



Animal Connection

Oregon State University College of Veterinary Medicine

WINTER 2012

5 Cool Things About Llamas

There is more to llamas than long eyelashes and a smug expression. They are surprisingly smart, friendly, and quirky.

1 Llamas make excellent guards for herds of small animals. They are very social and will 'adopt' a group of sheep or goats as their own herd. Then they will protect the herd by chasing off coyotes and other predators.

2 Llamas are smart. They can distinguish between the family dog or the neighbor's pets, and a predatory animal.

3 Llamas are the camel's hippie cousins. They belong to a group of animals called camelids that also includes alpacas. All camelids spit or stick out their tongue when they are annoyed.

4 One of the ways llamas communicate is by humming.

5 Llamas are diabetic — sort of. The OSU College of Veterinary Medicine (CVM) is using their herd of 30 llamas and alpacas to study how certain hormones

affect blood sugar. Because the metabolism of llamas is very similar to that of a human diabetic, the results of this research may provide insight into human diabetes treatment.

"We've known for a while that everything from camels to alpacas are essentially like diabetic people in a lot of ways," says Dr. Chris Cebra, Clinical Sciences Department Head at CVM. "We've been looking at the roll of incretins – hormones released by the gut after a meal – that make the insulin response stronger and are a major factor in controlling blood sugar."

The data collected by Cebra suggests that diabetes may

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Recycled Pacemakers Help Canine Tickers

Pacemakers made for humans are adding years to dog's lives thanks to an ingenious non-profit agency founded by OSU Professor David Sisson.

Unsold human pacemakers that are past their shelf date and due to be thrown out can now be used in dogs. The Animal Companion Pacemaker Registry provides a clearing house for pacemaker manufacturers to donate the devices. Veterinary cardiologists can go to the registry's website and order them online.

There are strict rules about how long pacemaker manufacturers can keep a unit sitting on the shelf; the lithium batteries eventually wear out and pacemakers in people often need to last for decades. But when you put a pacemaker in a 10-year old dog, it is okay if the battery dies in 15 years.

The medical devices are often implanted to speed up a slow heart rate in dogs with disorders such as heart block and sick sinus syndrome. A donated pacemaker from the registry costs about \$500 compared to \$5,000 or more for a brand new one.

Sisson, who is head of the cardiology department at the OSU Veterinary Teaching Hospital, says several thousand dogs have gotten the lifesaving implants over the past two decades.

Dog of Steel Survives Gunshot



Top: Pre-operative x-ray shows shattered bone and bullet fragments.

Bottom: Post-operative x-ray shows stainless steel plate that repaired Luna's leg.



It is every dog owner's worst nightmare: You think your dog is safe in his own backyard then you come home from work to find her injured. That's what happened to Sheila Rogers.

Rogers got her beautiful white husky, Luna, from the Humane Society. She's a high-energy dog but Rogers has a fenced backyard and another dog, Max, to keep her occupied. Luna happily spends her days chasing Max and bouncing on the family trampoline so Rogers was surprised to return home from work one evening and find Luna lying on the front porch. "She looked dazed and wouldn't move," says Rogers. "We checked her out and found a tiny incision on her leg. When we tried to move her, she screamed."

Rogers immediately took Luna to Dr. Dietrich at Abiqua Animal Clinic who x-rayed the dog and found a shattered femur. "It scared me to death," says Rogers. "She is very much a part of our family. She sleeps on the end of our bed."

Dietrich gave Luna morphine for the pain and suggested Rogers take her to the OSU Veterinary Teaching Hospital. The hospital specializes in difficult cases and tricky surgeries. Dr. Jennifer Warnock was the surgeon on call when Rogers brought the dog in and was stunned to find Luna's leg full of metal bullet fragments.

Warnock, an orthopedic surgeon, sees quite a few canine fractures in the course of a year but Luna's case was a bad one. "Gunshot injuries are challenging," says Warnock. "The bone can't be reconstructed; the site

is contaminated with debris which dramatically increases the risk of infection; and the surrounding soft tissue can be badly injured which slows bone healing."

Warnock had to order overnight shipment of a special plate strong enough to hold the bone together and bear the weight of the leg while it healed. The plate was attached to Luna's leg with metal screws. She was in the hospital for four days and everyone at the hospital from the doctors to the technicians to the office staff was pulling for her. "The OSU people were so nice to us and to Luna; they really made us feel at ease," says Rogers.

