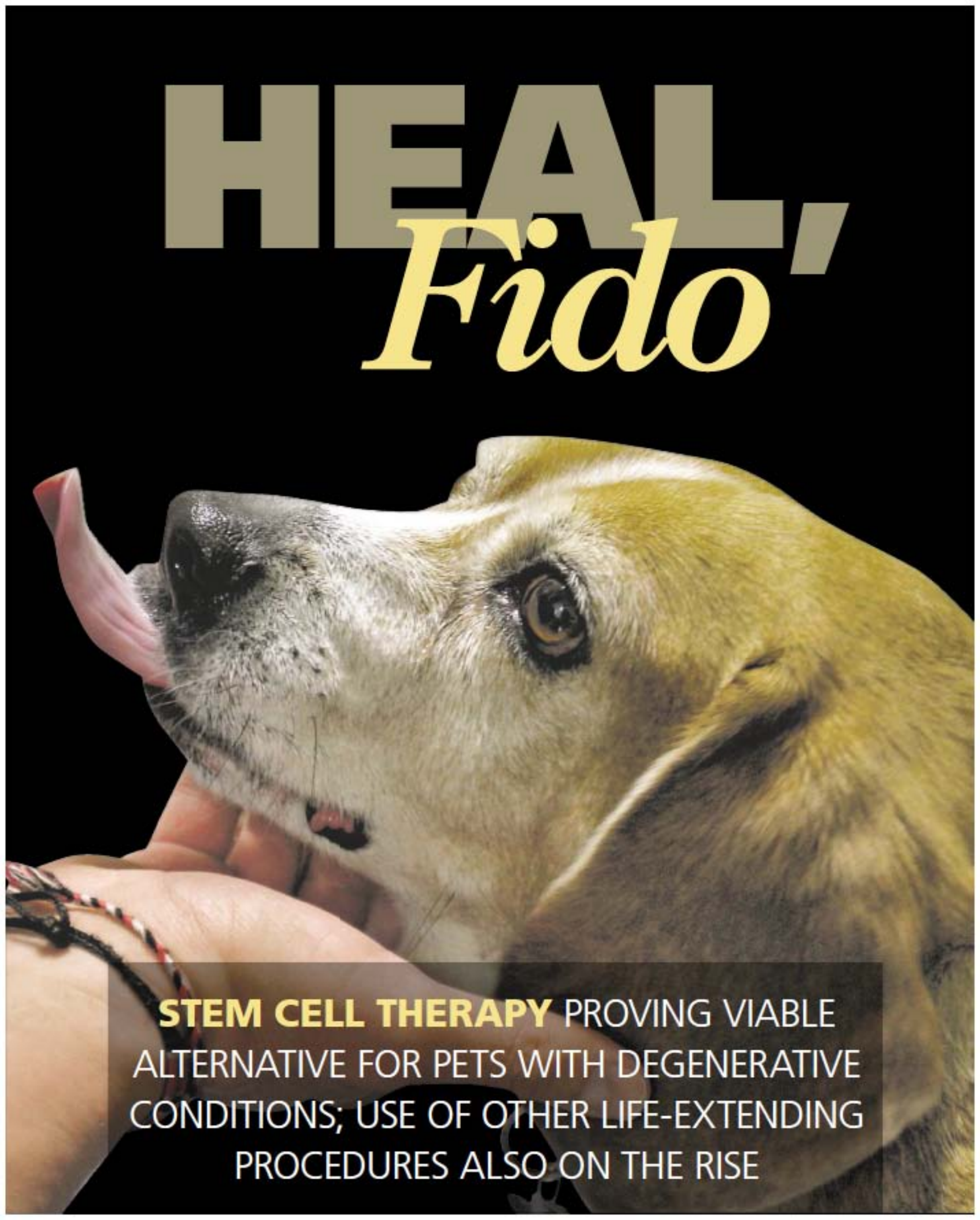


# HEAL, *Fido*



**STEM CELL THERAPY** PROVING VIABLE  
ALTERNATIVE FOR PETS WITH DEGENERATIVE  
CONDITIONS; USE OF OTHER LIFE-EXTENDING  
PROCEDURES ALSO ON THE RISE



**By Susan Bloom**

Special to the Courier News

The team members at Branchburg Animal Hospital greeted Auggie, a 9-year-old beagle, and Sonny, a 10½-year-old Duck Tolling Retriever, warmly as they released them from their cages for a last-minute walk before prepping them for their procedures.

