

# Equine NEWS

COLLEGE OF VETERINARY MEDICINE | SUMMER 2005 | VOLUME 2, NUMBER 2

## Common Plants that are Toxic to Horses

Nature is in full bloom this time of year, including hundreds of plants that are poisonous to horses if they eat them. But for Northwest horse owners, there are a handful of plants of major concern, says **Dr. Patricia Talcott**, a Washington State University associate professor who provides diagnostic toxicology service for the Washington Animal Disease Diagnostic Laboratory in Pullman, Washington.

"There are three plants that cause more problems and lead to more cases sent to our diagnostic lab than any others, and unfortunately, they are very common," she said. These plants include **alsike clover** (*Trifolium hybridum*), **red clover** (*Trifolium pratense*), and a category of plants in the **Senecio** family, including **tansy ragwort** (*Senecio jacobaea* L.) and **common groundsel** (*Senecio vulgaris*).

"With the clovers, most people don't appreciate the fact that these plants can be a problem or risk, and are even included in a lot of pasture mixes that people plant," Dr. Talcott said. "The *Senecio* plants are also very easily overlooked and are very common weeds throughout Washington."

The good news is that many plant poisonings require chronic exposure for horses to get sick, but that is not always the case. Horses can become sick through contaminated hay or grazing, but this usually takes days or weeks of eating a fair amount of the contaminants.

"Age or breed does not play a significant role in the development of plant-related diseases; it just happens when horses graze or eat hay," Dr. Talcott said. "But since the problem is dietary and usually involves more than one animal, when plant toxicity occurs, it can be striking and a large financial concern because a family may lose multiple animals."

"If these plants are in someone's pasture or hay, we recommend they contact a qualified person, such as a county extension agent or member of a weed control board to come take a look and identify which plants are actually there," she said. These specialists can recommend appropriate ways to handle unwanted plants, such as herbicide or mechanical removal, pasture management, or biocontrol measures.

## ALSIKE CLOVER

Two distinct syndromes in horses are associated with alsike clover poisoning. The first and most common syndrome is referred to as **photosensitization**, in which the horse has a negative reaction to light. The horse may experience a sunburn on the more exposed areas of the body where there is lack of hair or pigmentation. The lining of the eyes may become red or swollen, and lesions may appear on the horse's muzzle, mouth, tongue, eyes, and ears. Colic or diarrhea may also occur. Sometimes, horses do not show any symptoms at all, so the condition may not be apparent.

Alsike clover poisoning also does not occur in every instance a horse eats the clover. But horses that experience photosensitization seem to develop the problem after eating hay or grazing in pastures that contain alsike clover for a short period of time. Photosensitivity is rarely deadly, but treatment requires removing the clover from the horse's feed or pasture, and removing the horse from sunlight. A veterinarian can also prescribe skin moisturizers and antibiotics to be applied to sunburns and lesions.

**Big liver syndrome** is the second and more serious syndrome associated with alsike clover. A horse affected by it must graze or eat alsike clover for a few to several weeks. This syndrome can be deadly and may cause irreversible liver damage if the problem is not detected soon enough.

Indications of liver damage include sensitivity to light, sleepiness, chronic weight loss, and problems with the central nervous system. "If liver disease is suspected, a veterinarian should do an aggressive workup to determine the extent of the

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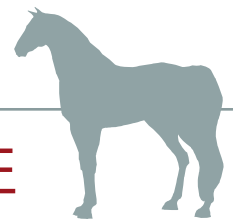
Alsike Clover—photo by Larry Hufford of the WSU Herbarium

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# First Aid for Eye Problems and Injuries

Sometimes it can be hard to get a horse to look you in the eye. This is especially true if he or she has an optical injury or infection.

“Commonly a horse with a painful eye will hold its eyelid shut and not want anyone to touch it,” said **Dr. Tamara Swor**, a WSU clinical instructor of equine surgery and emergency care. “If the horse does open it, the tissue around the eye is usually red and swollen, and the eye will constantly produce tears. For an owner, it can be very hard to get the horse to let you take a look at the problem.”

Trying to judge an eye injury or infection from the exterior can be difficult and misleading, but an owner may be able to see if a horse has a cut or flap of skin torn on the eyelid. “Sometimes the swelling can be severe, but the actual problem is not too serious. Conversely, as with corneal problems, there may be little swelling around the eye, but the problem is very serious,” Dr. Swor said.

With many eye problems, first aid options for owners may be limited to calling a veterinarian who can administer numbing medication or drops in the horse’s eye to properly examine the horse.

