

# Top-Stem®



Give your horse

a boost using

stem cells

A PRODUCT OF :



## **The Product**

Top-Stem® rejuvenates the horse body, boosts the immune system of the animal and offers positive signs like return to improved energy and sport levels.

Top-Stem® is used for the improvement of various conditions and disorders which cause signs of aging like myocardial infarction, arthritis and rheumatism, and muscle disorders.

Top-Stem® can also be used for the regeneration of tissues and cells (e.g. digestive system and skin) and for prolongation of the lifecycle of hematopoietic stem cells.

Top-Stem® is a single dose regenerative product of activated stem cells that is injected under veterinary consultation.

## **Why using Top-Stem?**

Stem cells are the cells which have unique characteristics i.e. to self-replicate throughout the entire life of the horse: they have the ability to differentiate into cells (e.g. smooth muscle cells, tenocytes, chondrocytes, etc.) and migrate to various tissues.

Progressive decline in stem cell production with age is normal; the bone marrow releases fewer stem cells, giving horses less power to repair the damage of ageing. It has been postulated that stem cell exhaustion from the bone marrow is partly responsible for the process of cardiovascular ageing and the resulting diseases such as angina, heart attack, stroke and arthritis.

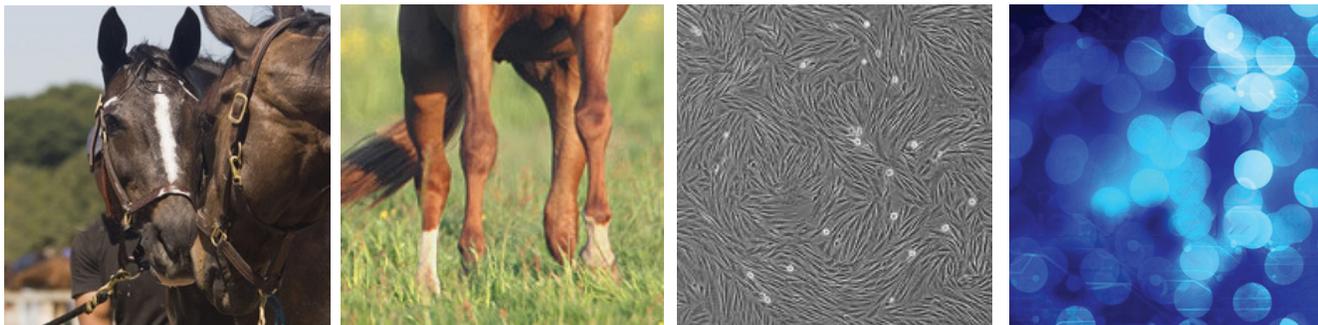
Treatment with adult stem cells reverses this process: stem cells possess a unique anti-ageing effect by improving immune function and regenerating and repairing organs damaged by stressors, like free radicals and the various toxins animals are exposed to.

Data suggest that activated equine mesenchymal stem cells from adipose tissue secrete high concentrations of mediators and exhibit an immunomodulatory profile. The immunosuppressive and anti-inflammatory response of these cells make them prominent candidates for the treatment of rheumatic diseases.

## **How to use Top-Stem®**

Top-stem® is applied by intravenous infusion one or twice a year, a complete non invasive treatment. The equine activated and selected donor stem cells are infused in ½ hour. Top-Stem® should not be given in combination with antibiotics and/or NSAID's.





## **The most powerful solution**

Stem cells appear to be our most powerful tool in Regenerative Medicine at this time. Previous dogma concerning adult stem cells taught that our tissues did not have stem cells and the cells present at birth just declined in quantity and quality until there was nothing left. Now we can improve the regeneration by cells.

Stem cells can and “know how to” differentiate into a variety of different types of cell and tissues as needed and integrate themselves into a functioning organ to renew it.

It is also stated that stem cell supplementation of an age-damaged adipose tissue stem cell population can result in rejuvenation and the increase in longevity of the horse.

## **Results of Top-Stem®**

Top-Stem® effects are considered to be fully seen at six months after infusion. No adverse effects were reported. No cell toxicity and/or cell tumorigenicity has been found in animal models.

Top-Stem® will give your horse a hoof by overall health condition improvement:

- ✓ Physical improvements
  - ✓ Decreased soreness in neck, arms and legs
  - ✓ Reduced stiffness in joints
  - ✓ Far less tiredness or fatigue
- ✓ Aesthetic improvements (skin, hair)
- ✓ Improvements in Energy Levels and higher resistance to disease.
- ✓ Control of inflammation through immunomodulation

**Top-Stem® is a health conditioning product for sport horses based on stem cell rejuvenation. Top-Stem® has been developed by Fat-Stem Laboratories and is marketed through its partners.**