



## Christine E. Hunt, DVM

*Dr. Christine E. Hunt received her B.S. in Zoology from N.C. State University, cum laude, followed by her veterinary doctorate from Oklahoma State University. She has practiced small animal medicine, dentistry and surgery in Greensboro for 28 years. In 2003, she opened University Animal Hospital. Her interests lie in geriatric medicine, pain management and advanced dentistry.*

**Q** What are some of the newest techniques for managing musculoskeletal diseases like degenerative and immune mediated arthritis, damaged soft tissues (muscles, cartilage, ligaments and tendons) and neuromuscular diseases such as degenerative myelopathy and chronic intervertebral disk disease?

**A** There are several new techniques that are currently available in veterinary medicine to treat musculoskeletal and neuromuscular diseases. These treatments can alleviate pain and slow or even reverse many degenerative conditions.

**Adult Stem Cell Therapy** is a highly effective technique using the patient's fat tissue to harvest and concentrate stem cells. The stem cells are activated and then injected into damaged tissues or joints. These cells can differentiate into healthy cells that replace the damaged ones. Because of the high concentration of stem cells, the healing process is extremely accelerated. Stem cells can differentiate into many different tissue types such as muscle, tendon, ligament, cartilage and even nervous tissue. They also attach to the joint capsule of an arthritic joint to provide continuous healing and pain relief for up to two years. Stem cell therapy has also been used in compassionate applications to treat acute kidney and liver failure, degenerative myelopathy (canine version of ALS), stomatitis in cats and several other chronic degenerative diseases. There have been many reports in which animals have developed acute organ failure from a toxin or infection, and received intravenous stem cells that reversed the organ failure. Any remaining stem cells can be stored in a cryo-bank for future use. Cancer patients cannot receive stem cell therapy because there is a risk that the stem cells may differentiate into cancer cells.

In human medicine, Stage 1 clinical trials are under way for the treatment of early stage ALS with stem cells that have been differentiated into nervous tissue and then injected into the spinal tissue. There is currently a compassionate use veterinary protocol for the canine version of ALS (degenerative myelopathy) that has slowed the progression of the disease if used during the early stages of the disease.

**PRP or Platelet Rich Plasma** is a natural derivative concentrated from a pet's own platelets. Platelets are necessary for wound healing because they provide hemostasis, inflammatory modulators and a variety of growth factors—all necessary components for tissue synthesis and repair. By injecting PRP into acutely injured joints or tissues, we can speed your pet's recovery rate. This procedure is safe, drug and chemical free and can be quickly performed with

light sedation in one visit. PRP can also be used as a temporary measure for chronic arthritis patients who may not qualify for stem cell treatment.

Last month, a patient at University Animal Hospital had a surgical repair for a traumatic tear of the patellar ligament and secondary luxation. She also received intra-articular PRP therapy post-operatively. When she returned for her suture removal two weeks later, she was weight bearing. Within four weeks post-operatively, she was completely sound and off her pain medication. Most patients take up to three months to become completely weight bearing after a patellar luxation procedure.

In human medicine, PRP therapy is FDA approved for use in certain types of elbow and shoulder injuries.

There are four types of **Therapeutic Cold Lasers** that range from mild Class 1 to the most powerful Class 4. Different laser levels generate different light frequencies and frequency combinations for the noninvasive pain management of chronic musculoskeletal diseases and for post-operative pain. Laser therapy works by generating light energy that increases energy production at the cellular level. Increased cellular energy accelerates the wound healing and decreases inflammation, the painful part of injury or infection. Some low level lasers (Erchonia Class 2) can produce a violet light wave length that can treat antibiotic resistant skin infections and fungal infections. The violet wavelength is FDA approved for use in humans to treat acne and fungal nail bed infections.

**Q** Where can my pet receive these treatments?

**A** University Animal Hospital of Greensboro currently offers the MediVet America system for adipose derived stem cell and PRP therapy for dogs and cats. The stem cells and PRP are harvested and activated using our in-house state of the art equipment and patients receive same day treatment. Independent studies at the University of Kentucky compared MediVet to other stem cell systems. MediVet systems yielded the highest, most viable stem cells.

For our noninvasive pain management, University Animal Hospital uses the Erchonia Class 2 laser which uses different combinations of light frequencies to increase wound healing, decrease inflammatory pain and reduce scar tissue. The Erchonia Laser also produces the violet light frequency which we use to treat non-responsive pyodermas (deep skin infections), painful ear infections and immune mediated stomatitis in cats. Please call us for more information about our cutting edge technology that can improve your pet's quality of life.



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