## CONDITIONS

The most frequent eye problems that horses experience include inflammatory problems like conjunctivitis, in which the lining around the eye becomes inflamed. Eyelid or eye lining lacerations from nails, hooks, or sharp branches are also common, as well as injuries from foreign material that gets lodged in the eye, such as grass awns, sawdust, and weeds when horses roll on the ground.

Other common problems include cataracts, an equine inflammatory disease called uveitis, corneal edema in which fluid rushes into the cornea, and corneal ulcers. “We also see a lot of traumatic things that happen to the bone around horses’ eyes,” Dr. Swor said. “Because those bones stick out so far from the head, that will be the first thing to hit if a horse accidentally runs its head into a doorway.”

Fly masks can also present a problem for horses because even though their owners are trying to protect them from annoying bug bites during warmer months, if the mask is not clean or is too tight, corneal scratches, ulcers, and infections may occur. “To prevent this, owners should check fly masks daily to make sure they are kept clean and fit appropriately,” Dr. Swor said.

Occasionally, foals are born with hereditary problems, such as cataracts or a condition called entropion. With entropion, the foal’s eyelid is rolled inward, causing its eyelashes to rub

the eye. This results in excessive tearing and discomfort for the foal.

When it comes to optical problems such as these, Dr. Swor recommends the earlier an owner calls the veterinarian, the better. “Many traumas need prompt repair, or the horse will experience permanent damage, such as excessive tearing or scarring where the horse will not be able to close its eye,” she said. “Ulcers may also develop, as well as many other kinds of secondary problems and infections, which all progress very quickly in horses.”

An example of a common complication of corneal injuries is a fungal infection, which can cause loss of eyesight if the horse is not treated soon enough.

## TREATMENTS

Lacerations and other traumas may require stitches, or if the cut is deep enough, a veterinarian may need to surgically repair the wound. “Typically, most corneal traumas heal quickly in about three to five days, but some can take longer depending on the inflammation,” Dr. Swor said.


Foals with entropion only require a simple suture procedure in which a pinch of skin around the eye is stitched together to keep the eyelid out. “Most foals are better in a couple of days,” Dr. Swor said. “We can also inject fluid to help roll the eyelid out.”

Congenital cataracts can be removed surgically, as well as those caused by advanced cases of uveitis. “Uveitis causes chronic inflammation and infection in a horse’s eye, which may be caused by its immune system,” Dr. Swor said. “It is most commonly seen in Appaloosas or horses with spotted, mottled skin. Topical drugs and antibiotics can control outbreaks if the infection is caught early, but if the problem goes on too long, the horse’s eye may develop a cataract, go blind, or need its eye removed. It is a difficult disease because the infections are chronic, but owners generally learn to recognize outbreaks when they occur and can treat them with medications.

“Some veterinarians in private practice perform some eye surgeries and many do the initial workup,” she said. “But many cases are referred to the WSU Veterinary Teaching Hospital because anesthesia is generally required and we have round-the-clock care and staff for the horses.”

For problems such as ulcers, veterinarians can use a special eye drop called fluorescein to diagnose where an ulcer is and how far it progressed. “Fluorescein is neon-yellow and will stick to any part of the cornea that is missing, which allows us to see the ulcer,” Dr. Swor said. From there horses may be treated with drops, ointments, and in some cases, catheters are inserted if a medicine needs to be given frequently.

“Prevention of eye problems may be difficult to avoid, but if owners see a problem, they should have it taken care of quickly because problems can rapidly progress to loss of vision or the eye,” Dr. Swor said.

For more information or questions regarding optical emergencies or care, contact the WSU Veterinary Teaching Hospital at 509-335-0711, or Dr. Tamara Swor at 509-335-3079 or [tswor@vetmed.wsu.edu](mailto:tswor@vetmed.wsu.edu). 



*A horse with a traumatic eye injury.*

## Toxic Plants continued from page 1

liver damage. This should include blood work, an ultrasound to see if the liver is enlarged or smaller than normal, liver enzyme assessment, and a biopsy may also be called for," Dr. Talcott said. "There is no specific treatment for liver disease. The best you can do is treat the problems the horse is having, similar to the way liver failure is treated in humans.

"This is a fairly common problem, depending on the year," she said. "It is not unusual for three to six cases a year to be presented to our laboratory (WADDL), and these instances usually involve multiple horses. There are many more cases handled by local veterinarians that we never see. Usually, we do find alsike clover as the culprit."

To prevent poisoning, horses should not receive feed that contains more than five percent of alsike clover. Pasture managers should also avoid planting seed mixtures that contain alsike clover if it is intended for grazing or hay. And because several varieties of clovers are commonly used in pasture mixes, it is also helpful for owners to be able to recognize different types of clovers. A good way to identify clovers can be to compare where the flower appears on the plant. Alsike clover flowers are usually pink and white, and grow from the main stalk, alongside the separate leaves. Red clovers have hairy leaves with an inverted "V" mark, and the flower is located at the terminal end of the stem along with the leaves.

