HUMAN RECOMBINANT TYPE-I COLLAGEN BASED SCAFFOLDS, INNOVATIVE EFFECTIVE BIOMATERIAL FOR CUTANEOUS WOUND HEALING



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Background

Chronic ulcers represent a major public health concerns and constitute a common cause of morbidity and mortality. These wounds, associated with delayed and disorderly healing, are difficult to treat and comprise a significant unmet medical need.

Collagen is the most abundant protein in the human body and a major participant in cutaneous wound healing. Typically collagen is extracted from bovine, porcine and cadaver sources that entail potential allergenic and pathogens risks.

CollPlant has developed a rhCollagen wound dressing currently undergoing clinical evaluation. A second product, flowable gel for wound healing, is currently in advance stages of development.

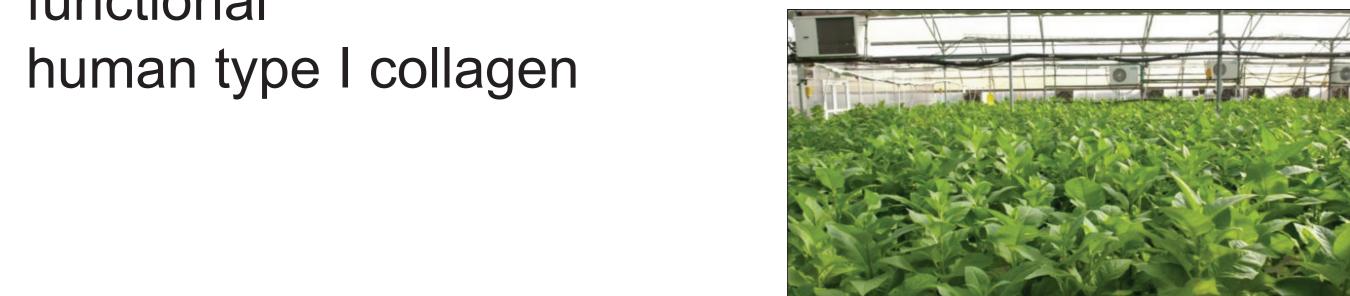


Goal

To test the performance of wound healing scaffolds made of human recombinant type-I collagen (rhCollagen) for the treatment of acute, chronic and tunneled wounds

Human Recombinant Collagen Type-I (rhCollagen) Technology*

Tobacco plants were genetically engineered to produce functional









The product is available for sale for R&D purposes

rhCollagen Flowable Gel for Wound Healing**



Product Description

- rhCollagen syringe
- Empty syringe for saline administration, luer lock connector and flexible
- Easily reconstituted with saline
- Forms 2 cc gel
- Single use kit

- Biocompatible
- Stored at Room Temperature
- Sterile

Product Indications



rhCollagen Flowable Gel is indicated for use in partial and full-thickness tunneled wounds such as diabetic ulcers, pressure ulcers, venous ulcers, chronic vascular ulcers, surgical and traumatic wounds.

Product Advantages

- Homogenous human collagen
- Free of risks of hypersensitivity and diseases, inherent to animal and cadaver derived collagen
- Safe and Biocompatible for human use

rhCollagen Flowable Gel Pre-Clinical Evidence

(I) RAT WOUND HEALING MODEL: Treatment administrated to full thickness skin wounds inflicted in SD Rats

Treatment Groups:

- . rhCollagen Flowable Gel
- 2. Saline control
- 3. Human collagen flowable soft tissue matrix (commercial control)
- Bovine collagen flowable matrix (commercial control)