The dogs' excited, wagging tail-response belied the pain of the hip dysplasia and arthritis that had led them there.

But all of that was about to change as Auggie and Sonny prepared to participate in a fascinating first for the hospital and the local canine community — regenerative stem-cell therapy, a less-invasive procedure which holds great promise for healing pets with orthopedic/joint conditions and, in the future, other degenerative diseases as well.

A procedure which often has made headlines for stirring up controversial right-to-life issues in humans, stem-cell therapy is a process by which "mother cells," which have the potential to be-

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**Veterinarian Karin Derfuss and veterinary technician Jason Zayle prep Auggie, a 9-year-old beagle (also at top), for a stem-cell therapy procedure at Branchburg Animal Hospital.**

KATHY JOHNSON/STAFF PHOTOGRAPHER

*“The adipose regenerative stem-cell therapy that we practice ... is highly successful, more affordable and less invasive than many surgical procedures.”*

**KARIN DERFUSS**, Branchburg Animal Hospital



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# STEM CELLS

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come many different type of cells in the body and which can regenerate indefinitely, are introduced into damaged tissue to treat disease or injury. It is proving to be an increasingly viable alternative to surgery and medication for healing family pets suffering from osteoarthritis, hip dysplasia, and ligament and cartilage injuries. For these pets, adult, multi-potent stem cells are used in an "autologous" procedure—drawn from oneself and administered back to oneself—avoiding any body rejection issues or ethical concerns.

"Some animals have been on medication for a long time to treat their issues, which is not good for their liver or kidneys," said Karin Derfuss, principal of Branchburg Animal Hospital, of the conditions which led her to pursue training in this special procedure and perform it for the first time Feb. 26.

"At the same time," she added, "surgery can be expensive and risky, particularly in light of the fact that animals dealing with orthopedic conditions are often older to begin with. The adipose regenerative stem-cell therapy that we practice, developed by MediVet America, is highly successful, more affordable and less invasive than many surgical procedures, and can truly offer a better quality of life for pets overall."

Stem-cell therapy is just one of the interesting and sometimes extraordinary measures that owners are increasingly opting for to help extend their pet's lives or enhance their comfort, according to Anita Greenberg, co-owner of East Brunswick Animal Hospital for nearly 25 years with her husband and fellow veterinarian, Dan Belli.

"People's pets mean a lot to them and there's definitely a clientele out there who will go to extreme measures to try to help them," she said, of an informed client base de-



**Veterinarian Dr. Karin Derfuss DVM, preps for ground breaking surgery at Branchburg Animal Hospital.** KATHY JOHNSON/STAFF PHOTOGRAPHER

termined to take advantage of an increasing array of medical resources.

From \$3,000 to \$5,000 cataract surgery to sophisticated chemotherapy and radiation treatments for cancer-stricken pets, "we have a responsibility to advise patients of all that's available to them, and we're finding pet owners to be increasingly willing to do life-extending procedures for their pets, even in this difficult economy," Greenberg said.

## A precise process

The three-step, stem-cell procedure begins with anesthetization of the animal so that a 2-4-inch incision can be made on its belly or behind its shoulder blade, from which 20 to 40 grams (about two to four tablespoons) of fat, which contains high concentrations of adult stem cells, can be removed and stem cells "harvested."