## RED CLOVER

Red clover can be a high-quality forage for horses. But it can also cause the liver disease described for alsike clover above. In addition, red clover can contain a fungus called *Rhizoctonia leguminicola*. This fungus produces a toxin that stimulates animals' salivary glands, so animals that ingest it slobber profusely. This sign quickly occurs within one to three hours after a horse has eaten the contaminated forage.

Cool, wet springs or falls are ideal conditions for fungal growth. If red clover is made into hay with the fungus on it, the hay can be toxic for several years. The fungus can also affect cows, sheep, goats, and pigs. It can also grow on white clover, alsike clover, and alfalfa, but it is found most frequently on red clover.

Fortunately, "**slobbering disease**," also known as "**blackpatch**," is not deadly, but it is unsightly. Most cases do not require treatment and horses will get better within several days once the feed is removed. However, slobbering can also be caused by viruses or mouth irritations, such as burrs or grass awns stuck in the mouth. So if slobbering continues several



Red Clover—photo by Larry Hufford of the WSU Herbarium

days after the feed is removed, owners may want to consult with a veterinarian. It may also be hard to eradicate from a field, so consultation with an extension agent or certified crop advisor may be helpful.

## SENECIO PLANTS

The common names of *Senecio* plants that are troublesome for horses are **tansy ragwort, lamb's tongue ragwort, common groundsel, threadleaf groundsel, broom groundsel, and Riddell's groundsel**. These plants are mostly perennial herbs that produce substances called **pyrrolizidine alkaloids**, which are toxic to the liver in horses if ingested moderately over several weeks or months. They are also poisonous to cattle and pigs. Acute cases occur when horses eat about five percent of their body weight over several days, causing liver damage and failure and even death in some circumstances.

These plants are toxic whether eaten fresh in a pasture or dried in hay. Symptoms and treatment of alkaloid poisoning, also known as "**walking disease**" or "**sleepy staggers**," is similar to big liver syndrome caused by alsike and red clover. Symptoms include weight loss, sleepiness and yawning, incoordination, aimless wandering, and photosensitization. Like big liver syndrome, supportive care for a horse's liver failure is the only treatment.

Unfortunately, affected horses do not have a good prognosis, so the best thing for horse owners to do is to prevent their horses from being exposed. For removal or management of *Senecio* plants in pastures, contact a local extension agent or certified crop advisor.

More information about and pictures of these problem plants can be found online at the Washington State Noxious Weed Control Board Web site at [www.nwcb.wa.gov/INDEX.htm](http://www.nwcb.wa.gov/INDEX.htm), or the USDA Natural Resources Conservation Service Plant Database Web site at [plants.usda.gov](http://plants.usda.gov).

For medical questions or emergencies, contact the Washington State University Veterinary Teaching Hospital at 509-335-0711, or Dr. Patricia Talcott at 509-335-9696 or [ptalcott@vetmed.wsu.edu](mailto:ptalcott@vetmed.wsu.edu).



Tansy Ragwort—photo from the Washington State Noxious Weed Control Board



Common Groundsel—Photo by Emmy Widman

## Emerald Downs Hosts 2005 WSU Day at the Races

Join us for the 2005 WSU Day at the Races at Emerald Downs Racetrack in Auburn, Washington, on Saturday, August 27. The first race starts at 2:00 p.m. Come watch the races and support our Equine Team by wearing your Cougar attire, which also allows you to enter for half price.

Once inside, visit the Track Level of the grandstands to check out our exhibits and visit with veterinary students and

many of our top equine experts from the College of Veterinary Medicine! Races will run every 25 minutes, including special races dedicated to WSU's Equine Program. Come join in the fun!

For more information, contact Lynne Haley at 509-335-5021 or [lhaley@vetmed.wsu.edu](mailto:lhaley@vetmed.wsu.edu).

## WSU Equine Surgeon Named Distinguished Professor

**Professor Robert K. Schneider**, an internationally known equine orthopedic surgeon at Washington State University's College of Veterinary Medicine, is the current recipient of the four-year Robert B. McEachern Distinguished Professorship in Equine Medicine.

Dr. Schneider is the immediate past president of the American College of Veterinary Surgeons. He is also a previous recipient of the WSU Faculty Member of the Year Award from the Washington State Veterinary Medical Association.