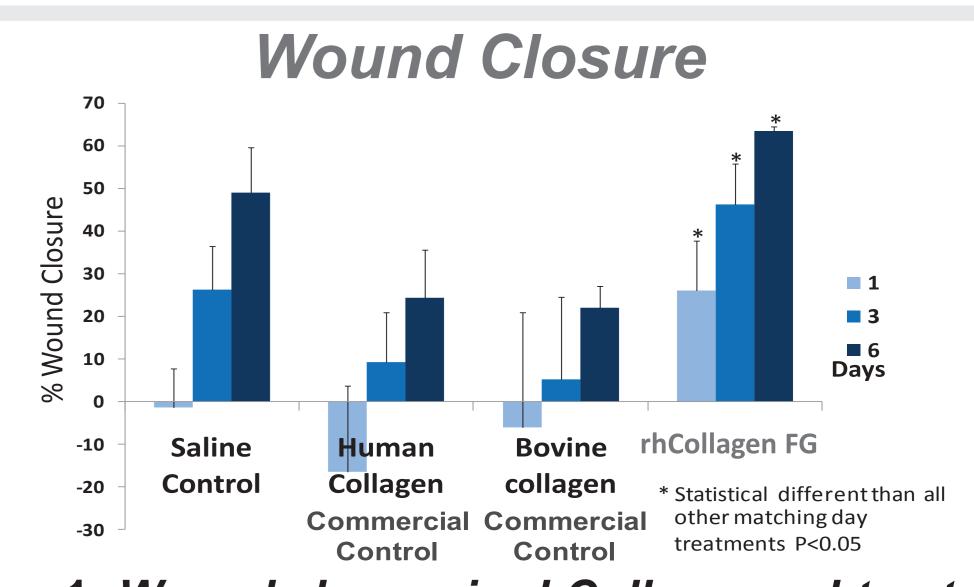


Figure 1: Wound closure in rhCollagen gel-treated fullthickness wounds in rats. n = 6

(II) PIG WOUND HEALING MODEL: Treatments administrated to full thickness skin wounds inflicted in domestic pigs

Treatment Groups:

- 1. rhCollagen Flowable Gel
- 2. Bovine collagen flowable matrix (commercial control)