Once the incision is closed, its extracted fat is addressed with a specified protocol of digestion, separation, and activation activities that stimulate the growth of some 20 million to 50 million stem cells per gram of fat over a several-hour period. Later in the day, the concentrated stem cell frac-

tion is injected into the animal, both directly into the affected joint(s) as well as intravenously "so that it finds its way to places that need healing," Derfuss said. "This process treats more of the animal than surgery ever could."

Results have been impressive so far, with "over 90-95 percent of pets suffering from arthritis and orthopedic conditions showing improvement after the procedure," said Sal Pellerito, representative for MediVet America in the tri-state area. The beneficial effects can last from one to three years, but owners can "bank" their pet's stem cells for use in a streamlined booster procedure in the future, an election made by Auggie's Branchburg owners.

The cost of the three-hour stem-cell procedure at Branchburg Animal

Hospital ranges from \$2,000 to \$2,500, "which is definitely less expensive than the average \$2,500 to \$5,000 cost associated with orthopedic surgery," Derfuss said. "In addition, while surgery can involve a one-month or longer recovery time, there's almost no recovery time with stem-cell therapy beyond the healing of the incision itself."

For Nicole Latch, a veterinary technician at Branchburg Animal Hospital, the procedure succeeded in delivering all of those benefits and more to her 8-year-old Rottweiler, Chaos.

After suffering a cruciate tear that required knee surgery three years ago, "Chaos continued to limp, even with the Rimadyl we gave him to reduce inflammation," Latch said.

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# PETS

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Since undergoing stem-cell therapy at the hospital last August, "Chaos no longer limps, has been off Rimadyl completely, and runs around outside and goes for walks with no problems at all," she said. "Though the procedure may seem expensive up front, I hope people would consider the cost of surgery or the medications their pets are on and their side effects — in the long term, this procedure is definitely worth it."

Derfuss, who has owned Branchburg Animal Hospital since 1996, said she felt an increasing sense of frustration over the years concerning the lack of treatment options available to some of her patients.

"There are only so many pills you can throw at a condition — they only treat the symptoms, not the problem, and they can compromise an animal's immune system and long-term health," she explained. After branching out and pursuing certification in integrative and natural options like acupuncture and herbal remedies in an effort to "find more options for our patients," Derfuss was drawn to the many benefits of stem-cell therapy and completed training with MediVet America, a Kentucky-based developer of "advanced cellular treatments designed to maximize animal performance, repair, recovery, and general wellness" in 2012.

"Contrary to what people may think, stem-cell therapy isn't just a controversial procedure involving embryos or fetuses; there are so many places to harvest stem cells and the process uses the animal's own cells to heal themselves," she said. "It opens the door to so many possibilities and makes practicing worthwhile."

Pellerito praised Derfuss for her proactive interest in promising integrative alternatives as well as her desire to teach others, calling Derfuss "a



Veterinarian Karin Derfuss performs a stem-cell procedure at Branchburg Animal Hospital as veterinary technician Shane Henderson works. "There are only so many pills you can throw at a condition — they only treat the symptoms, not the problem, and they can compromise an animal's immune system and long-term health," Derfuss said.

PHOTOS BY KATHY JOHNSON/STAFF PHOTOGRAPHER

pioneer in the veterinary community."

"I'll try to use whatever works," Derfuss said, of the two stem-cell procedures she performed on the 26th and invited other area vets to observe. "It's exciting to have this great new option in our arsenal of treatments and to see word getting out that we offer this service, which we plan to begin performing on a routine basis. As we see it, there are no downsides or detrimental side effects to this procedure; the benefits far outweigh the risks."

## Weighing the options

With the new procedures also come age-old ethical questions.

"Without a doubt, the status of pets has been elevated over the years based on our society's greater understanding of the human-animal bond," said Dr. Peter Falk, a veterinarian at Ocean County Veterinary Hospital in Lakewood and co-chair of the Public Relations Committee for the Hillsborough-based New Jersey Veterinary Medical Association.

