

## عنوان مقاله:

Theranostics Wound Dressings; Promising Strategy for Future Wound Care

## محل انتشار:

دهمین کنگره بین المللی زخم و ترمیم بافت (سال: 1402)

تعداد صفحات اصل مقاله: 1

## نویسندگان:

Ahmad Reza Farmani - *Tissue Engineering Department, School of Advanced Technologies in Medicine, Fasa University of Medical Sciences, Fasa, Iran*

Fatemeh Moradbeygi - *Department of Pharmaceutical Biotechnology, School of Pharmacy, Shiraz University of Medical Sciences, Shiraz, Iran*

## خلاصه مقاله:

**Background:** There is a significant financial burden due to the need for continuous monitoring of chronic wounds due to various factors such as diabetes and burns, as well as the lack of real-time monitoring in traditional wound care strategies. Because they are based on passive bandages, whereas smart bandages are capable of tracking biomarkers for diagnostics, treatment monitoring, and regeneration induction (theranostics scaffolds). Hence, they have attracted much research interest. **Materials and Methods:** In this review, PubMed, ISI Web of Science, Google scholar and SCOPUS databases were searched for studies published up to October of ۲۰۲۳ related to "Theranostics Wound Dressings; Promising Strategy for Future Wound Care" were addressed. **Results:** Chronic wounds are often associated with infection, so a promising strategy to minimize the severity of infection is continuous wound monitoring with the aim of informing rapid changes in care after a rapid diagnosis of infection. The use of modern, smart, and user-friendly wound dressing has significantly reduced hospital costs by reducing the patient's hospitalization time. These smart wound dressings have been developed with sensing capabilities to detect various physiological and biochemical changes such as glucose, lactate, oxygen, hydrogen peroxide, temperature, and pH in real-time at trace levels in the wound site. monitor wound status and diagnose infection. In particular, because of the significant change in alkalinity that occurs after the onset of infection, wound pH has been widely reported as a promising biomarker of infection. In addition, smart wound dressings capable of measuring glucose are of great interest in diabetic wound monitoring. **Conclusion:** Subsequently, given the diagnostic and therapeutic capabilities of smart wound dressings and their various capabilities to reduce hospitalization time, it can be expected that the next generation of wound dressings may enable the management of healing wounds at the moment without the need for hospitalization and significantly reduce treatment time and hospital expenses.

## کلمات کلیدی:

Theranostics, Smart Medicine, Wound Healing, Regenerative Medicine, Nanomedicine

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