

11<sup>th</sup> International

# VETERINARY CONGRESS

July 02-03, 2018 Berlin, Germany

## A regenerative gel for wound healing

**G Wouters and T Bilgec**

Fat-Stem Laboratories, Belgium

**W**ound healing is a biological process achieved through highly programmed stages and stimulated by different factors. It involves a complex interaction of inflammation, epithelialisation, granulation, angiogenesis and remodelling. A product that promotes these different phases of wound healing is designed. Woundfix is a therapeutic product that promotes strongly tissue epithelialisation and granulation in wounds and avoids scar formation. This product contains a supra-physiologic concentration of bioactive growth factors (TGF- $\beta$ , PDGF, VEGF, HGF, IGF1 and EGF) together with a carrier molecule encapsulated in a gel. We applied this formulated gel on different species (horse, dog, cat, elephant, mouse, hedgehog) and different type of wounds (trauma, pox lesions, burns, surgery) and the clinical improvement is followed: the growth factors access and augment the natural healing process by decreasing inflammatory reaction, neo-angiogenesis, vascularization, stimulating cell matrix proteins (remodelling) and the proliferation of fibroblasts in the wound bed. Woundfix is designed in a gel or liquid formulation for topical application and can be used in all mammals. This wound healing product is a highly concentrated mixture of 'tissue factors' obtained by a special concentration method. Adipose derived stem cells produce keratinocyte growth factor and vascular endothelial factor accelerating the healing process in the proliferation phase. Gross wound measurements and histological analysis - granulation tissue and keratinocyte migration as well as vessel density assessment were evaluated by imaging software positively, indicating an overall cutaneous regeneration, but also new vessel formation and neovascularization through differentiation. In two week time a complete healing can be achieved to repair tissue deficit.

guy.wouters@fat-stem.be