

PGDF PEPTIDE
AND ITS DERIVATIVES
IN REGENERATIVE
SKIN MEDICINE



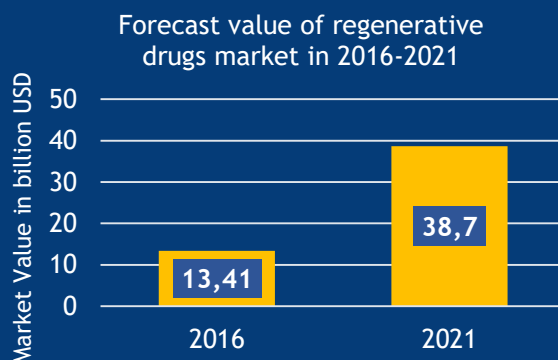
Technology

In described technology, amino acid sequences of synthetic peptides have been prepared, being fragments of growth factors that positively affect wound healing using the appropriate receptor. The process of wound healing includes cleaning its area from foreign bodies, dead tissues, cell proliferation leading to reproduction of tissue continuity to form a scar or without a scar. Wound regeneration is a dynamic process consisting of several overlapping stages, single out three main phases: inflammatory, proliferative - and remodelling. Very important functions in process of skin reconstruction are played by growth factors that regulate cell proliferation and differentiation, in particular platelet-derived growth factor PDGF.

Technology also includes a method of obtaining peptide derivatives of platelet derived growth factor (PDGF) and pharmaceutical composition and use of new compounds as agents for treatment of hard-healing wounds and skin lesions of various etiologies including wounds resulting from venous insufficiency, post-operative, after chemotherapy and radiotherapy treatments, tissue ischemia, atherosclerosis, diabetes, neurological and inflammatory diseases. The new compounds significantly accelerate proliferation of skin cells, intensify the process of epidermal formation and increase thickness of created epidermis during healing of the wound in skin and on its surface. Present invention is distinguished by properties accelerating regeneration wound in skin. Substance allows it to be safely used directly on the skin, in areas of hair follicles, hair and sweat glands. The invention may be a main component of drug applied in form of injections or tablets. The main advantage of the above product is a wide range of applications of substance in different forms, a small market for competitive products and limited effectiveness of competing offers.

Market

The number of patients suffering from hard-to-heal wounds and related skin changes in Poland reaches 100,000. In case of the United States and the European Union, it is respectively three and six million patients. Factors significantly increasing risk of developing difficult-to-heal wounds are: commonly occurring civilization diseases such as diabetes, obesity, the number of accidents with bodily injury as well as age-related natural decline in regenerative abilities of organism. As a consequence, global market for products supporting healing and scarring is developing at a rapid pace. According to the report of Markets and Markets „Regenerative Medicine Market by Therapy (Cell Therapy, Tissue Engineering, Immunotherapy, Gene Therapy), Product (Cell-Based, Acellular), Applications (Orthopedic and Musculoskeletal Disorders, Dermatology, Oncology, Cardiology) - Forecast to 2021” until 2021, revenues from this market is expected to increase from USD 13,41 billion in 2016 to USD 38,70 billion in 2021.



Source: Regenerative Medicine Market by Therapy, Product, Applications Forecast to 2021 - MarketsandMarkets

Commercialization opportunities



- ➔ Licensing agreement
- ➔ Transfer of ownership
- ➔ Partnership in order to further research or commercialization.
- ➔ Spin-off

IP Status



The invention was submitted for patenting according to Polish P.425038.

Implementation progress



TRL 4
Technology validated in laboratory conditions

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