



# Animal Connection

Oregon State University College of Veterinary Medicine

SPRING 2012

## Many Skilled Hands Save One Special Cat

**Born with a serious medical condition, Pebble the cat is alive because of a unique partnership between OSU and the Humane Society.**

A little, nine-pound cat with a dicey history is trying to give Benny Beaver a run for his money in the mascot department. The cat's journey from critically-ill stray to Beaver Believer began at the Oregon Humane Society in Portland, Oregon.

A unique partnership exists between the Oregon Humane Society (OHS) and the College of Veterinary Medicine at OSU. It began in 2007 with the opening of the Animal Medical Learning Center (AMLC), a full-service animal hospital adjoining the OHS shelter. At the center, veterinary students from OSU live onsite in dorms and take two-week clinical courses in primary care as part of their graduation requirement. They join OSU veterinary faculty and the OHS medical staff, working on everything from diagnoses to surgery. It's a win-win collaboration and, as the first program of its kind in the nation, has become a model for other universities to follow. The benefits of the

program to veterinary students and the Humane Society are obvious but for Pebble the cat, the partnership between OSU and OHS was a life saver.

Pebble arrived at the AMLC in December 2010. She was brought in as a stray and was barely moving. The AMLC medical team put her on IV-fluids and ran blood tests that indicated liver problems. They thought she had eaten something poisonous. After weeks of TLC from the staff, Pebble improved and was sent to foster care. But one month later, she was back, vomiting and lethargic. This time they ran more tests and found a serious flaw in her liver. Things were not looking good for the little black kitty with the big orange eyes; she needed surgery ASAP.

A portosystemic shunt is an abnormal blood vessel that runs from the intestines into the circulatory system without passing

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With her black hair and orange eyes, Pebble was destined to find a home with Beaver Believer Nichole Hovelsrud.

# Water Workout Helps Recovery *and more?*

Bailey is a high-energy dog. Fortunately, she lives with her family on a raspberry farm where she can run alongside their four-wheelers and swim in the nearby Santiam River. Indoors, Bailey likes to walk on the treadmill. In fact, if she's really stressed or excited, she will stand on the treadmill and call her owner, Keri Childers, to come turn it on.

One day last year, Bailey got stung by a bee and took off running. She hit a ditch full of tall grass and came out the other side limping. Childers took Bailey to her local vet who correctly diagnosed a torn ligament in her left rear stifle joint. Sometimes, partial tears can heal without surgery, but after several weeks with no improvement, Childers took Bailey to the OSU Veterinary Teaching Hospital for TPLO surgery.

A dog's stifle joint is similar to the human knee with one big difference: In a dog, the end of the tibia is sloped so the ligaments in the joint work hard to hold it in place. Once a ligament is completely torn, the tibia slides down the stifle joint causing tissue distress, joint wear, and pain. TPLO surgery removes the slope at the end of the tibia making it possible to stabilize the joint. At

OSU, Dr. Wendy Baltzer performed the surgery on Bailey.

Baltzer is a small animal orthopedic surgeon and the principal investigator in a TPLO research project sponsored by Nestle Purina. Although TPLO surgery is often very successful, any orthopedic joint surgery can accelerate the development of arthritis. Dr. Baltzer is studying post-surgical therapies that may decrease the incidence of arthritis. To do this, the project is enrolling dogs who have had TPLO surgery and dividing them into two groups: those who receive rehab after surgery and those who do not. The dog's owner chooses which group they prefer then the dogs are further divided into those on a regular diet and those on a diet containing Omega-3 fatty acids, glucosamine and chondroitin. "We need 23 more dogs to enroll in the study," says Baltzer, "and that will likely take another 18 months."

Each patient in the study wears a special harness that holds an accelerometer which measures the dog's level of activity. Dogs like Bailey that are in the rehab group have a strict schedule of

home and hospital exercise and therapy sessions. One of Bailey's favorite sessions is the underwater treadmill which provides just enough resistance to build muscles and mobility while reducing trauma and pressure on the recovering joint. Of course, some dogs initially balk at standing in a tank of water on a moving surface, but Bailey loves it. When Childers tells Bailey it's time to go to OSU, she heads for the door.

Sarah Smith, a certified veterinary technician at OSU, has worked with Bailey throughout her rehabilitation. Being able to get acquainted with the animals is one reason Smith likes working for OSU. "Because we get the extreme cases," says Smith, "they are often here for an extended stay or repeat visits. I become very attached to them." Smith is happy to report that after ten weeks of therapy, Bailey's knee is completely healed. "She is back to her active life as a happy-go-lucky boxer," Smith says.

