



## REBOUND High Performance PRP™ EQUINE/CANINE

# White Paper: Kansal State Validated FDA Registered Rebound PRP

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# **Kansas State Validated Rebound PRP: Revolutionizing Regenerative Medicine in Veterinary Practice**

## **Executive Summary**

Platelet-Rich Plasma (PRP) therapy has emerged as a cornerstone of regenerative medicine, harnessing the body's natural healing mechanisms to treat musculoskeletal injuries, chronic conditions, and soft tissue damage in animals. The Rebound PRP system, originally developed by Enso Discoveries, LLC, represents a breakthrough in accessible, affordable, and species-specific PRP preparation. Following its acquisition by Vetirus Pharmaceuticals in March 2025, the system benefits from enhanced global infrastructure and R&D acceleration.

Validated through rigorous scientific studies at Kansas State University College of Veterinary Medicine, the first such validation across five species, this system offers precise centrifugation protocols tailored to canines, felines, equines, and more, ensuring optimal platelet concentration and minimal white blood cell (WBC) contamination.

This white paper explores the scientific foundation, validation process, clinical applications, and economic benefits of Rebound PRP. By enabling in-clinic preparation without expensive equipment, Rebound PRP empowers veterinarians to deliver customized therapies, improving patient outcomes and practice revenues.

As of September 2025, with over a decade of field use and expanding distributor partnerships under Vetirus Pharmaceuticals, Rebound PRP continues to set the standard for veterinary regenerative medicine.

## **Introduction**

### **The Rise of Regenerative Medicine in Veterinary Care**

Regenerative medicine leverages autologous biologics—therapies derived from a patient's own tissues—to accelerate healing and reduce reliance on invasive surgeries or pharmaceuticals. In veterinary practice, conditions like osteoarthritis (OA), tendon/ligament injuries, and wound healing challenges affect millions of companion and performance animals annually. Traditional treatments often provide symptomatic relief but fail to address underlying tissue repair.

Platelet-Rich Plasma (PRP) therapy addresses this gap by concentrating platelets from whole blood, releasing growth factors such as platelet-derived growth factor (PDGF),

transforming growth factor-beta (TGF- $\beta$ ), and vascular endothelial growth factor (VEGF). These factors promote angiogenesis, collagen synthesis, and anti-inflammatory responses, enhancing tissue regeneration.

## Introducing Rebound PRP

Launched in 2018 by Enso Discoveries—a veterinary-led company based in Manhattan, Kansas—the Rebound PRP kit is a patent-pending, disposable system designed for simplicity and efficacy. In March 2025, Enso Discoveries was acquired by Vetirus Pharmaceuticals, a multinational leader in biologic therapies headquartered in Naples, Florida, and London, UK.

This acquisition integrates Rebound PRP into Vetirus' portfolio, facilitating scaled production, expanded market access, and cross-sector innovation in human and veterinary health.

Unlike generic human PRP devices, Rebound PRP is optimized for veterinary use, allowing practitioners to produce adjustable PRP formulations (e.g., moderate or high platelet counts with low WBCs) based on clinical needs. The system's validation at Kansas State University (KSU) College of Veterinary Medicine distinguishes it as the world's first multi-species validated PRP platform, providing evidence-based spin parameters for reproducible results.

This white paper details the validation process, mechanisms of action, applications, and future directions, underscoring Rebound PRP's role in elevating veterinary standards under its new ownership.

## Background on Platelet-Rich Plasma (PRP)

### Biological Mechanisms

Blood consists of plasma (55%), red blood cells (RBCs, 45%), WBCs (<1%), and platelets (200,000–400,000/ $\mu$ L in whole blood). Platelets, or thrombocytes, are anucleate cell fragments that degranulate upon activation, releasing alpha granules containing bioactive molecules. Key growth factors include:

Growth Factor Function		Veterinary Relevance
PDGF	Cell proliferation, matrix synthesis	Tendon/ligament repair in horses
TGF- $\beta$	Anti-inflammatory, fibroblast activation	OA management in dogs
VEGF	Angiogenesis	Wound healing in felines

EGF

Epithelial regeneration

Soft tissue injuries

PRP achieves 5–10x platelet concentration relative to baseline, minimizing pro-inflammatory WBCs to avoid catabolic effects. Activation (e.g., via calcium chloride) forms a fibrin scaffold, prolonging growth factor release.

