

ARTI-STEM *frost*®



Allogeneic stem cells

for degenerative joint disease

in horses



The product

Arti-Stem frost® is an allogeneic cryopreserved stem cell isolate derived from equine adipose-derived stem cells with addition of different immunomodulatory factors for horses with degenerative joint disease, cartilage tears suffering from chronic lameness and joint swelling. Treatment does not reverse permanent damage (severe cartilage loss) as seen in severe osteoarthritis (OA). The advantages of Arti-stem frost® are:

- It can be immediately used at diagnosis stored in Liquid N2 (-196°C)
- Cost-effective (per three doses)
- No need for a fat biopsy from the horse
- It contains anti-inflammatory IL-1R antagonist (involved in synovitis)

Joint and cartilage problems in horses

Damaged joints initiates a vicious cycle of inflammation, pain and degeneration and is a critical component of joint stability and comfort. Joint problems are responsible for more than 60% of lameness cases in (sport) horses. Anti-inflammatory drugs and corticosteroid injections are needed to control the discomfort, but in more advanced cases OA and bone defects can develop. Lameness and joint swelling not responding to routine treatments can receive this point of care stem cell therapy.

Mode of action

Equine adipose-derived stem cells are adult multipotent stem cells that can differentiate into specialized cells and thereby are able to regenerate/form tissues. Cells exert trophic, immunosuppressive, anti-inflammatory (counteracting IL1-R and activation of suppressive cytokines such as IL10) and anti-apoptotic effects and activate the body's own stem/progenitor cells, modulating the local environment and thereby stimulating tissue regeneration.

How to use

The stem cell isolate Arti Stem frost® is shipped in frozen condition to the veterinary clinic for storage in liquid N2. Samples can be stored for years. After diagnosis a sample is quickly thawed at 37°C : a one-time injectable suspension (2 ml) is injected under local anesthesia into the joint.

After injection, routinely bandage of the joint (if possible) and a revalidation period is essential and will improve the healing quality. Therefore subsequent radiographs and an ultrasound is advised.

Results

- Decreased inflammation (swelling) and pain
- Improved mobility (decreased lameness)
- Increases the rate of return to function
- No further medication required

Treatment of a meniscus tear before and after (6 months).

(Reference: Braeutigam K. Point-of-Care adipose derived stem cell therapy promising in the treatment degenerative joint disease and meniscus tears)