While he highly encourages a "preventative

medicine" approach for pets — one involving proper nutrition, sufficient exercise, regular exams, appropriate vaccines, and flea and tick control — he's excited by the availability of promising complimentary procedures, from stem-cell therapy, laser therapy, and acupuncture to cutting-edge cyber-knife procedures and hyperbaric oxygen therapy, all of which he said are becoming more mainstream.

## Balanced approach

But Falk also noted the importance of a balanced perspective.

"Some owners don't care what it costs, they just want their pet to live. Technology has clearly allowed us to improve the lives of the pets we serve, but just because we can do these things doesn't mean we should," he said. "Pets are truly family members and we want them to live long and well, but owners need to make sure they're doing things for their pets, not to them, and understand that in some cases, ending their pet's life humanely can often be the greatest show of love and respect." Either way, he said,

owners considering a life-extending or quality of life-enhancing procedure should have a dialogue with their vets and get a second opinion for another qualified perspective.

Jim Morrison went through such a dialogue when he elected to have his beloved 14-year-old cat Tiddles, who was suffering from renal failure, undergo a sophisticated kidney transplant in early 2010.

"I loved him and just couldn't part with him," said the 75-year-old Old Bridge resident of the loyal friend he had raised from a kitten. Though the procedure cost him upward of \$20,000 and Tiddles ultimately died later that year after independently contracting cancer, Morrison has no regrets about his decision.

"As long as a procedure doesn't cause an animal pain, I would do it over again," he said, estimating that he's spent well more than \$100,000 on medical care for his many pets over the years.

"I regard animals the same as I regard fellow humans — they're living creatures and it's our responsibility to take care of them," he said. "My pets have added so much to my life."



Derfuss removes a fat sample from Sonny, a 10½-year-old Duck Tolling Retriever. An enzyme is then added to consume the fat cells and leave the stem cells, which are grown and injected into the problem area of the dog.

## Powerful Potential

Available commercially for nearly a decade through a variety of providers, stem-cell therapy for pets "involves the gathering and activation of dormant adult stem cells," said Sal Pellerito, MediVet America's tri-state area representative. "Through the process, we 'wake up' a larger-than-normal amount of these cells and then blitz the affected area with them, which triggers a huge healing response."

In addition to providing a viable alternative to invasive and costly surgery and the side effects of medication, he said other benefits of the procedure include:

» **Quick action** — "The rebuilding of tissues and other beneficial effects occurs within 30 to 60 days of the procedure," Pellerito said of the near-immediate impact of the therapy on a pet's activity level, energy, mood, and long-term health and welfare.

» **In-house capability** — According to Pellerito, "some providers rely on processing support from outside labs, where up to 40 percent of fragile stem cells can be lost in the shipping process. The MediVet America stem-cell procedure enables all stem-cell processing to be done at

the point of care, which is not only more immediate and more effective, but also more affordable than using an outside lab."

» **Unlimited potential** — Though currently approved to treat osteoarthritis and other joint-related issues in dogs, cats, and other pets, Pellerito and Dr. Karin Derfuss of the Branchburg Animal Hospital said that they are encouraged by early results they've seen from the application of stem cell therapy to liver and kidney disease as well as other degenerative conditions in animals.

## Resources

Branchburg Animal Hospital is at 1167 Route 28 in the North Branch section and can be reached at 908-707-0045 or by visiting [www.branchburganimalhospital.com](http://www.branchburganimalhospital.com).

For details on MediVet America, visit [www.medi-vet-america.com](http://www.medi-vet-america.com).

East Brunswick Animal Hospital is at 44 Arthur St. in East Brunswick and can be reached at 732-254-1212 or by visiting [www.eastbrunswickanimalhospital.vetsuite.com](http://www.eastbrunswickanimalhospital.vetsuite.com).

For more details on the New Jersey Veterinary Medical Association, contact 908-281-0918 or visit [www.njvma.org](http://www.njvma.org).