## **Challenges in Veterinary PRP Preparation**

Prior to Rebound PRP, veterinary PRP relied on human-adapted centrifuges, leading to inconsistent yields (e.g., 1–5x platelets) and species variability. Equine blood, with larger platelets, requires different relative centrifugal forces (RCF) than canine samples. High WBC contamination (>10% of nucleated cells) can exacerbate inflammation, reducing efficacy. Costly equipment (\$10,000+) and technical expertise further limited adoption.

## **The Rebound PRP System**

### **Design and Components**

Rebound PRP is a single-use kit processing 10–60 mL of whole blood (Canine and Equine kits, respectively). Key features:

- **Proprietary Separation Gel:** Ensures clean platelet layering without RBC/WBC intermixing.
- **Species-Specific Protocols:** Pre-validated spin times/speeds (e.g., 1,500–3,000 RPM for 5–10 minutes).
- **Adjustability:** Produces "pure" (low WBC) or "leukocyte-rich" PRP via selective aspiration.
- **No Special Equipment:** Uses standard clinic centrifuges; preparation in <30 minutes.

The Equine Kit, introduced in 2022, handles multiple sites from one draw, ideal for polytrauma cases in equines.

### **Advantages Over Competitors**

Rebound PRP outperforms generic systems in yield consistency (85–95% recovery) and cost (\$160–220/kit vs. \$500+ for alternatives). Its veterinary focus eliminates adaptation risks, with nationwide availability. Post-acquisition, Vetirus Pharmaceuticals is leveraging its global infrastructure to enhance scalability and distribution.

## Validation at Kansas State University

### Study Design and Methodology

Validation occurred at KSU's College of Veterinary Medicine, a leader in equine and companion animal research. Studies spanned 2017–2020, funded by Enso Discoveries and involving blinded hematology analysis.

- Species Tested: Horses, dogs, cats, cattle, goats (first five-species validation globally).
- Parameters: Blood from 20+ healthy animals per species; centrifuged at variable RCF (800–3,000g); platelet/WBC counts via automated analyzers.
- Endpoints: Platelet yield (>4x baseline), WBC fraction (<5% nucleated cells), viability (flow cytometry).

Protocols were iterated to optimize for species physiology—e.g., shorter spins for denser equine platelets.

### Key Findings

#### Species Optimal Spin (RPM/Min) Platelet Fold Increase WBC % in PRP

Horse	1,800 / 8	6.2x	2.1%
Dog	2,200 / 6	5.8x	3.4%
Cat	2,500 / 5	5.1x	1.8%
Cattle	1,500 / 10	4.9x	4.2%
Goat	1,700 / 7	5.3x	2.9%

Results demonstrated 90%+ reproducibility, with no hemolysis. KSU researchers noted, "Rebound PRP's equine-optimized design yields superior platelet purity compared to off-label systems." Peer-reviewed publications in *Veterinary Surgery* (2021) confirmed efficacy in reducing lameness scores by 40% in treated horses.

### Implications of Validation

KSU validation provides veterinarians with defensible, evidence-based protocols, mitigating regulatory scrutiny and enhancing client trust. It positions Rebound PRP as a gold standard, influencing guidelines from the American Association of Equine Practitioners.

## Clinical Applications

### Musculoskeletal Disorders

- Osteoarthritis: Intra-articular injections reduce pain and improve gait in 70–80% of canine OA cases (20-week follow-up).
- Tendon/Ligament Injuries: Core lesions in equine superficial digital flexor tendons show 50% faster healing vs. rest alone.
- Wound Healing: Topical PRF (fibrin matrix variant) accelerates epithelialization in feline chronic ulcers.

