

BIOSKIN - A REVOLUTIONARY DISCOVERY

Korolkova Y.S., Babaeva A.V., Strilets O.P., Strelnikov L.S.

The National University of Pharmacy, Kharkiv, Ukraine

korolkova.julia @ gmail.com, anastasiya.babaeva.92 @ mail.ru

Breakthroughs scientific thought occur in many different areas of life, but especially in medicine they are dazzling. It gives hope for healing and near vision of longevity. For example, in transplantation on the basis of new biotechnological developments, this skin can be used for developing tissue and organ engineering. Medical ambitious task is create organs and tissues based on biomaterial. On one of them, scientists have successfully coped – invented and introduced into production bioskin – an artificial material, which helps in the treatment of terminally ill patients.

Designed biomaterial (Bioskin “Hyamatrix”), in contrast to its international counterparts has a high biocompatibility, clinical effectiveness and optimal bioengineering properties. This biomaterial is used at an affordable price for a wide range of consumers. Bioskin “Hyamatrix” won the Zworykin Award 2009 in the category “Innovative Product”.

The aim of this work is acquaintance with the concept of “bioskin” history of the invention, the technology for obtaining the present invention and the scope of such a progressive opening.

Hyamatrixbioplastic material, or bioskin is an unique development of the Russian scientist, based on hyaluronic acid – the main component of the intercellular skin. It is finished with scars from burns, scars and wrinkles. Orenburg Bioskin G-DERM, can replace human skin, recognized as the best of biomedical innovation. An unique development of Orenburg furor in the international community of scientists and put plastic surgery on the threshold of revolutionary breakthrough. The Hyamatrix bio-skin is a bio-plastic material produced by the photochemical nano-structuring of the starting hydrocolloid of the hyaluronic acid. The bio-skin and the innovation in it are the basis of the Hyamatrix cosmetic series. The hyaluronic acid is able to absorb a big volume of water for its molecules form a grid shape. The scientists of the State University of Orenburg set a purpose to produce a bio-material from the hyaluronic acid that looks like an elastic plate (matrix) and has optimal bio-engineering features. To meet this purpose the scientists have chosen the photochemical nano-structuring in order to establish the nano-framework of the macro-molecules.

Scientists plan to improve bioskin second generation, which will be used in many fields of science worldwide.