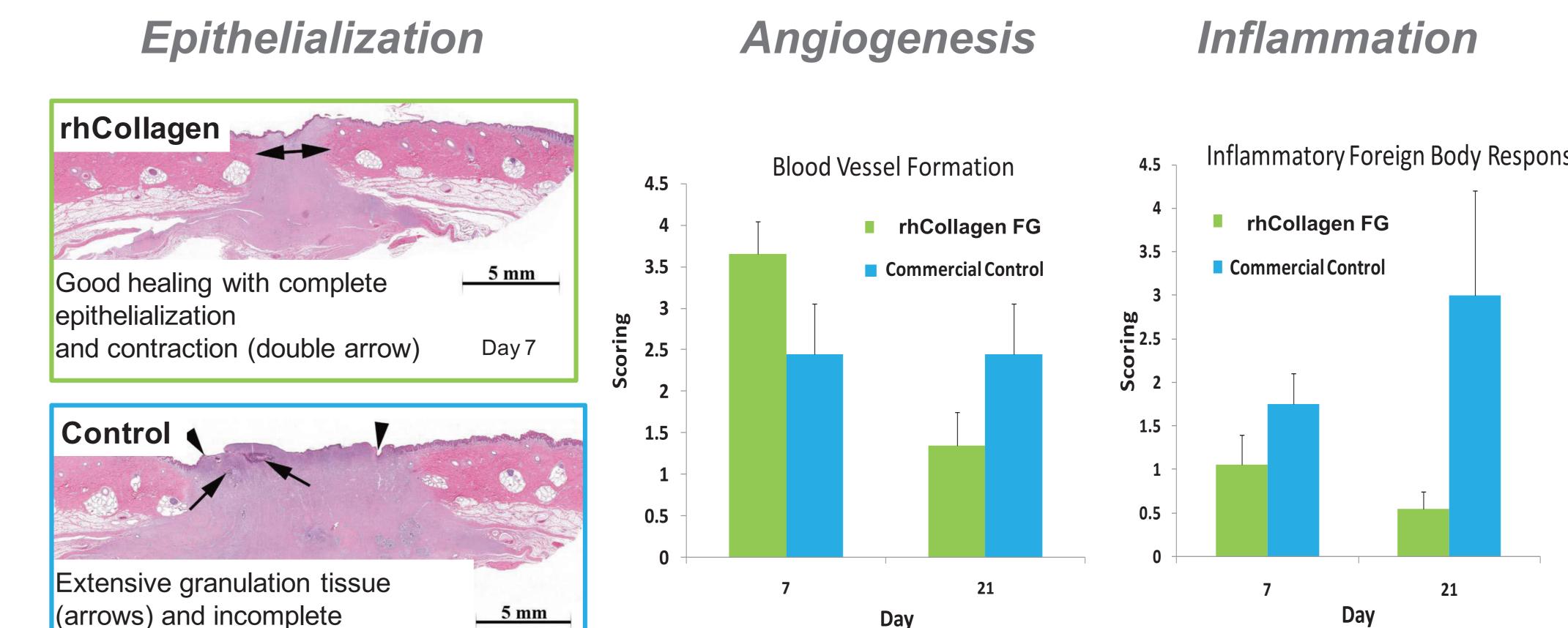


Figure 3: Representative images. H&E

epithelialization (arrow heads)

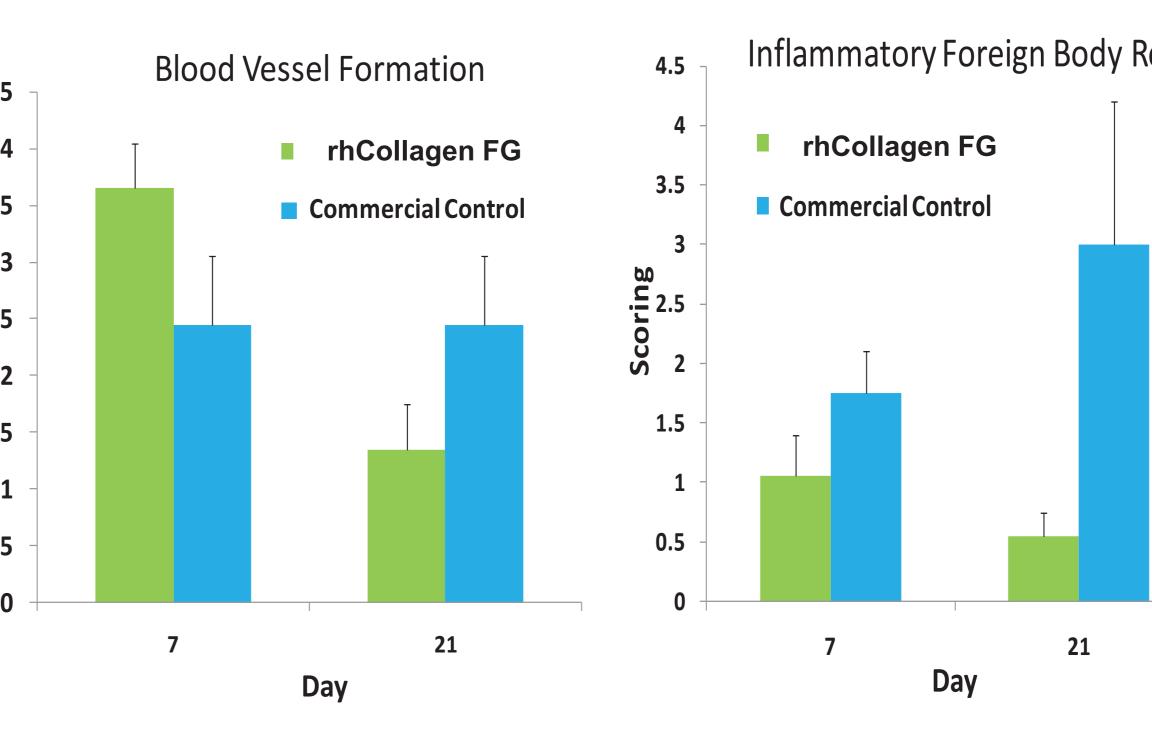
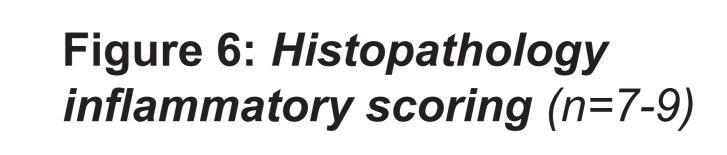