As part of her recovery from joint surgery, Bailey enjoys the underwater treadmill at OSU Veterinary Teaching Hospital.





# PRP: Not Just for Basketball Players



What does a small Quarterhorse from West Linn, Oregon have in common with celebrities like Tiger Woods and Kobe Bryant? She got the same high-end, high-tech treatment for her joint injury as the big-name athletes. And she didn't have to travel to Europe to get it.

Brandy travelled to Oregon as a gift to the Savoy family. Soon after her arrival, she became very ill with pneumonia. Still recovering from that, she severely injured her eye requiring more treatment and convalescence. But she bounced back quickly and suffered no long-term effects. "This was when I knew she was a fighter," says Anne Savoy. "Her ability to deal with the extended and painful treatments at such a young age gave me some insight into her mind and her potential."

The family was soon taking Brandy on camping and trail trips in the mountains of Oregon and Washington; and they were making plans to train her as an event horse for their daughter. "She has a great work ethic, is a thinker, and seems happier with more challenge," says Savoy. "She is a horse that, given the chance to think things through, will do just about anything. This is why the day of her injury is so bizarre."

At a lesson on a blustery, stormy day, Brandy was unusually tense and unable to settle into her work so Savoy had her circling, bending and doing other exercises to relax her. While working her in a trot, a gust of wind came through the arena and rattled the plastic in the rafters. Brandy stopped in mid-stride and looked but did not spook or bolt. Then, on moving out, Savoy noticed her horse was lame.

*Platelet-rich plasma (PRP) is a concentration of platelets containing protein growth-factors that affect wound healing and act as a scaffold for new tissue growth.*

Dr. Trevor Ferguson at Equus Veterinary Service X-rayed Brandy, diagnosed an injury to her stifle (knee) joint, and suggested arthroscopy to evaluate the extent of the damage. Arthroscopy is a minimally invasive surgical procedure in which an examination, and sometimes treatment, of damage to the interior of a joint is performed using a scope that is inserted into the joint through a small incision. The OSU Veterinary Teaching Hospital has state-of-the-art facilities for minimally invasive procedures. "Having worked in the veterinary

field with equines, I knew that if she needed an arthroscopy I would have it done at OSU," says Savoy.

OSU veterinarian Michael Huber performed the arthroscopic surgery and found cartilage, ligament, and tendon damage. Before closing up the incision, Huber and his team used ultrasound to guide injections of platelet rich plasma (PRP) into the damaged areas of the joint. PRP is a concentration of platelets containing

protein growth-factors that affect wound healing and act as a scaffold for new tissue growth. The PRP was prepared on site from Brandy's own blood.

Like all therapeutic treatments, the degree of success with PRP varies depending on timely application, proper dose, and severity of the damage. "Her odds were only 50/50 for a complete recovery," says Savoy, "and any chance of improving on that would be based on how she handled the stall rest for the next nine months."

Stall rest can be a challenge for owner and horse alike. Some horses have trouble adapting to confinement and lack of exercise but Brandy handled it well. "One trick I learned to minimize boredom was to place a milk jug with a few treats

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# Big Impact on a Tiny Island

Dedicated volunteers go a long, long way to help animals in need.



**Ometepe Island** is a tropical jewel in the middle of Lake Nicaragua with miles of sandy beaches and stunning scenery. It is largely undeveloped and reached only by a forty minute ferry ride over notoriously rough water. The people of Ometepe have little money and rely on their animals for food and transportation yet there is no resident veterinarian on the island. This means that many of the domestic animals suffer from disease and malnutrition.

Every year, for seven years in a row, the OSU student chapter of the International Veterinary Students Association (IVSA) has travelled to Ometepe to help.

OSU veterinary medicine students begin organizing their fall trek to Ometepe in the spring. They start early because it is a huge logistical endeavor to move dozens of volunteers, plus huge amounts of equipment and supplies, to an

island 4,000 miles away. Over the summer, the students also manage fundraising and coordination of the many donations coming in from Oregon veterinary clinics, friends and supporters, pharmaceutical companies, and medical corporations who help with the cost of supplies and travel.

Laura Meadows is a second-year veterinary student who made her first trip to Nicaragua last fall.