Dr. Schneider's specialty is surgery on bones and joints of horses, especially equine athletes, performance and show horses, and valuable breeding stock. The volume of his caseload in Pullman is responsible in part for the college serving western Washington residents, with a special horse transportation service to and from the west side about every two weeks.

"Bob Schneider contributes a large, vital lameness and orthopedic surgical caseload and consultation service to the WSU Veterinary Teaching Hospital," said Dr. Warwick Bayly, dean of the college and a past recipient of the same distinguished professorship. "This provides unmatched service for horses and their owners as well as an extraordinary learning environment for WSU veterinary students, residents, and interns. To honor his work and abilities with the college's only distinguished professorship is very fitting."

The professorship was established with a \$250,000 private gift from Robert B. and Margaret McEachern in 1995. The intent of the couple's gift was "to make WSU's educational program in equine medicine even stronger and to further the college's reputation for quality research in this field."

The state formerly matched endowments like that made by the McEacherns, bringing the total value to \$500,000. The professorship award includes funding from a portion of the endowment interest income worth more than \$26,000 annually for four years.

Robert McEachern, a 1937 WSU graduate, was a prominent Pacific Northwest construction executive from Redmond. He developed a fondness for horses as a young man while he worked as a cowboy in Canada. He served on the WSU Board of Regents from 1981-88 and was president of the board for several years. A founding member of the WSU Foundation, he died in 1991. Margaret McEachern, a WSU alumna from the class of 1938, shared her husband's passion for WSU and horses.

"I'm honored to be recognized with such a prestigious distinguished professorship," Dr. Schneider said. "My goal is to continue to provide the finest surgical services for horses and their owners who travel to WSU."

"We'll use the financial support from the McEachern professorship to train a resident veterinarian in equine sports medicine," Dr. Schneider said. "Our goal is to provide additional help for clinical cases, develop even more expertise using magnetic resonance imaging or MRI to evaluate lameness, and establish a perpetual post-veterinary training program that will advance diagnosis and treatment of horses with performance-limiting lameness." 🐾



*Dr. Robert Schneider*

## Ride for Research Events to Benefit WSU Veterinary College

The Washington State Horse Council and member organizations are hosting fundraisers to benefit the Washington State University College of Veterinary Medicine and its equine research programs.

State resources currently fund approximately 28 percent of the veterinary college's activities. As such, our WSU Equine Program relies heavily on grants, gifts, and fees collected for services to fund its teaching, service, and research programs. Support for these programs across all areas of focus within the college is not likely to come from tax dollars in the future. The veterinary college needs and welcomes help from the horse industry to provide funds necessary to support research aimed at improving the health of our equine friends.

The WSU College of Veterinary Medicine is an international leader in many areas of equine research. Current studies in equine clinical medicine include the management of pain in post-operative patients, navicular syndrome, and new techniques in laparoscopic surgery, the management of joint disease, and sports medicine in general. Across the basic science departments within the veterinary college, additional work is being pursued on equine digestive and infectious diseases, as well as the immune responses of horses and foals to disease.

The WSU College of Veterinary Medicine is staffed with many outstanding equine clinicians and research authorities and is the only veterinary college in North America currently equipped with magnetic resonance imaging equipment capable of evaluating lameness and neurological disorders in horses. This technology has rapidly moved WSU to the forefront of equine veterinary medicine and has changed the approach to the diagnosis and treatment of horses with lameness problems that cannot be readily diagnosed from traditional radiography or ultrasound examination. The information gained as a result of this technology is of interest to equine practitioners and horse owners everywhere.

Events scheduled in support of the WSU research programs include a benefit prize ride, the "Ride for Research," set for July 22-24, 2005, at the Evergreen Sportsmen's Club near Littlerock, Washington. A Washington State Horsemen approved "B" system horse show, the "WSU Benefit Horse Show," will also be held at the Kitsap Saddle Club in Port Orchard, Washington, on September 3 and 4, 2005. These events give the horse-owning community an opportunity to support WSU College of Veterinary Medicine's equine research programs while being involved in activities horse enthusiasts enjoy.

If participation in these family-friendly events is not possible, please consider a donation to support improved health and welfare of our equine friends. Checks can be made payable to Washington State Horse Council, and mailed to 2363 Mt. View Rd. E., Port Orchard, WA 98366-8320. Be sure to include on the check, "donation to Ride for Research." 🐾



# What Horse Owners Should Know about Equine Infectious Anemia

Summer is full of events for many horse enthusiasts and their animals, such as trail riding, vacations, horse shows, and rodeos. These activities often involve travel that may take owners and their horses across state lines.

