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Multi-purpose and non-invasive methodology and the main goal for biotissues speedy regeneration

Elena V Orlova

Institute of Theoretical and Experimental Biophysics, Russia

The main goal and the core methodology of the present research is the speedy and non-invasive recovery of wide variety of biotissues materials: from cell cultures upto organism level. There are two parts of our technology: extra- and intra- influence on a damaged biomaterial. Here, extra-influence means weak low frequency magnetic field with special characteristics for the exact biomaterial and intra means artificial interstitial matrix gel substance. It was shown that the above technology could be suitable for stem cells speedy growth and regulation of their differentiation; for acceleration of the healing of chronic persistent and/

or septic wounds, healing of burns, wound caused by metabolic disorders (diabetes and foot problems), *in vitro* embryos cultivation, prevention (on genome level) of stem cells transformation into cancer cells, speedy cultivation and restoration for freezed cell cultures. So, this technology could be applied to many branches of biology and medicine, such as cell therapy, transplantation, regenerative medicine, growing of artificial organs, 3D-bioprinting; in surgery and traumatology, but also in the recovery of rare and endangered species as a environmental sustainability tool.

e: eaglson@mail.ru