Rogers doesn't know who shot her dog but is relieved that after several months of healing, Luna is back to running around the yard with Max. "She is such a happy, affectionate dog," says Rogers. "It is great to see her back to her old self." 🐾



Mariah: Medical Miracle Pony

At Mercy Me Ranch in Eugene, Oregon itty-bitty girls in pink riding helmets get their first riding lessons with Mariah, a gentle Shetland pony with unusual patience and genuine affection for her little students. Lori Thomas, owner and instructor at the ranch, calls Mariah a best friend, teacher, and confidence-builder. "She is the cornerstone of my horse program," says Thomas, "and could not be replaced by just another pony."

In August, Thomas and her family noticed Mariah was drinking less and seemed depressed. When the pony stopped eating and became very weak, Thomas called an emergency vet who thought it was an abscessed tooth and gave her antibiotics. Despite constant care and hand-feeding from the Thomas family, Mariah got much worse so they rushed her to Dr. Richard Mosier at Del Oeste Vet Clinic. "He wasted no time calling OSU," says Thomas. "He gave her fluids through her nostrils in hopes it would make her strong enough for the trip to Corvallis. Later he told us he didn't think she would make it through the night."

Mariah arrived at the OSU Veterinary Teaching Hospital with a high heart-rate and severe dehydration. She was unable to open her mouth and had a stiff gait. Dr. Erica McKenzie, Professor of Large Animal Medicine at OSU, was the doctor on call. "Her urine was red and this gave us our first major clue that she had serious muscle damage,"

says McKenzie. Based on all her symptoms, McKenzie suspected selenium or vitamin E deficiency. Later a blood test confirmed that Mariah had critically low levels of blood selenium.

Clinging to life, Mariah spent ten days in intensive care receiving intravenous fluids, electrolyte supplements, injections of selenium and vitamin E, and pain relief. She also had to be fed via a stomach tube. "Our first visit to see Mariah was so heart-breaking," says Thomas. "She was in quarantine with many tubes connected to her and was so weak she could not even lift her head to greet us." Eventually the little pony was able to lick up a watery mash that the hospital staff fed her many times a day and she slowly began to recover. "At the end of three weeks, we finally got the phone call we were praying for," says Thomas. "Mariah could come home!"

Oregon is a selenium deficient region. Animals fed on local hay run the risk of becoming selenium deficient; that's what happened to Mariah. "I was misled to believe that great quality hay from Eastern Oregon

would replace the need for selenium supplements," says Thomas.

Jean Hall at the OSU College of Veterinary Medicine has been researching selenium deficiency for several years. "There is a narrow window of deficiency/toxicity safety and we don't know exactly where that window is so we tend to be on the deficient side because we don't want to be on the toxic side," she says. Hall has discovered that adding selenium enriched fertilizer to boom sprayers is a good way to produce feed that contains the correct amount of selenium. This also provides the nutrient in a form that becomes organically incorporated into the animal's tissue and is stored there for many months. As the tissue turns over, selenium is released for use by the body. Hall hopes to eventually see selenium fertilizer replace supplements. "This would be an advancement for Oregon," she says.

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Walking the Talk

Students in the OSU College of Veterinary Medicine learn about animal welfare firsthand: Every week they are out in our communities making a difference.

The old cinder-block expo building on the Benton County Fairgrounds has held a variety of events over the years from holiday bazaars to library book sales, 4-H archery practice, and Dogs Gone Dancin' – just to name a few. But on a warm, sunny day in November, the cement floor of the expo building was covered with an unusual display: row after row of folding tables holding dozens of blanket-covered crates.

Out in the parking lot, pulled up close to the front entry, was a big white trailer with an enormous graphic of a cat on its side. Shuttling between the trailer and the expo building, a steady stream of veterinary and pre-veterinary students held unconscious cats bundled into blankets. The Feral Cat Coalition of Oregon (FCCO) had come to town.

The FCCO uses a trap-neuter-return strategy to combat the exploding growth of feral cats in Oregon. The coalition supplies humane traps to property owners who bring captured cats into a clinic for sterilizing. It is the only proven way of reducing the feral cat population and it depends on the kindness of many volunteers including the veterinarians who perform the surgeries.

At the fall clinic in Corvallis, six different veterinarians worked in the operating room of the big white trailer performing nearly 100 sterilization surgeries in just half a day. OSU students from the College of Veterinary Medicine (CVM) prepped the cats for surgery, moved them to the recovery area, and monitored their progress. The cats were returned to property owners for release the next day.

A week later on the other side of town, many of the same students

were folding up pinochle tables at Corvallis Senior Center to make way for a free pet care clinic for low-income seniors. Later they were joined by volunteer veterinarian Ryan Scholz of Ark Animal Care who provided exams, flea and tick care, vaccinations, and just plain old advice for owners and their pets.

