

## WHAT IS V-PET™

V-PET™ is a new regenerative medicine system, available to veterinarians nationwide through VetStem Biopharma.



This new system provides a convenient means to concentrate platelets and their associated growth factors from an animal's own blood (10ml to 55ml) for use as platelet enhancement therapy.

- **Single use all-inclusive kit**
  - **Closed sterile system** (*can be used in the surgery suite*)
  - **Gentle 3X-7X\* platelet concentration** (*gravity filtration based*)
  - **No centrifuge required** (*no capital equipment, "portable" system*)
- **Supported by veterinary peer reviewed publications** (*see references*)

Using V-PET™ a veterinarian can have an injectable platelet concentrate rich in biologically active cytokines and growth factors ready in about **30 minutes** (from blood collection to in-situ injections).



**Blood Collection**  
(10ml – 55ml)



**Preparation**



**Filtration**  
(15min)



**Recovery**



**Ready for injections**

As blood flows through the V-PET system, platelets are selectively captured on the surface of the filter media through complex interaction of size exclusion and adsorption, while the majority of red cells pass through. The platelet concentrate is then recovered by back-flushing the filter with a harvest solution.

\* 3X concentration for standard 40lbs dog, up to 7X concentration for standard horse.

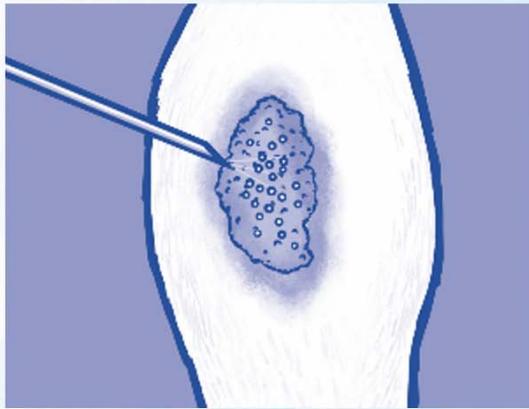
\*\* Platelet Enhancement Therapy is not appropriate for intravenous use – intra-articular or intra-lesion use only.

## HOW DOES PLATELET ENHANCEMENT THERAPY WORK?

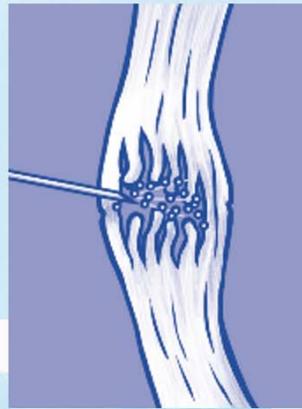
Platelets activate by exposure to damaged tissue, releasing their granular contents which include anabolic growth factors such as platelet-derived growth factors (PDGF), transforming growth factors- $\beta$  (TGF- $\beta$ ), and vascular endothelial growth factor (VEGF). These growth factors help attract progenitor cells to the injury site and play a key role in stimulating tissue repair through fibroblast expansion and cellular matrix production.

Since the animal is the donor and recipient, the safety profile for such autologous platelet therapy is highly favorable.

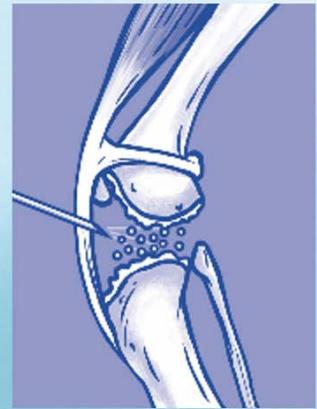
With platelet enhancement therapy a solution concentrated in platelets is injected directly into an injured tissue area, with the objective to 'kick-start or further stimulate' the patients internal healing processes.



**Wounds**



**Tendons/Ligaments**



**Joints**

### References (specifically selected because they utilize V-PET™ technology as platelet enhancement system)

1. Fahie M, Ortolano G, et al., **A randomized controlled trial of the efficacy of autologous platelet therapy for the treatment of osteoarthritis in dogs.** *J Am Vet Med Assoc.* 2013; 243(9):1291-7.
2. Ortolano G, Wentz B. **A review of the pathogenesis of osteoarthritis and the use of intra-articular platelet therapy for joint disease in animals and humans.** *Bone and Tissue Regeneration Insights.* 2014(5):1-13.
3. Castelijn G, Crawford A, et al., **Evaluation of a filter prepared platelet concentrate for the treatment of suspensory branch injuries in horses.** *Vet Comp Orthop Traumatol* 2011; 24(5):363-9.
4. Hessel LN, Bosch PR, et al., **Equine autologous platelet concentrates: A comparative study between different available systems.** *Equine Vet J* 2015 May; 47(3):319-25.
5. Textor J, Tablin F. **Intra-articular use of a platelet-rich product in normal horses: Clinical signs and cytologic responses.** *Vet Surg* 2013. Jun; 42(5):499-510.



**PALL** Life Sciences

**V-PET™**  
Veterinary Platelet Enhancement Therapy

V-PET™ platelet enhancement therapy system is manufactured for use by VetStem Biopharma in the US and Canada, through a distribution and clinical research agreement with Pall Life Sciences. V-PET™ is a trademark of Pall Corp. Product photography courtesy of Pall Corp.