

Dermatology

Scarless Wound Healing with Intradermal IL-10 Application

Brief Description of Technology

Using a longer acting form of IL-10 to assist in scarless wound healing.

TECHNOLOGY ID

2013-0120

BUSINESS OPPORTUNITY

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PATENT INFORMATION

US Non-Provisional Filing

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Technology Overview

IL-10 delivery to cutaneous wounds using a hydrogel based delivery system to induce regenerative tissue repair. Although it is well known that IL-10 reduces scar formation, using a hydrogel instead of a lentivirus to deliver IL-10 to the site, has not been used before. Our experience is with a high molecular hyaluronan (HA) based system and we are developing a PEG maleimide (PEG-mal) based delivery method. Both constructs use a heparin sulfate binding moiety to allow prolonged cytokine release, for which the kinetic release studies are completed. The hydrogel allows the bolus dose and the longer term dosing profile of IL-10, resulting in superior scarless wound healing as opposed to other delivery methods.

Applications

Wound healing

Advantages

Better dosing profile of IL-10 and longer acting in situ

Market Overview

- The WHO estimates a global surgical volume of approximately 234 million per year.
- Keloids occur in 5-15% of wounds and are difficult to treat once established, with a high recurrence rate regardless of therapy.

Investigator Overview

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