Student Ali McKay who helped organize and staff the clinic, says the most common complaint was itchy dog but they also did lots of nail trimming, flea treatment and vaccinations. Quite a few pets were overweight so education was a crucial part of the service. Center regular Shirley Richardson brought in her chihuahua, Miss Candy, because she was a bit lame in one leg. Miss Candy is Shirley's constant companion and sleeps on her pillow every night. "It's just me and her since she was 6 weeks old," says Shirley. Dr. Scholz diagnosed Miss Candy's problem as old age and too much people-food and prescribed a new diet. "I learned she doesn't need chicken," says Shirley. "It's best to feed her ground meat mixed with rice so she will feel full."

Senior Center Program Coordinator Chelsea Chytka appreciates the OSU students for providing a much-needed service. "Many older adults have trouble paying their rent or buying prescription drugs let alone getting pet health care. This service gave people who find themselves in a tight bind the opportunity to give their beloved pets the care they want to provide but can't afford."

CVM students also volunteer regularly at Pro-Bone-O clinics in Eugene, providing free health care for the pets of homeless people. Laura Niman, co-president of the OSU Shelter Medicine Club, is one



of the many students who take time out of their grueling academic schedules to volunteer. "Pro-Bone-O is so rewarding," says Niman. "The people who run it are fabulous. The people who come there for services are fabulous. A lot of those pets are so well taken care of . . . the people take care of their pets before they take care of themselves. There is a huge bond between them. It's really meaningful."

In addition to the many hours they donate to free clinics throughout the state, OSU veterinary students also work throughout the year raising thousands of dollars in donated food and supplies for local animal shelters. In December alone, they gathered more than 600 pounds of dog, cat, rabbit, and goat chow. And that's just the work they do locally. Many of the same students are involved in global charities as well.

"One of the things we look for in selecting our students is commitment to service," says CVM Associate Dean Sue Tornquist. "We think it is an important part of being in this profession. So it is not surprising that many of our students are out working in the community on a regular basis."



Top: Volunteers check on feral cats recovering from surgery.

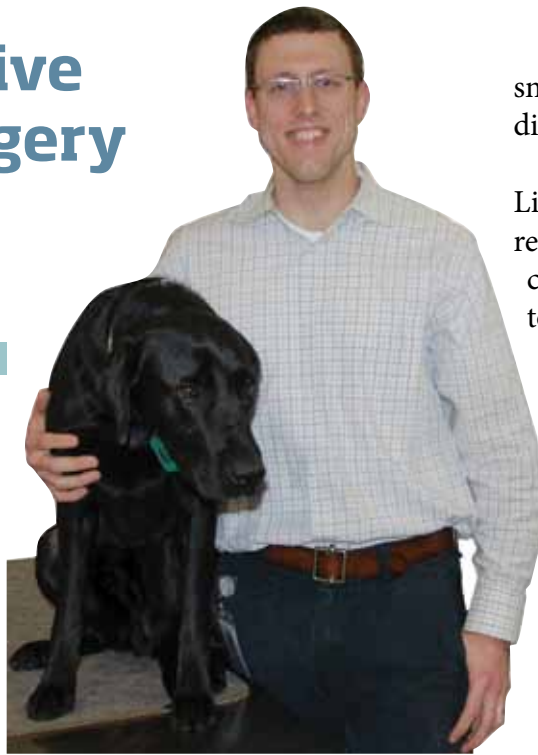
Bottom: Ali McKay, a student at the OSU College of Veterinary Medicine, explains treatment recommendations for Miss Candy and her mom.

Minimally Invasive Gall Bladder Surgery for Dogs

By Milan Milovancev, DVM, DACVS

Veterinarians have become better at recognizing a relatively common condition in canine patients called a gall bladder mucocele – a distended gall bladder filled with thick mucus. Because ultrasound technology has becoming more commonplace, veterinarians are able to evaluate abdominal organs better than they could in the past with x-rays. An increasing awareness of the condition, especially in predisposed breeds such as Shetland Sheepdogs and Cocker Spaniels, is also helping owners and veterinarians alike diagnose this condition.

Dogs with gall bladder mucoceles may be caught early in the course of disease, as an incidental finding, when the patient seems healthy from all outward measures. At the other end of the spectrum, patients with advanced gall bladder disease may be quite ill, potentially entering a life-threatening scenario if the gall bladder has ruptured or obstructed the common bile duct.



There are also patients at every stage in between: some may have relatively mild signs of lethargy or a reduced appetite, others may show signs of gastrointestinal upset such as vomiting or diarrhea, and others may have yellow/orange discoloration of their gums or eyes.