If that is the case, owners are required to have their horses tested for a disease called equine infectious anemia, or EIA as it is commonly known. The test screens for the virus that causes EIA, which is similar to the virus that causes AIDS in humans. Although EIA has not been common in the United States since the 1970s, a horse that tests positive must either be quarantined for life or euthanized, according to guidelines set by the United States Department of Agriculture.

Current tests approved by the USDA include the **Coggins test**, which is the most widely recognized official test, and the **EIA ELISA test**. Results of the Coggins test can be available within 24 hours, while results of the EIA ELISA test can be available within one hour.

"EIA is a serious disease," said **Dr. Robert Mealey**, a WSU assistant professor and board-certified specialist in equine medicine. "Horses that become infected will be infected for life."

## INFECTION

EIA is a blood-borne disease. The EIA virus is transmitted primarily by horseflies and deerflies during the summer months in regions like the Northwest, but can occur earlier or later in the year in warmer climates.

"Horseflies and deerflies get a lot of blood on their mouth parts when they bite, making it possible to transmit the virus to other horses after they bite one that is infected," Dr. Mealey said. Although humans cannot be infected by the EIA virus, humans can inadvertently transmit the virus between horses by reusing materials contaminated with horse blood, such as needles, syringes, surgical instruments, and dental equipment. All horses are susceptible to EIA, as well as ponies, zebras, donkeys, and mules.

A horse that becomes infected may become acutely ill within one to three weeks of being bitten, and sometimes the only clinical sign is a high fever, up to 105 degrees or more. Since fever can have many causes, including infections with influenza virus, herpes virus, and various bacteria, EIA can be difficult to diagnose based on clinical signs alone. More often, the initial clinical signs of EIA are mild and go completely unnoticed. Very rarely, horses can die from severe acute disease shortly after being infected.

After the first bout of the disease, most infected horses will likely suffer recurrent episodes of illness with signs such as fever, loss of appetite, and lethargy. Anemia (decreased red blood cells) and thrombocytopenia (decreased platelets) may also be detected with a blood test. Over time, chronic weight loss may become apparent, as well as edema, in which fluid collects under the skin in the legs and under the chest.

"During the first year of infection, most horses will have recurrent episodes of disease, each lasting five to seven days. The period between these episodes can be weeks or months, during which time most horses appear completely normal," Dr. Mealey said. "After a year or so, the immune system ends up controlling the virus to a low level in most horses, but the virus is never totally eliminated."

In other instances, an infected horse may not show any signs of illness at all, even from the start. "It is certainly possible to have an infected horse and the owner not know it because the horse looks and acts perfectly normal," Dr. Mealey said. "Even though an infected horse can live with the virus,



*The WSU Equine Infectious Anemia Research Team: (left to right) Dr. Robert Mealey, Steve Leib, Emma Karel, Dr. Lindsay Oaks, Sue Pritchard, Matt Littke, and Dr. Travis McGuire. Dr. Susan Carpenter not pictured.*

that horse can be a source of infection for other horses in the area. That is why testing is so important."

Currently, approximately 26 percent of horses in the United States are tested for EIA, mostly those that travel. "Because of that, we really don't know how many horses in the U.S. have it, though the number of reported cases is low," Dr. Mealey said.

## PREVENTION AND RESEARCH

"We recommend that horses have an EIA test every year as part of a routine health exam, and it should always be part of a pre-purchase exam if an owner is thinking of buying a new horse," he said. "Any accredited veterinarian can perform the test. Basically, the veterinarian draws a tube of blood, which gets sent to a USDA-accredited laboratory like the one at WSU, and results come back within one to 24 hours depending on which specific test is run. The test will show whether or not the blood is positive for antibodies against the virus. If antibodies are present, then the horse is infected with the EIA virus."

Currently there is no vaccine or treatment for EIA, but Dr. Mealey and other researchers are working to change that. In addition to Dr. Mealey, the EIA research group at WSU includes Dr. Travis McGuire, who has been conducting EIA research for 40 years, Dr. Lindsay Oaks, and Dr. Susan Carpenter. Other important contributors include research technicians Steve Leib, Matt Littke, Emma Karel, and Sue Pritchard.

"Our research has focused on how the immune system responds to the virus. We are concentrating on a particular type of cell in the immune system, called a cytotoxic T lymphocyte, or CTL," Dr. Mealey said. "These white blood cells recognize other cells in the body that are infected with the virus and can kill them before the virus spreads."

"There are ongoing studies at WSU to identify the specific virus proteins that the CTLs recognize, and we have found several. From this, we are hoping to come up with a vaccine that is protective against the disease," he said. "We are hoping to find one that works within the next few years."

Until then, prevention is the best tool horse owners have to protect their horses. Preventative measures include a routine health exam and EIA test every year, never reusing blood-contaminated materials between horses, and rigorous horsefly and deerfly control during the summer months.

