

# Trends

magazine

## Take It to the Bank

Blood Banks Save Animals' Lives, Too 26



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# Donating



Life

## A Glimpse into the World of Veterinary Blood Banking

by Jen Reeder

JOSEPH LETOURNEAU CONSIDERS HIS DOGS PART OF THE FAMILY. So when his spunky one-year-old boxer, Brody, became lethargic, he didn't hesitate to seek medical attention near his home in Coventry, Rhode Island. The practice ran tests and suggested Brody might have a tick-borne disease. Letourneau was sent home with medication and advised to keep an eye on the dog.

The next morning, Brody was "out of sorts" and couldn't even walk down the steps. Letourneau brought him back to the practice, and a blood panel showed the boxer's red blood cell count had dropped to single digits.

"His organs were shutting down," he recalled. "They pretty much told me he was like an hour away from death."

At the urging of his veterinarian, Letourneau raced with the beloved family dog to AAHA-accredited Ocean State Veterinary Specialists (OSVS), an emergency veterinary practice about 25 minutes away in East Greenwich, Rhode Island. A blood transfusion bought Brody time for testing, which revealed he suffered from immune-mediated hemolytic anemia (IMHA).

To the immense relief of Letourneau, his wife, and their children, Brody survived the night and stabilized the next day after a second blood transfusion.

"He came back—he's himself," Letourneau said. "He's totally recovered."

The OSVS team saved Brody's life with red blood cells from the practice's blood bank, which is stocked thanks to 55 canine blood donors whose owners volunteer their services for the program. Now, Letourneau hopes to enroll his older boxer, Buster, in the program after his eye-opening experience with the blood bank.

"I'd never heard of a blood transfusion for a dog," he said. "It's one of those things that you don't know about until you go through it."

## Growing Demand for Donated Blood

As the human-animal bond grows, so does the number of pet owners who are willing to do whatever it takes to save their pets' lives—including emergency blood transfusions. Animal hospitals need to be prepared to address this new normal by collaborating with existing blood banks or even opening their own.

Ocean State Veterinary Specialists (OSVS) started a blood donor program in 2005 to ensure the practice would have blood products readily available for patients, said Katti Teixeira, BS, CVT, blood bank coordinator at OSVS.

“From the time our hospital opened in 2001, we had the ability to purchase and stock blood from commercial blood banks, but as our client base grew, so did the demand for more blood products,” she said. “Creating an in-house blood bank was the next, logical step to guarantee supply met demand.”

Today, the practice primarily uses canine blood products from the donor program. In 2016, OSVS produced 380 units of canine packed red blood cells (125 ml each).

To qualify as donors, dogs must have a relaxed temperament, weigh at least 50 pounds, and be between one and eight years old, free of communicable diseases, and current with vaccinations and flea, tick, and heartworm protection. In exchange for donating the required three times per year, the patient receives a free annual physical exam and complete blood panel (as well as smaller versions at each donation).

The team cleans each donor's ears, trims their nails, and expresses the anal gland upon request. Dogs are sent home with a bag of homemade dog cookies and a bandana that reads, “Pet me! I donated blood today!” Once a donor has donated three times, they are eligible for additional incentives like receiving free blood products for life, should the need arise, and hospital account credit for flea, tick, and heartworm preventives or services.

“Most of the patients don't even flinch when the collection needle is inserted into the jugular vein,” Teixeira said. “They are usually more bothered with the nail trim that comes after the blood donation.”

OSVS will supplement its supply by purchasing blood



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products from commercial veterinary blood banks as needed—demand has risen nearly 15% each year for the past three years. The practice purchases the majority of their feline blood products, though three donor cats live at the hospital in case feline patients need an emergency transfusion of fresh, whole blood.

“Our in-house cat donors are almost exclusively patients that were otherwise young and healthy but presented to our emergency room with a life-threatening urinary obstruction,” Teixeira said. “They are all turned over to our clinic under informed consent by their families who would have otherwise elected humane euthanasia.”

After being treated and screened as potential blood donors, the cats live at the 24-hour hospital for a year or two before being adopted to forever homes.

## Commercial Blood Banks

Veterinary comparative hematologist W. Jean Dodds, DVM, founded the rescue-based veterinary blood bank Hemopet in 1986 after working to regulate human blood bank programs for New York during the AIDS crisis. The California-based nonprofit rescues former racing greyhounds and enters them into the blood banking program. The dogs spend no more than a year donating blood every 10 to 14 days (depending on size and sex) and then are available for adoption. There are

typically 200 donor greyhounds in the program at any given time; about 1,800 dogs have been adopted since Hemopet's inception.

"We are truly, totally committed to ensuring that our dogs have a happy and enriched life while at Hemopet," Dodds said. "In addition to our full-time staff of 40-plus employees, we have many volunteers who come regularly on weekends, holidays, and even during the week to help socialize and walk the dogs. We also have daily visits from a California group caring for people with special needs that come with their staffers to see and work with and hug the greyhounds."

Pediatric unit-sized packed red blood cells and fresh-frozen plasma both cost \$108 (plus shipping), but Hemopet offers a 10% discount to service dogs and nonprofit animal organizations, and free blood units for hardship cases.