Top: Student volunteers vaccinate a cat.  
Middle: Veterinary student Emily Amsler completes an intake assessment. Bottom: Dr. Donna Anderson, a veterinarian from Banfield Pet Hospital, examines samples at the free clinic.

She was surprised by how well the complex project functioned. “We brought together students, faculty, staff, private-practice vets, and massive amounts of supplies and equipment, then transported everything and everybody via plane, bus, boat, taxi, and horse to a remote town on a small island in a third-world country. We had the trust of the community to bring their animals from miles away and we successfully treated over 300 animals. Then we cleaned up, packed all our things, and successfully got everything and everybody back home. Whew!”

With just one short week to set up and run a veterinary clinic, including a surgery, the volunteers hit the ground running. Their objective is always the same: to provide free veterinary medical care for all the island’s domestic animals. Last year alone, the volunteers treated everything from parasites to viruses, performed nearly a hundred spay and neuters, provided long-overdue dental care, and taught the villagers about everything from flea treatment to proper handwashing.

“Every morning when I walked down to the clinic, there was a line of people waiting with their animals,” says student Sara Livesay. “Some of these people waited all day just so

we could examine their pet. There were a few long days where we ended up doing surgery with headlamps for light, and after the procedure the owner was still there waiting for their dog to recover so they could take them home.” In addition to working in the clinic and teaching workshops, volunteers made dozens of farm calls, often travelling by mountain bike to rural areas.

The yearly mission to Ometepe serves two purposes: provide optimal care to animals in need and give veterinary students a unique learning experience. That experience can be measured in hours spent testing for disease, sterilizing surgical instruments, and giving vaccinations but the intangible benefits may be even bigger. “This has been the single greatest experience of my life,” says student Kate Schoenhals. “The relationships I have built with people and animals over the years have made my life worth living and make me extremely enthusiastic about my future career in veterinary medicine.”

Although the volunteers pay most of their transportation costs, the cost of supplies, transporting equipment, and many other expenses are paid through generous donations from animal lovers and veterinary clinics across Oregon.







# Eagle With Broken Wing Presents Unique Challenges

Jeff Picton, Director of the Chintimini Wildlife Rehabilitation Center, holds the bald eagle while Dr. Ron Mandsager removes an anesthesia tube following surgery on its fractured wing.

The OSU Small Animal Clinic treats cats and dogs only. They don't treat birds. That is, unless a national symbol of freedom shows up.

In March, the Chintimini Wildlife Rehabilitation Center (CWC) north of Corvallis, received a badly injured bald eagle. The bird's wing had suffered multiple fractures requiring delicate surgery to repair. Jeff Picton, CWC director, contacted OSU Veterinary Teaching Hospital and orthopedic surgeon Jennifer Warnock agreed to do the surgery.

Bird bones are radically different than dog and cat bones. "The avian humerus is pneumatic, meaning it is connected with the respiratory system making the bird lighter for flight and keeping them cool," says Warnock. Her experience at UC Davis' Avian Exotics Service and other wildlife medical services enabled her to tackle the tricky case. "Bird bone is particularly thin and brittle, making implant placement a delicate affair: pins placed in bird bone can easily strip out or further fracture the bone," says Warnock.

Another concern in repairing the broken wing was putting it back together without shortening it so much that the eagle couldn't fly well. They used a minimally invasive procedure to place an external metal fixator with nine pins through tiny incisions into the good bone.

The eagle came through the two-hour surgery well. In fact, immediately upon waking up from anesthesia, he bit Picton and drew blood. "We were all saying, 'Oh great, he's fast! That is a good sign,'" laughs vet med student Claire Peterson. As a third-year veterinary student and regular volunteer at CWC, Peterson was one of the few observers allowed in the operating room. "The bald eagle surgery was so cool to observe. I have not got to see an orthopedic surgery where they put in so many pins and construct the whole external fixture."

Peterson has a life-long interest in birds and started volunteering at a rehab center when she was thirteen. "They had everything from little kestrels to golden eagles. I worked

with all of them over time and learned how to handle birds." That experience enabled her to fit right in at CWC training education birds. "I work with the turkey vultures," says Peterson. "They are a little different than other raptors because they are so smart. They are practically parrots." Peterson is especially fond of a vulture named June Bug who she has trained to respond to the sound of a clicker and fly in the direction she indicates. Like all the education birds at the center, June Bug can't fly well enough to survive in the wild.

