet Hospital, Edmonton, AB • Campbell River Veterinary Hospital Ltd., Campbell River, BC • Delton Veterinary Hospital (1991) Ltd., Edmonton, AB • Dewdney Animal Hospital Ltd., Maple Ridge, BC • Du Mont, Patricia, Aldergrove, BC • Folstad, Mark, Saskatoon, SK • Harper, Douglas, Lanigan, SK • Landing Animal Hospital, Calgary, AB • McKinstry, Lynn, Saskatoon, SK • Mill Creek Animal Hospital Ltd., Edmonton, AB • Mills Haven Veterinary Clinic (2001) Ltd., Sherwood Park, AB • Priddle, Craig, Edmonton, AB • Ross, Anita, Greenwich, CT • St. Francois Xavier Animal Hospital, St. Francois Xavier, MB • Stewart, Gord, and Styacko, Maria, Saskatoon, SK • Town Centre Veterinary Hospital Inc., Edmonton, AB • Victoria Veterinary Clinic Inc., Regina, SK.

\$500 to \$999

Bailey, M.E., Prince Albert, SK • Burwash, Wayne, Calgary, AB • Dowling, Trisha, Saskatoon, SK • French, Dan, Okotoks, AB • Frolic, Natasha, Comox, BC • Killeen, James, Sherwood Park, AB • Okotoks Animal Clinic, Okotoks, AB • Paizakis, Julia, Vancouver, BC • Paton & Martin Veterinary Services Ltd., Aldergrove, BC • Perron, Michael, Surrey, BC • Riddell, Betty (*in memory of Murray Riddell*), Saskatoon, SK • Smith, Mae, Regina, SK • Southern, Ron and Margaret, Calgary, AB • Sullivan, Patricia, Regina, SK • Versavel, Luc, Stonewall, MB.

\$100 to \$499

• **A** • Allen, Andy and Carmen, Saskatoon, SK • **B** • Ball, Doris, Abbotsford, BC • Barber, Spencer, Saskatoon, SK • Brodsky, Shirley, Saskatoon, SK • **C** • Campbell, Kathleen, Calgary, AB • Corbett, Bill, Calgary, AB • **D** • Davis, Wendy, Sonningdale, SK • Deep Creek Veterinary Services, Enderby, BC • **E** • Elders Equine Clinic, Cartier, MB • Ellis, Betty, Cayley, AB • **F** • Fitzharris, Fern, Saskatoon, SK • Frank's Saddlery & Supply Ltd., Lloydminster, SK • **G** • Gawley, Sheila, Saskatoon, SK • Gladson, Don, Pickardville, AB • Gordon Bryan Stables, Calgary, AB • Gray, Lorna, Winnipeg, MB • Gregory, Marilyn, Langley, BC • **H** • Hamilton, Don, Saskatoon, SK • **J** • Jeffray, Joe, Airdrie, AB • Jones, Gail, Calgary, AB • **K** • Kollassa, Sonia, Lloydminster, AB • **L** • Ladyman, Elizabeth, Merritt, BC • Laing, Robert, Leader, SK • Lloydminster Animal Hospital, Lloydminster, AB • Logan Lake Ranch & Country Club, Logan Lake, BC • **M** • Mathias, Patricia, Saskatoon, SK • McCargar, Murray, Calgary, AB • Misra, Vikram, Saskatoon, SK • Moore & Co. Veterinary Services Ltd., Balzac, AB • **N** • Newbert, Judy, Crossfield, AB • **P** • Palouse Holdings Ltd., Calgary, AB • Panorama Veterinary Services Ltd., Winfield, BC • Pauw, Kathy, Saskatoon, SK • **R** • Rach, Dennis,

Calgary, AB • Regina District Dressage Association Inc., Regina, SK
 • Rothwell, Janet, West Vancouver, BC • **S** • Saskatchewan Regional Pony Club, Saskatoon, SK • Saskatchewan Association of Veterinary Technologists, Saskatoon, SK • Shoemaker, Ryan, Sherwood Park, AB • Silver Spurs Riding Club, Errington, BC • Sinclair, Glenn, Winnipeg, MB • Souris Valley Trekkers, Estevan, SK • **T** • Thomas, Howie, Nanoose Bay, BC • Timm, Shelley, Saskatoon, SK • Townsend, Rob, Saskatoon, SK • Townsend, Robert, Victoria, BC • Twidale, John, Surrey, BC • **U** • Urtsun, Frances, Edmonton, AB • **W** • Wheels and Saddles Driving and Riding Club, Wawota, SK • Wild Rose Arabian Horse Association, Stony Plain, AB • Winkelman-Sim, Dianne, Rosetown, SK • Woodwedge Consulting, Shellbrook, SK.

