عنوان مقاله:

Novel drug delivery system and tissue engineering: challenges and opportunities

محل انتشار:

اولین کنگره بین المللی مهندسی بافت و پزشکی بازساختی ایران (سال: 1397)

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خلاصه مقاله:

Tissue engineering and regenerative medicine is ''an interdisciplinary field that applies the principles of engineering and life sciences toward the repair/regeneration of damaged human organs''. Tissue engineering strategies use a suitable scaffold matrix to repair the damaged human tissue, to provide structural support, and to deliver active agents, medicines, peptides and proteins, cells and/or growth factors that have the ability to form tissues within the body on transplantation. Novel Drug Delivery System technologies have advanced significantly during the last few decades, and the current technologies are at such a level that drugs can be delivered at predetermined rates for days or months, depending on the application. These advances, however, usually apply only to low molecular weight drugs. High molecular weight drugs such as peptides and proteins is still complicated due to the intricate nature of the physical and chemical properties of protein. In fact, almost all attempts to deviate from traditional parenteral dosage forms have suffered from the same kind of problems. In many cases, developing a traditional dosage form is not an easy task either.Susceptibility of most proteins to the environmental stresses would pose much harder barriers in development of NDDS systems for proteins. Despite all the obstacles, protein delivery systems are still a main approach, especially when we want to deliver them in scaffold for long time

کلمات کلیدی:
Drug Delivery, tissue engineering

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