Elevate Conditioned Serum

Osteoarthritis is a widespread source of lameness in equines. Orthobiologics such as platelet-rich plasma (PRP), autologous protein solution (APS), and autologous conditioned serum (ACS) aim to provide a physiologically based solution by targeting the inflammation associated with osteoarthritis and other inflammatory injuries via increased concentrations of proteins such as IL-1ra [1-3]. IL-1ra is chondroprotective as it blocks the effects of IL-1β, the leading cytokine triggering cartilage degradation [2]. ACS has been effectively used to treat osteoarthritis in both humans and horses [1, 4-7].

Ardent Animal Health's Elevate Conditioned Serum (ECS) product is an autologous conditioned serum with concentrated levels of IL-1ra to target inflammation. The product starts with a simple blood draw, is shipped to the laboratory for sterile processing, and arrives back at your location as 10, 20, or 40 doses in just 72 hours. Ardent's ECS product was shown to concentrate IL-1ra levels over 14x on average when compared to the animal's baseline serum values and over 4.5x on average when compared to traditional PRP.

Sample Type, n=10	Fold Increase in IL-1ra Concentration from Baseline
PRP	3.2x
ECS	14.9x

	ECS	Traditional IL-1ra Treatment Kits
Volume Yield	40-160 mLs	1-30 mLs
Avg. Cost per mL	$8-19 per mL	$30-200
Doses	10, 20 or 40	1-5
Processing Time?	None	Required
Sterility Report	Yes	No

1. Chondrocytes. Front Vet Sci, 2019. 6: p. 64.
2. Muir, S.M., et al., The Concentration of Plasma Provides Additional Bioactive Proteins in Platelet and Autologous Protein Solutions. Am J Sports Med, 2019. 47(8): p. 1955-1963.
3. Camargo Garbin, L. and M.J. Morris, A Comparative Review of Autologous Conditioned Serum and Autologous Protein Solution for Treatment of Osteoarthritis in Horses. Frontiers in Veterinary Science, 2021. Volume 8 - 2021.
4. Frizziero, A., et al., Autologous conditioned serum for the treatment of osteoarthritis and other possible applications in musculoskeletal disorders. Br Med Bull, 2013. 105(1): p. 169-184.
5. Frisbie, D.D., et al., Clinical, biochemical, and histologic effects of intra-articular administration of autologous conditioned serum in horses with experimentally induced osteoarthritis. Am J Vet Res, 2007. 68(3): p. 290-6.
6. Baselga García-Escudero, J. and P. Miguel Hernández Trillos, Treatment of Osteoarthritis of the Knee with a Combination of Autologous Conditioned Serum and Physiotherapy: A Two-Year Observational Study. PLoS One, 2015. 10(12): p. e0145551.
7. Baltzer, A., et al., Autologous conditioned serum (Orthokine) is an effective treatment for knee osteoarthritis. Osteoarthritis and cartilage, 2009. 17(2): p. 152-160.