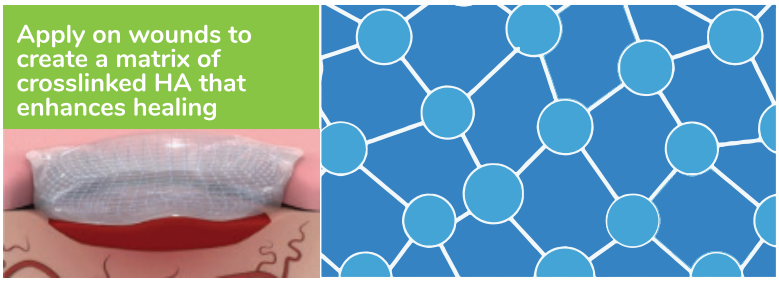

# BioHAnce™ Technology

Sets Sentrx ophthalmology and epidermal repair solutions apart from any other products in pet healthcare.

• **Patented and Proprietary:** BioHAnce technology uses advanced bioengineering to create a molecular matrix of crosslinked hyaluronic acid (HA) that can be specifically modified for each formulation and particular tissue environment, including ocular and skin surfaces. It produces a cellular scaffolding with unique physical and chemical properties that enhances hydration, accelerates the body's own healing processes and extends duration in tissue.

• **Bioengineered to effectiveness and duration:** HA is a naturally occurring substance throughout the body of humans and animals that plays a key role in hydration, tissue lubrication and healing processes. Before BioHAnce, the rapid degradation of naturally occurring HA limited its clinical applications and efficacy in the real world. This patented technology makes it possible to chemically modify the HA so it is more resistant to degradation, while providing an ideal environment to enhance natural healing processes and unique muco-adhesive properties that extend hydration and lubrication. This bioengineering technology also makes it possible to specifically design an optimal HA matrix for a particular tissue environment. The concentration of BioHAnce may vary based on the intended use.

• **Products with no active ingredient, yet actively support healing and hydration:** The unique crosslinking process creates a hydrogel that acts as a molecular scaffolding material. Therefore, our ocular and dermal products DO NOT have an active ingredient, but instead are scaffold materials that allow the natural healing process to occur more quickly.




• **A platform technology:** In addition, the chemically functionalized polymers (a molecule made from joining together many small molecules) in this platform technology can be crosslinked to a variety of other molecules. Not only does this make BioHAnce effective alone, it can act as a platform technology that we plan to fully leverage in the future by incorporating other drug actives in a unique carrier system.

• **How our cross-linked HA compares to traditional cross-link alternatives:** Our BioHAnce technology is a purified product. No side components that have any detrimental or toxic byproducts or irritating effect. Traditional cross-link technologies use a process that can result in poor biocompatibility, an elevated immune response or inflammation.

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## How it's made:

**BioHAnce is created by making two modifications to hyaluronic acid. We purchase medical grade hyaluronic acid made by a fermentation process that is free of animal products, which is modified and purified prior to use in our dermal and ocular formulations. Certificates of Analysis for all raw materials are kept at our manufactureing facility in Salt Lake City, Utah as part of our documentation procedure. Following the final purification, the solution of BioHAnce is sterile filtered and aseptically crosslinked to form the final HA gel product.**

**Learn more at sentrxanimalcare.com/products/biohance-technology/**

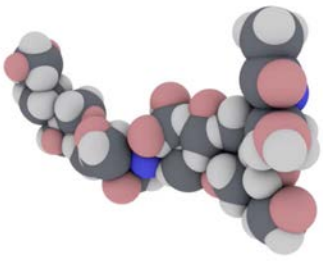
## Key Benefits of Crosslinked HA:

- Extends duration in ocular and dermal surfaces
- Accelerates the body's own healing process
- Enhances hydration and lubrication in tissue
- Creates a thin barrier that soothes and protects
- Can be tailored to match the specific tissue environment
- Unlike many veterinary products that are derived from human treatments, Sentrx biomaterials are created specifically for animal

## Crosslinked vs Non-Crosslinked HA Products

• **Cross-linking creates a more viscous lubrication at a lower concentration.** It also has muco-adhesive properties that a base HA molecule does not. Thus it stays on surfaces longer and does not get cleared from the eye during blinking like traditional HA eye drops do.
• **Once you cross-link HA, it changes the chemical and physical properties of HA.** Thus you cant compare the concentration of an HA product to the concentration of a cross-linked HA product. The cross-linking process effectively creates an infinite molecular weight and thus the physical properties are different.

• The higher the molecular weight of a product the harder it is to get into solution. **Our cross-linked formulation nearly creates an infinite molecular weight but allows for scaling, purification and sterile filtration**

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