

FESTEL CAPITAL

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Wound Healing Composition based on a Synthetic Wound Healing Peptide

Growth Factors in Wound Healing

Today's chronic wound care is either very limited in its possibilities or very cost intensive. These difficulties can be put down to the molecular processes of wound healing itself: dominantly a malfunction of the tissue's regulatory system causes inflammation followed by an excess of proteinases which keeps the wound in a non-healing state and furthermore reduces the efficiency of many wound healing applications.

Proof-of-Concept of ETF-based Systems

Based on several preclinical studies which investigated the role of matrix metalloproteinases (MMPs), pro-inflammatory cytokines, cell survival and cell growth and one oral clinical study¹ using experimental gingivitis as a chronic wound paradigm, a composition of a proteolysis-protected epidermal thymic factor (ETF) peptide and different protease inhibitors has shown to successfully interfere with tissue destructive processes.

Pros and Cons of PDGF-based System

Furthermore, first preclinical fibroblast growth experiments with the platelet derived growth factor (PDGF) have been carried out. As PDGF causes a significant increase of fibroblast proliferation with longer duration and higher level than the ETF peptide, it can be presumed that it comprises superior stimulating effects for the process of wound healing. Moreover, it has to be acknowledged that PDGF inherits a central role in wound healing as it acts as a regulating peptide, adjusting and organizing many crucial processes. Besides these advantages, human PDGF, which is the main compound of Regranex from Johnson & Johnson, suffers from low bioavailability, reasonable high proteolytic degradation, especially in a chronic wound environment, and in the case of its synthesis, from high manufacturing costs.

¹ The preclinical and clinical studies were conducted by a partner of FESTEL CAPITAL.

Development of an Optimized Synthetic Wound Healing Peptide

A small and proteolytic protected receptor-binding fragment of PDGF as optimized synthetic wound healing peptide might exert the same beneficial growth-stimulating and wound-healing effects but without facing such disadvantages. Two other, additional active agents, MMP and elastase inhibitors, which are intended to be incorporated in such a composition, will support the process of wound healing by regulating the expression of pro-inflammatory cytokines, tissue destroying MMPs and human leucocyte elastase.

Relevant Markets

The relevant markets are chronic wounds, especially those originating from ulcus cruris, decubitus and diabetic foot ulcerations as well as burnings and major surface tissue injuries. Moreover, it will also provide possible future applications in the field of neurotraumata and oral biology.

Investment Opportunity

The aim of FESTEL CAPITAL is to commercialize this innovative wound healing composition, which contains a small, biomimetic ETF or preferably PDGF peptide and two protease inhibitors. In the search for industrial partners and financial investors different commercialization options, such as founding a dedicated start-up company, out-licencing or a sale of all relevant intellectual property and know-how, are possible. A detailed business plan can be provided after the signing of a confidentiality agreement.

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About FESTEL CAPITAL

FESTEL CAPITAL is an advisory and investment firm focusing on the commercialisation of technologies and optimisation of organisations in the areas of energy, environment, health, infrastructures, materials and nutrition.

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