Treatment for this condition usually involves removing the gall bladder. This procedure is called a cholecystectomy and has traditionally been performed via an open surgical approach. More recently, similar to what is done in humans, canine patients are being treated with laparoscopic surgery. This results in a much

smaller incision, less post-operative discomfort, and faster healing.

Like many new techniques, there are refinements to the procedure that are constantly being developed in order to improve the operation. One such refinement is being developed at the OSU Veterinary Teaching Hospital. This technique allows a surgeon to evaluate the bile duct for an obstruction at the time of the surgery. This is an important development because it allows a much greater degree of safety for dogs undergoing the procedure. Without this evaluation of the bile duct, a surgeon might miss an obstruction and even though the gall bladder was successfully removed, the unidentified obstruction could cause continued problems for the patient.

At the OSU Veterinary Teaching Hospital, we are dedicated to offering the most advanced techniques in compassionate animal care. A safer method of laparoscopic cholecystectomy is just one of the many ways we do this.

Dr. Milan Milovancev is a small animal surgeon at the OSU Veterinary Teaching Hospital. Readers may contact him with questions or comments at milan.milovancev@oregonstate.edu.

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Pay tribute to your best friend with an inscribed paving stone at the OSU College of Veterinary Medicine and you will help dedicated, caring students become the next generation of veterinarians.

For more information, contact Kelley Marchbanks, OSU Foundation, 1-800-354-7281.

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Every- body Loves Chuck



You can't work at Oregon State University for twenty-two years and not be aware of the many students who struggle to pay for their college education. As a retired university IT analyst, and long-time supporter of the College of Veterinary Medicine, Jim Corbett knows that is especially true in professional programs like veterinary medicine.

Jim serves as an AKC delegate for the Tualatin Kennel Club where his wife, Kathy is on the board of directors. They are also the fond owners of six Black and Tan Coonhounds. The Corbetts have been instrumental in establishing \$35,000 in scholarship money that is donated by the Tualatin Kennel Club to the college each year. "Our members see this as an investment," says Corbett. "The health of our dogs is of the highest importance and we need a continuing stream of quality veterinarians who are knowledgeable, skilled, and caring."

Recently, the college had an opportunity to return the Corbett's generosity when they came to the aid of Chuck, a friendly, sweet-tempered coonhound with a big interest in the outside world. Every now and then, Chuck casts off his couch potato status and heads for the hills. Kathy Corbett calls it 'grass is greener syndrome'. Last year his desire to see

if there was something better next door got him into trouble when he tried to climb a six-foot fence and injured his leg going over.

The Corbetts took Chuck to Wilsonville Veterinary Clinic where the veterinarian on duty took an x-ray and told the Corbetts his ankle was shattered beyond anything they could fix. The vet advised them to take Chuck to an orthopedic specialist at the OSU Veterinary Teaching Hospital.

It took a whole team of specialists to put Chuck's shattered ankle back together. Then he had ten more weeks of rehabilitation. "I think the entire senior class worked with him" jokes principal surgeon Jennifer Warnock. The Corbetts say they were very impressed with everyone at the hospital from the top down. They especially appreciate Dr. Warnock for taking her injured arm out of a sling to participate in the last surgery. But that was more than professional dedication on her part: "I love Chuck," says Warnock.

Chuck has recovered completely, running freely and standing on his hind legs with no problem. The hospital staff are looking forward to his next visit but this time he'll bring his posse: six brand new puppies who call him 'dad'. 🐾

Llamas Continued from page 1

develop as a result of decreased incretin production. Further study is needed to determine if these results are transferable across species.

Despite their resemblance to human diabetics, llamas don't suffer from the same health issues because their digestive system is different and their diet is so simple.

Mariah Continued from page 3

Today, all the horses at Mercy Me Ranch get selenium supplements. Mariah has gained weight, her spirits are up, and she is teaching one lesson per day. "The doctors and staff at OSU spent countless hours on this little pony and never gave up," says Thomas. "Words are not enough to express my appreciation for saving the life of a pony we could never replace. Mariah will forever be our Miracle Pony."

\$143,000?

The average cost of a veterinary medical degree in the U.S.

With that kind of debt load, veterinary graduates can't afford to work where they are needed most: in rural areas.

You can help veterinary students follow their hearts and go where they are needed by supporting scholarships at the OSU College of Veterinary Medicine.

For more information, contact Kelley Marchbanks at the OSU Foundation:
1-800-354-7281.





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2012 PET Day



Petting Zoo
Dog Frisbee Contest
Fun Run
Llama Packing
Teddy Bear Surgery
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Pet Photo Contest
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Kids Zone & more!

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MAGRUDER HALL

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