

## عنوان مقاله:

preparation of biodegradable scaffold loaded with Argireline for wound healing

## محل انتشار:

چهارمین کنگره بین المللی و ششمین کنگره ملی زخم و ترمیم بافت (سال: 1398)

تعداد صفحات اصل مقاله: 1

## نویسندگان:

Zahra Mousivand - Ph.D of pharmacy, Tehran university, tehran, Iran

Sepideh Karimi Afshar

## خلاصه مقاله:

Argireline acetate as an anti-wrinkle peptide has been used in cosmetic recent decades. In this study, application of argireline acetate loaded in electrospun nanofibers has been investigated in healing process of wounds. To achieve an appropriate scaffold, hybrid electrospinning was used with Poly L-Lactic Acid (PLLA) and argireline acetate loaded Poly Ethylene Oxide (PEO) via dual pump electrospinning instrument. Morphology, contact angle, mechanical strength, loading efficiency and release profile of the scaffolds were evaluated. It is indicated that peptide-loaded scaffold has lower contact angle and mechanical strength but, almost similar morphology with larger diameter ( $298\pm 7\text{nm}$ ) in comparison to PLLA scaffold. In-vitro cytotoxicity test of scaffolds toward Human Dermal Fibroblast (HDF) have been indicated higher cell viability in drug loaded scaffolds in comparison to blank scaffolds. In-vivo studies in rats with second-degree burn have also determined the high affinity of drug-loaded scaffold toward acceleration of wound healing process and reduction of wound area in a shorter time. Finally, the histology analysis exhibited more percentage of collagen synthesis and angiogenesis, therefore, further epithelialization rather than blank scaffold was revealed.

## کلمات کلیدی:

;Electrospinning; Tissue engineering; poly L-lactic acid (PLLA); poly ethylene glycol (PEO); Argireline acetate

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/982532>

