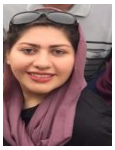
Title: Tissue engineering and Scaffold designing challenges Through digital Games and Simulations

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Abstract

Tissue engineering known as a multi-disciplinary area of research gathering different life science and egineering disciplines with the goal of fabricating tissue replacements improving the regeneration process of damaged tissues or organs. Developing an ideal scaffold provides efficient site for remdeling process of a tissue and promotes proliferation and differentiation of cells. During past decades many fabrication technologies have been done for designing applicable scaffolds. Various methods of modelling and simulation will permit ideas to be evaluated without any waste of materials. Moreover, special modelling techniques will have a role in personalized medicine. Innovative digital games not only will address many complexities in tissue engineering concepts by providing informatic tools and simulation methods but also provide a variety of decision-making context. Furthermore, combination of different skills like innovation, design, production and collaboration in digital games related to tissue engineering strategies will grow the future of this science in both technique and learning style for an individual. For example there are different biological challenges like controlling the release of growth factors in 3D designed scaffolds, introducing angiogenesis, creating appropriate multipple tissue assembly and forming a complex heterogeneous tissue scaffolds accomodating tissue interactions. Novel digital games in tissue engineering procedures, provide a simulated environment with different laboratorical and informatic variables in which a player have to be able to manage and take decisions in an effective way. Therefore, assessing the new simulation game will provide helpful data for professional computer scaffold designers and revolutionize the science of tissue engineering.



Biography (150 word limit)

Nahid Kheradmand has her experties in stem cell research and teaching new innovation related to tissue engineering and regenerative medicine and working as a research and development researcher in Mashhad StemCell Research group in mashhad University of medical Sciences. She graduated from Nourdanesh Institute of Higher Education in Cellular and Molecular Biology in Isfahan. Her enthusiasm in modelling and simulation games connected to innovation in stemcell research results in designing different projects related to simulations in tissue engineering and regenerative medicine.

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