Plasvacc USA specializes in equine plasma to supplement the immune system response and maintains a US Department of Agriculture-approved herd of about 90 donor horses in Templeton, California. The horses are typically donated to the company after an injury ends their ability to compete in racing, rodeos, show jumping, dressage, or other sports. In exchange for donating blood once each month, they live out their lives together on 60 irrigated acres of land. They are given specific vaccines to "hyperimmunize" them, said Heather Alspach, Plasvacc business manager.

"We are all horse people," she said. "A lot of us are involved in breeding. We want to give every horse the best chance at life . . . our plasma products can be given to horses at birth to give them that boost they need before they can start making antibodies on their own."

Plasvacc also sells plasma products to treat exposure to specific diseases. For instance, Equiplas B is for horses with botulism. The company also offers canine plasma products from blood donated by dogs at its facility in Queensland, Australia.

Jocelyn Pratt, the manager of Blue Ridge Veterinary Blood Bank in Purcellville, Virginia, said the commercial blood bank doesn't maintain a herd or pack—instead, about 400 private dog owners volunteer to bring their dogs to one of 25 donation sites every six weeks for a year. The dogs receive a

physical exam from a veterinarian each time they donate—which has led to early detection of masses and other issues—as well as blood typing and annual blood screening. The dogs also get bandanas that say, "I'm a lifesaver blood donor," and have their photos posted on Facebook.

While some owners might like having "bragging rights" for their dogs—many donors are therapy dogs or compete in flyball, dock diving, or conformation competitions—others are blood donors themselves or have had a dog saved by a transfusion. "It's a feel-good thing," Pratt said. "They are giving back to the community."

If a blood product nears the end of its shelf life, Blue Ridge donates it via veterinarians to owners facing

## Thinking of Starting a Veterinary Blood Bank at Your Practice?

Rebecca Kessler Vodnick, DVM, DACVIM, blood bank supervising veterinarian at AAHA-accredited Ocean State Veterinary Specialists in East Greenwich, Rhode Island, offers these insights about starting a blood bank:

"Collecting and administering blood transfusions is a serious and thoughtful process and requires quite a bit of knowledge, equipment and a system of checks and balances to ensure that the blood is safe to administer from the moment it leaves the donor until it enters the recipient.

There are several resources available to help ensure that these practices are safe; however, having dedicated staff to run the program, a dedicated storage refrigerator, and extensive recordkeeping are paramount.

Training the technical staff to safely administer and monitor transfusions is also invaluable. A blood transfusion is essentially a 'transplant' procedure, and therefore should be taken seriously. Our program is over 10 years old and is constantly evolving as the literature and practice of transfusion medicine evolves."

financial difficulties, rescue organizations, or research facilities. Since 2013, the company has donated more than 1,200 units of canine blood products.

However, Pratt said that doesn't mean there aren't shortages, particularly with red blood cells. To help prevent shortages, she urges veterinarians to blood-type their patients so they know the type of blood to request rather than just ordering "universal" (this is also helpful because there can be a discrepancy about what constitutes the canine "universal" blood type between veterinary blood banks).

Sara Kinnett, blood bank manager at AAHA-accredited Jefferson Animal Hospital and Regional Emergency Center in Louisville, Kentucky, a 2014 AAHA-Accredited Practice of the Year finalist, said the practice opened an onsite blood bank in January 2014 because shortages at regional blood banks were leading to wait times.

"There's definitely been an increase in demand for blood in the past two years," she said. "We have just seen an increase in owners pursuing that kind of treatment for their pets. Word of mouth spreads."

Currently, there are 22 dogs and 11 cats enrolled as donors by members of the staff or clients. She said rather than using the gravity method of blood collection, in which a pet must be lifted onto a table, the practice uses a vacuum method that uses suction, thereby cutting donation time to less than 10 minutes. Unlike cats, dogs are not sedated and receive affection from their owners or staff while donating, depending on the animal.

Maddie, a pit bull terrier mix owned by a veterinary assistant at the practice, has donated the most at 13 times—usually on short notice in emergency situations.

### For More Information

Ocean State Veterinary Specialists: [osvs.net](http://osvs.net)

Hemopet: [hemopet.org](http://hemopet.org)

Plasvacc USA: [plasvaccusa.com](http://plasvaccusa.com)

Blue Ridge Veterinary Blood Bank: [brvbb.com](http://brvbb.com)

Jefferson Animal Hospital and Regional Emergency Center: [jeffersonanimalhospitals.com](http://jeffersonanimalhospitals.com)



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"She's great—she just sits super still and knows when we're done," Kinnett said. "She's not antsy. She tolerates the process really, really well."

Kinnett added that whole blood isn't necessary for the vast majority of cases. "By using component therapy, you can take one donation and stretch it to meet the needs of multiple animals," she explained.

"For example, if you have a dog that comes in for rat poison ingestion, they don't need blood—they need the coagulation factors that you would find in plasma, and so we give them fresh-frozen plasma. Then, we have those red cells for the next dog that comes in that may be an IMHA dog that just needs red cells. . . . One donation from a dog can go to up to four pets depending on how you split it."

The motivation for the practice to create an in-house blood bank was to best serve patients; as Kinnett noted, "Nobody gets rich doing a blood bank."

Similarly, the reason why most clients volunteer their pets as blood donors is also altruistic. "They just want to do it for the good of doing it, and I've found that to be the case with the majority of people," Kinnett said. "We have had a great community response." ✨



Award-winning journalist Jen Reeder is the new president of the Dog Writers Association of America. She's grateful to the people and animals working to save lives through veterinary blood banks.