For more information about equine infectious anemia, visit the USDA Web site at [www.aphis.usda.gov/vs/nahps/equine/eia](http://www.aphis.usda.gov/vs/nahps/equine/eia) or contact Dr. Mealey at the WSU College of Veterinary Medicine at [rhm@vetmed.wsu.edu](mailto:rhm@vetmed.wsu.edu). 📧

# Information about the WSU Veterinary Teaching Hospital

## APPOINTMENTS AND HOURS

Equine appointments can be made at the WSU Veterinary Teaching Hospital by calling the Equine Desk at 509-335-0719 from 8 a.m. to 5 p.m., Monday through Friday. No referral is necessary.

- Equine Medicine appointments are scheduled Tuesdays and Thursdays.
- Equine Surgery consultation appointments are scheduled for Mondays and Wednesdays to allow for subsequent surgeries to be performed on Tuesdays and Thursdays.
- Equine Theriogenology appointments are scheduled on an individualized basis at a time most convenient for both the animal owner and the clinician.

Appointments may be scheduled directly by individual service areas. If you are unable to reach a number directly, call the main hospital number at 509-335-0711, and the operator will transfer you to the correct personnel.

A 24-hour emergency service is also available for both small and large animals. Please call 509-335-0711 if you are bringing in an animal as an emergency so our veterinarians can prepare for your arrival.

## WHAT TO EXPECT

A trip to the WSU Veterinary Teaching Hospital is not like a trip to most veterinary practices. Upon arrival, clients register at the Admissions Desk. A senior veterinary student, or in some cases an intern or resident, obtains a complete medical history from the owner or caretaker and performs an initial physical examination. More than one graduate veterinarian will likely examine your horse while it is at WSU. Most of the equine services at WSU function in a team configuration with a senior clinician, intern, and resident present, so examinations and treatments generally take more time than they would in the private sector. Since WSU is also home to some of the world's best equipment, most notably medical imaging, there are often delays due to previous scheduling of diagnostic and therapeutic procedures. As with any medical facility, horses with true medical and surgical emergencies take precedence over regularly scheduled appointments. In most cases, the hospital staff can give a reasonably accurate estimate of the approximate time necessary to adequately evaluate your horse and provide service. Because teaching is an integral part of the services we provide, most people accept some delays in order to

obtain the most thorough and comprehensive examination for their horses as is available anywhere in the world.

Owners are allowed to stay with their horses during most initial examinations and some diagnostic procedures. However, there are some procedures, such as radiographs, nuclear scintigraphy, and surgery, where owners are not permitted because of safety, sterility, or infection control concerns. Daily visitation is allowed for hospitalized horses, but the timing and length of the stay may be limited and should be scheduled with the attending clinician. In some instances in which a horse is in intensive care or an isolation unit, owners are not allowed to visit except with special arrangements through the hospital staff for the same reasons noted above. All visitors need to check in at the front desk at the time of arrival.

## PAYMENT POLICY

Fees are charged for all services provided by the WSU Veterinary Teaching Hospital in a similar fashion to that of a private veterinary practice. Payment is expected, in full, at the time of service. For patients treated as outpatients, the clinician will advise the owner of costs that will be incurred before service is provided, with payment expected upon completion of the visit.

Clients with hospitalized animals will be given an estimate for the cost of treatment. For these inpatients (surgeries / ICU / extensive diagnostics), one-half of the high end of the estimate is requested at the time of admission. The remainder of the bill is due at the time of discharge. Acceptable forms of payment include cash, check, Visa, or MasterCard. If a client is unable to pay under these guidelines, a credit report must be obtained and contractual arrangements for payment should be made with the business office prior to beginning the procedure. On a very limited basis, funds are available for ownerless animals or owners with special circumstances.

## MAPS TO WSU

Maps to the WSU College of Veterinary Medicine can be found at [www.vetmed.wsu.edu/maps/](http://www.vetmed.wsu.edu/maps/).

Routes can be found from southern Idaho through Lewiston, Idaho; from Montana or northern Idaho through Coeur d'Alene, Idaho; from Portland, Oregon; from the Seattle area through Colfax, Washington; and from Canada or northern Washington through Spokane, Washington.

Washington State University Campus maps can be found at [www.wsu.edu/campusmap/index.html](http://www.wsu.edu/campusmap/index.html).

