

STEM CELL THERAPY FOR DOGS

By Carl Milson

Breakthrough treatment now available in Canada

I recently had the pleasure of interviewing many experts and specialists in the field of companion animals at the first of its kind AAHA/OVMA (American Animal Hospital Association and Ontario Veterinarian Medical Association) conference held in Toronto. Many excellent examples of how our pet industry is evolving were showcased, but I want to share with CottageDog readers one of the event's hottest topics: stem cell therapy. It's been an interest of mine for many years for personal reasons, and I was thrilled to learn that Avivagen Animal Health, a pet wellness company, is now offering this therapy in Canada.

I met Avivagen representative Kira Andersen at the conference, along with her pets Thomas (a Dogue de Bordeaux) and Franklin (a Boxer). Thomas is afflicted with osteochondrosis (OCD) and dysplasia in both elbows – abnormalities in cartilage to bone formation in joints that can affect shoulders, elbows, stifles, knees and hips. Kira explained that Thomas was set to receive stem cell therapy, which immediately sparked my interest in researching the treatment further. Although he'd already received orthopedic surgery, Thomas' dysplasia was discovered not long afterwards. Not wanting to put him through another operation, especially as Thomas required therapy now for both elbows and both shoulders, Kira soon realized the next best thing was stem cell therapy.

"Stem Cells have a great ability to reduce inflammation in an area and in reducing pain," says Kira. "It's less intrusive and it's using cells he already has."

With Kira's help, I was put in touch with pioneers Vet-Stem in the US and Avivagen here in Canada to better understand stem cell therapy. It's my hope that this story will put a face on the treatment by following the progress of canines benefiting from it. While I was too late to observe the harvesting of tissue from Thomas, I was invited to watch the remarkable breakthrough of stem cells being administered to him. In case you're unaware of the procedure, it involves removing adipose

(fat) from the shoulder or stomach area of the patient (see sidebar).

"When using stem cells from fat there, are no side effects," says Avivagen's Dr. Isabelle Verzberger-Epshtein. Her colleague, Dr. Corey Orava from Vet-Stem, adds: "It has been found that adipose contains an abundance of stem cells."

Dr. Jamie Nickerson from Avivagen explains further, "We like to have the vet give us as much fat as they can. It could be as many as two tubes of fat. Each tube is about 50ml or an average of 90 grams of fat."

To date, Avivagen has processed 15 cases in Canada. Thomas was number 15. I met him and Kira at Mississauga Oakville Veterinarian Emergency Hospital the day of his surgery. Thomas was bouncing around, tail wagging madly while mom held his teddy bear. The bond of love between them was awesome! After the intake and being weighed in at a whopping 114lbs of mostly muscle, Thomas was led away by the technician for pre-op. Catheterized and

sedated, by the time we joined him, he was sleeping comfortably as his shoulders and elbows were shaved for the injections.

I watched with fascination as Dr. Alexandra Bos administered a needle into the joint and withdrew synovial fluid to ensure they were in the precise spot to inject the stem cells. I cringed a little when I saw the size of the needle, which was left in the site while the syringe was removed and replaced with one containing the stem cells, which were then administered. It was as easy as that! Thomas received an injection in each elbow and shoulder. Following this he received an IV injection of stem cells for a systemic support.

I left the hospital feeling privileged and excited to be a part of this remarkable new breakthrough in pet treatments, and to follow how this therapy was going to affect Thomas, along with another stem cell therapy patient I had the privilege of meeting – a Rottweiler called Sasha, and her owner, Linda Kenny.

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(We'll also be following the progress of Donna Cadeau's best-pet-friend, Sueka, in future issues of CottageDog.) The day following the stem cell injections I spoke with both Kira and Linda. Both claimed their pets were doing well. There seemed to be no ill effects, and both were eagerly awaiting positive outcomes over the course of the next two to four weeks.

"One thing I would like people to think about is this provides an alternative for them," says David Hankinson, CEO of Avivagen. "There are different treatment methodologies out there that may be better for some dogs, but it's certainly something that they should be speaking to their veterinarian about, particularly if there are dogs on high dosages of medication."

Dr. Jamie Nickerson adds, "Generally, the general public has to understand adult stem cells are taken from adult patients. This is different from embryonic stem cells."

Join us in the next issue of CottageDog for an update with nine-month old Thomas, seven-year old Sasha and 12-year old Sueka. Find out how the adipose (fat) is processed and how and why this therapy works. Statistically, what can we expect? In the meantime, for further information visit www.vet-stem.com or www.avivagen.com, or visit www.atouchoflove.ca to view the documentary filming of this exciting innovative new therapy being offered in Canada.

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Carl Milson and Shane Carr have exceeded a quarter century within the pet industry, providing unique natural approaches in pet care and manufacturing their own pet care line. They have appeared on television, radio and magazines as experts in the field, and are currently producing a 20 episode CTV series that has been sold internationally. Their series, A Touch of Love® - Pawzzzz for the NEWS!, will air in 2011. Visit their website at www.atouchoflove.ca or email info@atouchoflove.ca.

How Does It Work?

Dr. Jamie Nickerson, PhD, is Biology Group Leader and Senior Research Scientist with Avivagen Animal Health in PEI. Here's how he describes the incredible way stem cell therapy works.

"We have tissues in the body, such as tendons, cartilage, muscle, and bone marrow. Within those tissues are resident stem cells. Most tissues in the body have resident stem cells that play a role in maintenance and regenerating tissues. What happens if there is an injury, such as the joint injury in a dog like Thomas? The cells in that area would sound the alarm and send out signals into the blood to indicate that there is an injury here, there's a tear, or there is a degeneration of tissue and we need to rebuild this tissue."

"Those signals are received by stem cells located in other tissues throughout the body. It's kind of like a homing signal so stem cells will begin to mobilize, for example, from adipose (fat) and begin to migrate to the site of injury. They come into those sites of injury where they would differentiate and help replace or rebuild the injured tissue."



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