Figure 5: Histopathology blood vessel scoring (n=7-9)



Wound Closure

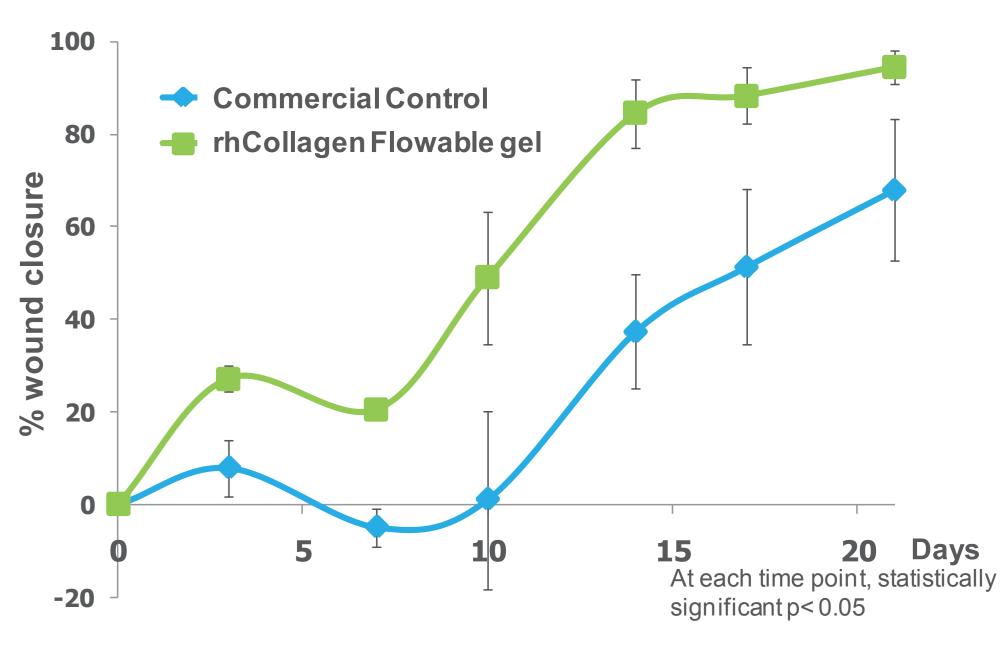


Figure 2: Wound closure in rhCollagen gel-treated full-thickness wounds in pigs (n = 14-18)

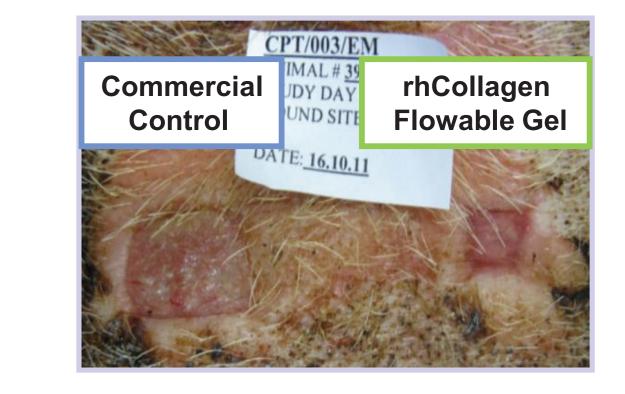


Figure 3: Representative image (day 14)

Conclusions

rhCollagen Flowable Gel improves wound healing compared to a commercial control

- Accelerates wound closure
- Promotes epithelialization
- Minimizes foreign body response
- Induces early angiogenesis and remodeling



The device is not available for sale in the EU or US and does not have