## TRANSPORTATION AND THE "HORSE VAN"

Horse owners often choose to bring their horse to the WSU Veterinary Teaching Hospital themselves. But for convenience, WSU also offers a horse van service that transports horses to and from western Washington to the Veterinary Teaching Hospital in Pullman on a weekly or bi-weekly basis. The main pick-up point for horses west of the Cascade Mountains is at Donida Farms, with directions posted on the WSU Equine Web site at [www.vetmed.wsu.edu/depts-equine/directions.asp](http://www.vetmed.wsu.edu/depts-equine/directions.asp). For more information about this transportation option, contact the Large Animal Appointment Desk at 509-335-0718 from 8 a.m. to 5 p.m., Monday through Friday.

## PARKING

Space for short and long-term parking is available at the hospital for all sizes of horse trailers and vans. Agricultural

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# Your WSU College of Veterinary Medicine Equine Team...

The WSU Veterinary Teaching Hospital could not operate without the cooperation and dedication of its staff of veterinarians, veterinary technicians, and other support personnel. Your WSU team strives to provide every client with the best possible medical care for his or her horse. Below is a chance to get to know some of these people before you visit the hospital.

## EQUINE FACULTY

The **Equine Medicine team** provides an array of services for the diagnosis and treatment of a wide variety of horse diseases, including heart and lung disorders, colic, diarrhea, neurological diseases, neonatal intensive care, and infectious diseases. Our senior faculty members, **Drs. Melissa Hines** and **Debra Sellon**, are board-certified in large animal internal medicine by the American College of Veterinary Internal Medicine (ACVIM).

The **Equine Surgery team** is renowned for their expertise in lameness evaluation and endoscopic surgery. They provide a comprehensive array of surgical procedures for many conditions including fracture repair, arthroscopic surgery, colic, urinary bladder disorders, upper respiratory abnormalities, and ovariectomies, to name just a few. Team members also perform high-speed treadmill testing. **Drs. Claude Ragle, Kelly Farnsworth**, and **Bob Schneider** are board certified by the American College of Veterinary Surgery. Another key board-certified member of the surgery team, **Dr. Tamara Swor**, is head of our emergency services at WSU.

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animal and equine owners may pull their trailers through the security gate to park on the east side of the hospital. If parking for several hours, clients will be directed to a "longer term" lot. For those with RVs, parking is not allowed overnight, but the receptionist in the front lobby can recommend an appropriate place to park on campus.

Those having business with the Veterinary Teaching Hospital can park in the lot directly in front of the main entrance. Clients must sign in at the reception desk during regular business hours when parking in this lot.

### SELF-REFERRALS OR VETERINARIAN REFERRALS

Owners may seek treatment for their own horses without a referral. If a private veterinary practitioner refers a client, he or she should call WSU and speak to the accepting service regarding their client's physical condition, where the client is coming from, anticipated arrival time if an emergency, and any other information pertinent to the client. If the case is not an emergency, the accepting veterinarian may transfer the caller to make an appointment.

We welcome referrals from our colleagues in private practice for a variety of reasons, but most importantly because it is an invaluable part of our professional veterinary education program. Referring practitioners are encouraged to keep updated on the progress of the animals they refer to our hospital, and there are a number of ways this can be done.

Want to know more about our equine clinical services, research, and accomplishments?

Then check out our equine Web site at [www.vetmed.wsu.edu/depts-equine](http://www.vetmed.wsu.edu/depts-equine) or the WSU Veterinary Teaching Hospital Web site at [www.vetmed.wsu.edu/depts-vth/equineServices.asp](http://www.vetmed.wsu.edu/depts-vth/equineServices.asp).

Also feel free to call 509-335-0718 for equine appointments or 509-335-0711 for emergency care. 🐾

The **Equine Theriogenology** or reproduction service is lead by **Dr. Ahmed Tibary**, our board certified and internationally renowned large animal theriogenologist. Dr. Tibary provides a diverse range of services for horse owners including breeding soundness evaluations of stallions and mares, pregnancy and fetal well-being evaluations, semen collection and freezing, embryo transfers, and artificial insemination with fresh-cooled or frozen semen.



**Dr. Melissa Hines**, DVM, PhD, Diplomate ACVIM  
Associate Professor and **Chief of the Equine Medicine Service**

Specializes in **immunology, infectious diseases, neonatology**, and **exercise physiology**

Member of the WSU veterinary faculty since 1989  
**509-335-0765, mth@vetmed.wsu.edu**



**Dr. Debra Sellon**, DVM, PhD, Diplomate ACVIM

Associate Professor of Equine Medicine  
Specializes in **infectious diseases, hematology**, and **pain management**

Member of the WSU veterinary faculty since 1997  
**509-335-0733, dsellon@vetmed.wsu.edu**



**Dr. Robert Schneider**, DVM, MS, Diplomate ACVS

Professor and **Chief of Large Animal Surgery**  
Specializes in **equine orthopedic surgery**

