World Academy of Science, Engineering and Technology
International Journal of Materials and Metallurgical Engineering
Vol:13, No:04, 2019

Bio-Functional Polymeric Protein Based Materials Utilized for Soft Tissue Engineering Application

Authors : Er-Yuan Chuang

Abstract : Bio-mimetic matters have biological functionalities. This might be valuable in the development of versatile biomaterials. At biological fields, protein-based materials might be components to form a 3D network of extracellular biomolecules, containing growth factors. Also, the protein-based biomaterial provides biochemical and structural assistance of adjacent cells. In this study, we try to prepare protein based biomaterial, which was harvested from living animal. We analyzed it's chemical, physical and biological property in vitro. Besides, in vivo bio-interaction of the prepared biomimetic matrix was tested in an animal model. The protein-based biomaterial has degradability and biocompatibility. This development could be used for tissue regenerations and be served as platform technologies.

Keywords : protein based, in vitro study, in vivo study, biomaterials
Conference Title : ICMSE 2019 : International Conference on Materials Science and Engineering
Conference Location : Tokyo, Japan
Conference Dates : April 22-23, 2019