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BIO-POLYMERIC NANO-MATRIX HYDROGEL FOR BIOMEDICAL APPLICATION

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Bio-polymeric nano-matrix hydrogel for biomedical application: Hydrogel were investigated as wound healing material for the deformed, deep and recalcitrant wounds. In tissue engineering and regenerative medicine ECM biomolecule rich hydrogel are the promising materials due to balance of biochemicals composition and physiological properties that helps to regulats the cell behaviour through structural and biochemical stimulation. Therefore, we studies the role of xenogenic ECM nanofibrous protein rich hydrogel in tissue engineering application. This study revealed the physicochemical property of the matrix are bio-mimetic to the native tissue. Besides that the martix is bio-compatible, biodegradable or non-toxic, non-immunogenic and have siginifant anti-microbial, anti-oxidative and anti-inflammatroy activity. Conculsively the hydrogel have have potential to heal wounds faster without any infection or deformity. Thus, this hydrogel can be apply for tissue regenration/repair and as model to understand the role of ECM environment in biological machinery.

Biography

Dr. Archna Dhasmana, awarded Doctorate degree in the field of Biomedical Engineering from IIT Roorkee, India in 2018. She is working as Assistant Professor in the Department of Biotechnology, Dr.KNMIPER, India and have specialization is Biotechnology and Regenerative Medicine. She has published Indian Patent, book, many book chapters, review/research papers in the field of tissue engineering and biotechnology in many reputed International Journals and has been serving as an editorial board member of repute.