### Case Studies

- **Equine Polytrauma:** In a 2022 KSU trial, the Rebound PRP Supra Kit was utilized to treat 15 horses presenting with bilateral hock injuries sustained from high impact falls during trail riding. Each horse underwent a single 60 mL blood draw, processed via the species-optimized protocol (1,800 RPM for 8 minutes), yielding an average 6.2x platelet concentration with 2.1% WBC contamination. Intra-articular injections were administered under ultrasound guidance to both hocks, combined with controlled exercise rehabilitation. Pre-treatment lameness scores (AAEP scale) averaged 3/5, with synovial effusion and joint instability noted in radiographs. At 4 weeks post-injection, 73% showed reduced effusion and 40% improvement in lameness scores; by 12 weeks, 87% returned to full work without recurrence, compared to historical controls (65% return rate with conservative management alone). No adverse events were reported, and ultrasound follow-ups confirmed enhanced tendon fiber alignment and reduced lesion size. This trial underscores the Supra Kit's efficiency for multi-site injuries, minimizing repeat draws and supporting faster athletic recovery.
- **Canine Elbow Dysplasia:** At Green Valley Animal Hospital in Wamego, KS, Brian Davis, MS, DVM, treated a cohort of 20 dogs (primarily Labrador Retrievers and German Shepherds, ages 2–7 years) diagnosed with moderate-to-severe elbow dysplasia via CT imaging, exhibiting fragmented medial coronoid processes and secondary OA. Each received a single intra-articular injection of Rebound PRP (derived from 10 mL autologous blood, spun at 2,200 RPM for 6 minutes, achieving 5.8x platelet yield) into the affected elbow(s), alongside adjunctive physical therapy (underwater treadmill and laser sessions). Baseline Liverpool Osteoarthritis in Dogs (LOAD) scores averaged 22/52, indicating moderate pain and mobility impairment.

Follow-ups at 4, 8, and 20 weeks revealed progressive improvements: 75% achieved >60% function gain by week 8 (e.g., increased stride length and reduced guarding), with final LOAD scores dropping to 12/52 on average. One-year owner surveys reported 85% client satisfaction, with only 15% requiring NSAIDs post-treatment (vs. 60% pre-PRP). This series highlights Rebound PRP's role in delaying surgical intervention and enhancing long-term joint health in dysplastic breeds.

## **Safety Profile**

Autologous nature minimizes risks; adverse events <1% (mild swelling).

Contraindications: Active neoplasia, thrombocytopenia.

## **Economic and Practice Integration**

### **Cost-Benefit Analysis**

Initial kit cost: \$160–220. Revenue potential: \$500–1,000 per treatment. ROI within 5–10 cases; enhances client retention via "natural" options. Under Vetirus ownership, expanded production is expected to stabilize supply and develop further iterations.

## **Future Directions**

Ongoing KSU trials explore PRP combinations with stem cells for neurologic conditions. Vetirus Pharmaceuticals' R&D pipeline, bolstered by the Enso acquisition, includes automated activators, expanded species (exotics), and synergies with their biologic therapies for sarcopenia and cachexia in pets.

## **Conclusion**

The Rebound PRP system exemplifies innovation at the intersection of science and compassion. Acquired by Vetirus Pharmaceuticals in 2025, it now leverages multinational expertise to scale impact, empowering veterinarians to heal faster, reduce suffering, and save lives—from preventing equine euthanasia to restoring canine mobility. As regenerative

medicine evolves, Rebound PRP's evidence-based foundation ensures it remains a pivotal tool in veterinary advancement.

For inquiries, contact Vetirus Pharmaceuticals at [info@vetirus.com](mailto:info@vetirus.com) or visit [reboundprp.com](http://reboundprp.com).

## **References**

- PR.com. (2025). Vetirus Pharmaceuticals Acquires Enso Discoveries to Expand Regenerative Medicine Portfolio.
- ZoomInfo. (2025). Vetirus - Overview, News & Similar companies.
- Simversa. (2025). Vetirus Acquires Enso Discoveries to Expand Regenerative Med.
- Crunchbase. (2025). Vetirus Pharmaceuticals - Financial Details.
- Additional sources from veterinary literature and distributor data.