The jury is still out on whether the bald eagle will recover well enough to be released. According to Peterson, he has a better chance of returning to the wild than other raptors. "If it were a falcon, it would be unlikely," says Peterson. "They are the athletes of the bird world. They are hunting ducks and songbirds so they need to be able to fly really well. Eagles can scavenge and they can catch fish. He doesn't need to be an athlete; he just needs to be able to get along. We're hoping that it's enough."

## One Special Cat Continued from page 1

through the liver to be cleared of toxins. It is rare in cats and requires delicate surgery to correct. Pebble was sent to the OSU Veterinary Teaching Hospital where surgeons Jason Spina and Bernard Seguin found and isolated the wayward blood vessel then surrounded it with an Ameroid constrictor. The constrictor is a ring that swells over time, gradually shutting down the blood vessel.

Pebble came through the surgery fine and while she was recovering, had the good luck to be cared for by OSU veterinary technician Nichole Hovelsrud. "She was so tiny, scrawny, and stinky, I couldn't help but love her," says Hovelsrud. "It also didn't hurt that she was Beaver colors!" Hovelsrud adopted Pebble and took her home to a menagerie that includes a husband, three other cats, and two pit bulls. She is the smallest sibling in the household and has become the family princess. "Her big brother kitty, Sluice, adores her and comes running to her rescue if she makes the slightest squeak," says Hovelsrud. As avid Beaver fans, the Hovelsruds like to dress Pebble in a cheerleading costume they had made just for her.

Pebble is thriving in her new home. Hovelsrud is really grateful to the medical teams at the AMLC and OSU for the expertise and dedication involved in their team effort to save her cat. "There were so many people involved, it just warms my heart that they cared enough to help get her to us and her forever home."

## PRP Continued from page 3

in her stall," says Savoy. "She quickly learned how to roll the jug around to dispense the treats. "

Months of inactivity was followed by months of careful hand walking before Brandy was cleared by Dr. Huber to start back under saddle. "I've always tried not to push her too far or too fast and she has made a remarkable recovery," says Savoy.

In fact, Brandy is doing so well, the Savoy family plans to take her back to the mountains camping this summer. They are also restarting her training so their daughter can take Brandy to Pony Club events next year.

**\$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.



## Endowment Helps Shelter Animals



When shelter animals like Pebble (see story on page one) come to the Lois Acheson Bates Veterinary Teaching Hospital at OSU, the cost of their housing, surgery, and care is paid by the Olive K. Britt Endowment for Emergency Medicine.

Olive Britt earned a degree in Wildlife Sciences at OSU in 1940 and went on to become an equine veterinarian. When she died in 2006, her will created an endowment to provide hospital care for shelter animals and animals whose owners cannot pay for critical treatment.

Dr. Kirk Miller, an OSU faculty member working at the Oregon Humane Society has sent several cats and dogs to the OSU vet hospital for procedures that he cannot provide. "These are young, otherwise healthy animals that are very adoptable," he says. In fact, he says, "They rarely make it back to us. They get adopted there."

Many generous donors have added to the Britt endowment over the past few years, keeping it funded and enabling the OSU veterinary hospital to save the lives of hundreds of beloved pets and pets-to-be.



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## This Happy Cow Comes From Oregon



Charlotte and Emily make a good team. Together they have won numerous awards at cattle exhibitions around the west.

Charlotte is a registered Gelbvieh heifer who began her show career at the tender age of four months. Emily Hopfer is a sophomore at Days Creek High School and, with Charlotte's help, she recently qualified for the championship class in Beef Showmanship at the Oregon State Fair.

Last fall, after returning home from a Livestock Exposition in Montana,

Charlotte was lethargic and off her feed. Despite good care from her local veterinarians, she did not improve so the Hopfers transported her to the OSU Veterinary Teaching Hospital. There she was diagnosed with both a respiratory virus and a rare, antibiotic-resistant pathogen that caused her to develop pneumonia. She was a very sick cow.

Doctors at OSU immediately put her on oxygen and IV fluids, and began treatment with a powerful antibiotic. Soon Charlotte was breathing easier and improving steadily.

During her ten-day recovery, Charlotte received visits from her home veterinarian, Dr. Hope Flint, and from the Hopfer family. "Charlotte is very special to us," says Shawn Hopfer. "The treatment and attention she received at [OSU] will always be appreciated."

This medical success story had the happiest of endings: In March, Charlotte gave birth to her first calf. "She gave us a very handsome little bull calf that Emily is calling Easton," says Shawn.