Member of the WSU veterinary faculty since 1992  
**509-335-0791, rks@vetmed.wsu.edu**



**Dr. Claude Ragle**, DVM, Diplomate ACVS, Diplomate ABVP (equine practice)

Associate Professor of Equine Surgery  
Specializes in **minimal invasive surgery, laparoscopy, respiratory surgery**, and **gastrointestinal surgery**

Member of the WSU veterinary faculty since 1992  
**509-335-0822, ragle@vetmed.wsu.edu**

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## WSU Veterinary

### TEACHING HOSPITAL SWITCHBOARD

Main VTH Number / Switchboard:.....	509-335-0711
Equine Appointments .....	509-335-0718 / 509-335-0719
Agricultural Animal Appointments .....	509-335-0741
Small Animal Appointments .....	509-335-0751 / 509-335-0752
Dean's Office.....	509-335-9515
Department Chair .....	509-335-0738
VTH Fax Number .....	509-335-3330
Billing .....	509-335-0816
Pharmacy .....	509-335-0736
Pet Partnership Program .....	509-335-4569
Pet Loss Hotline .....	509-335-5704



WSU Veterinary Teaching Hospital  
Department of Veterinary Clinical Sciences  
College of Veterinary Medicine  
PO Box 646610  
Pullman, WA 99164-6610

**Equine Team continued from page 7**



**Dr. Tamara Swor**, DVM, Diplomate ACVS  
Clinical Instructor of Equine Surgery and  
Emergency Care  
Specializes in **equine emergency medicine,**  
**orthopedic surgery, gastrointestinal**  
**disorders and surgery, and lameness**  
Member of the WSU veterinary faculty since 2003  
**509-335-3079, tswor@vetmed.wsu.edu**



**Dr. Kelly Farnsworth**, DVM, MS, Diplomate  
ACVS  
Clinical Assistant Professor of Large Animal  
Surgery  
Specializes in **minimal invasive surgery,**  
**laparoscopy, and lower limb lameness**  
Member of the WSU veterinary faculty since 2002  
**509-335-0724, farns005@vetmed.wsu.edu**



**Dr. Ahmed Tibary**, DVM, PhD, Diplomate of  
the American College of Theriogenologists  
Associate Professor of Theriogenology  
Specializes in **large animal reproduction**  
Member of the WSU veterinary faculty since 2000  
**509-335-1963, tibary@vetmed.wsu.edu.**

**WSU EQUINE VETERINARY TECHNICIANS**

Our licensed veterinary technicians are the “nursing” staff of WSU’s Veterinary Teaching Hospital. They play a vital role in patient diagnostics and care, as well as in the education of veterinary students. Their dedication and caring is evident with every patient they assist.

**Janel Holden** and **Lethea Hunter** work primarily with the equine surgery service. Besides surgery, they frequently help with the evaluation and treatment of horses with lameness problems. Janel also helps with large animal imaging. **Molly Loaiza** has been a technician at the Veterinary Teaching Hospital for more than 20 years. She primarily works with the equine medicine service. **Chad Whetzel** is our newest equine technician who helps the Equine Surgery service. **Shirley Sandoval** (not pictured) provides primary support for large animal and equine theriogenology. **Teri Olson** is a licensed veterinary technician with advanced training in equine dentistry. She also helps the Equine Surgery service, and is an invaluable aid in evaluation and treatment of a variety of dental disorders in horses.

**WSU EQUINE SUPPORT STAFF**

Many other individuals provide critical assistance in the day-to-day operations of the equine hospital. It is difficult to include everyone involved with the care and treatment of equine patients, but you may meet a few of these people.

**Lynette Kinzer** is our patient services representative at the large animal appointment desk, and the person you are most likely to talk to on the phone. Lynette helps clients make appointments, answers questions, arranges transportation to the hospital, and is a liaison between our doctors and clients. **Bob Parkins** (not pictured), **Mike Carpenter** (not pictured), **Rick Fredrickson, Jim Hicks,** and **Dan Hopkins** are our full-time large animal care staff. They clean and maintain the stalls for patient care during hospitalization, maintain our paddocks, and work with the animals. Rick Fredrickson is also the person who drives the shuttle van for equine patients traveling between Pullman and western Washington. 🐾



*Equine Support Staff (left to right) Rick Fredrickson, Lynette Kinzer, Dan Hopkins, and Jim Hicks.*



*Equine Veterinary Technicians: (Back row, left to right) Teri Olson, assistant John Broyles, and Chad Whetzel. (front row, left to right) Molly Loaiza, Lethea Hunter, and Janel Holden.*