Up to \$99

• **B** • B.C. Interior Morgan Horse Club, Pritchard, BC • Bell, Leslie, Calgary, AB • Burford, Karen, Calgary, AB • Burlingame, Donna, Saskatoon, SK • **C** • Campbell, Anne, Waterdown, ON • Carroll, Deborah, Sherwood Park, AB • Christensen, Heather, Regina, SK • Coulthard, Colleen, Castor, AB • Cribb, Peter, Saskatoon, SK • Croken, Glynnis, Ponoka, AB • **D** • Demeria, Jerry, Saskatoon, SK • Dobson, Yvonne, Kenosee Lake, SK • **E** • Eagle Butte Ranches Ltd., Calgary, AB • Eastman, Kimberly, Saskatoon, SK • Elashuk, Norman, Turin, AB • Erickson, Gwen, Clavet, SK • Evansburg Veterinary Clinic, Evansburg, AB • **F** • Feist, Dawn, Asquith, SK • **G** • Griffiths, Margaret, Asquith, SK • **H** • Halina, Helen, Saskatoon, SK • Harris, Betty, Calgary, AB • Hazelton, Janene, Burns Lake, BC • **I** • Isman, Val, Gladstone, MB • **L** • LeClerc, Suzette, Saskatoon, SK • Logan, Tracey, Oyen, AB • **M** • MacLauchlan, Andra, Calgary, AB • Metzger-Savoie, Pamela, Calgary, AB • **N** • Nelson and District Riding Club, Nelson, BC • Niebergall, Jack, Saskatoon, SK • **P** • Palanica, Michael, Kuroki, SK • Palese, Kathleen, Calgary, AB • Panorama Ridge Riding Club, Surrey, BC • Powell, Jackie, Lacombe, AB • **Q** • Quesnel and District Riding Club, Quesnel, BC • **R** • Robinson, Brian, Lloydminster, AB • **S** • Schneidmiller, Helen, Calgary, AB • Selkirk Veterinary Hospital Inc., Nelson, BC • **T** • Theilman, Laura, Saskatoon, SK • **W** • Walker, Diane, Okotoks, AB • Wallace, Ginette, Calgary, AB • **Z** • Zeilner, Catherine, Furdale, SK. **H**

A Year in Review

The Equine Health Research Fund's statement of revenue, expenditures and fund balances for the year ended, December 31, 2006.

EXPENDABLE	2006	2005
Revenue		
Donations		
Private	\$25,800.00	\$27,687.25
Horsemen's Association	21,840.00	15,520.00
Racing Commissions	20,000.00	30,300.00
NAERIC	*See below	11,700.00
Miscellaneous	0.00	-
	67,640.00	85,207.25

Expenditures		
Fellowship Program	\$63,881.14	\$70,650.47
Grants	59,141.55	93,350.00
Recovery from Previous Grants	(6,180.43)	-
Summer Student	7,200.00	8,702.29
Graduate Student Awards (\$3,000 each)	6,000.00	-
Fund raising	19,570.27	13,948.57
Horse Health Lines	49,216.29	30,665.75
Administration - Advisory Board	3,993.42	3,944.32
Equipment	-	-
	202,822.24	221,261.40

Excess (deficiency) of		
revenue over expenses	(135,182.24)	(136,054.15)
Transfer from restricted funds	135,182.24	134,596.14
Fund balance, beginning of year	0.00	1,458.01
Fund balance, end of year	0.00	0.00

RESTRICTED	2006	2005
Investment income	\$169,241.21	\$162,504.99
Transfer to unrestricted fund	(135,182.24)	(134,596.14)
Fund balance, beginning of year	1,744,723.63	1,716,814.78
Fund balance, end of year	\$1,778,782.60	\$1,744,723.63

*The North American Equine Ranching Information Council (NAERIC) donated \$7,000 to the Equine Health Research Fund in February 2007.



Equine TLC

Dr. Meagan McBurney is the first recipient of the Dino and Dr. Ashburner Award in Equine Care, a special award that recognizes veterinary students who show exceptional compassion for their equine patients.

Working with horses has been part of Dr. Meagan McBurney's life since she was a young 4-H member growing up on her family's cattle farm at Deleau, Man. Those years of hands-on experience — combined with her four years of veterinary training at WCVM — have turned McBurney into a veterinarian who's very much in tune with the needs of her equine patients.

"One horse might be willing to accept something you do, but there is no telling how the next horse will react to the same approach," explains McBurney, who graduated from WCVM in June 2007. "You need to be able to read their actions and adapt your approach to best suit the individual horse."

McBurney's perceptive way with horses hasn't gone unnoticed. In June, the new veterinarian became the first to receive a new award called the "Dino and Dr. Ashburner Award in Equine Care" at the 2007 WCVM Graduation Banquet.

Created by the L. David Dubé and Heather Ryan Foundation, the \$7,000 scholarship recognizes a fourth-year student who has provided compassionate care for equine patients during the fourth-year clinical rotations. The award was named in honour of the special relationship between WCVM field veterinarian Dr. Sue Ashburner and Dino, one of her long-time equine patients. The Quarter horse gelding, who was owned by Ryan and Dubé, passed away in 2006.

McBurney had the chance to watch and learn from Ashburner as well as many other veterinarians during her clinical rotations and summer jobs in veterinary clinics. Those experiences have demonstrated the benefits of handling horses with care.

"A big part of caring for horses is just handling them appropriately. Providing them comfort while they're in the hospital and giving them some extra TLC so they feel more at home and not quite as stressed out — all of those efforts really do make a difference in how the animal responds to you," says McBurney, who also has experience in training young horses under saddle.

As for talking with the owners of her patients, McBurney finds that her past experiences in equine competitions and organizations help her to quickly relate to her clients. Plus, her farming background gives her an appreciation for the variety of reasons why people raise and own horses.

"A client with two horses in his back yard sees things much differently than an equine rancher who has 150 mares on his farm. As a practitioner, my goal is to be able to change my perspective to match their needs and wants rather than seeing things only one way."

Becoming a mixed animal practitioner was McBurney's initial focus when she first came to WCVM. But during her second summer as a veterinary student, McBurney worked at Elders Equine Clinic in Winnipeg, Man., where the patients range from Thoroughbred racehorses to champion show competitors. After that, she was hooked and spent her next summer visiting four equine clinics in California, Utah, Colorado and Nevada through unofficial externships.

COMPASSIONATE CARE GIVER (from left to right): L. David Dubé and his wife, Heather Ryan, present the "Dino and Dr. Ashburner Award in Equine Care" to Dr. Meagan McBurney. The Saskatoon couple presented the \$7,000 award to the newly-graduated McBurney during WCVM's 2007 Graduation Banquet in June. The annual scholarship, which was created by the Heather Ryan and L. David Dubé Foundation, recognizes a fourth-year student who has provided compassionate care for their equine patients and has acted as their advocate.

"It was a great experience for me — it really gave me the chance to see how a variety of practitioners approach cases and situations in different ways," says McBurney, who accompanied veterinarians during their regular farm visits and clinic appointments.

Now, McBurney is in the midst of a one-year clinical internship at Edmonton Equine Veterinary Services where she has daily contact with equine patients and Alberta horse owners who are involved in everything from show jumping and dressage to rodeo competitions and ranching.

It's an interesting mix of people, horses and cases that's definitely enriching McBurney's experience in the world of horse health care. But no matter where her career eventually takes her, the young veterinarian is very clear about her objectives in patient care.

"My goals are to provide the best service and quality medicine to my patients and clients — I want to be the kind of practitioner who will go that extra mile for them. I want to help clients seek out different treatment options and give them as much opportunity as I can to make the decisions that work for their animals and for themselves," explains McBurney.

Spoken like a true advocate of patient care.

The Heather Ryan and L. David Dubé Foundation also presented the "Buddy and Dr. Snead Award in Small Animal Care" during the 2007 WCVM Graduation Banquet. For more details, check out the Fall 2007 issue of Vet Topics, publication for the Companion Animal Health Fund, at www.cahf.usask.ca.

Visit *Horse Health Lines* online at www.ehrf.usask.ca