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In vivo Pharmacology: Wound Healing Model - Excisional Wound

Species, strain, sex:	mouse, C57bl/6; db/db, female rat, wistar han; alloxan treated, male
No. of animals per group:	n=8-10
Pharmacological control:	becaplermin (PDGF-BB)
Routes of administration:	topical, upon request
Treatment mode:	therapeutic
Duration of dosing:	as requested

Main read-outs:

- wound closure

Facultative read outs:

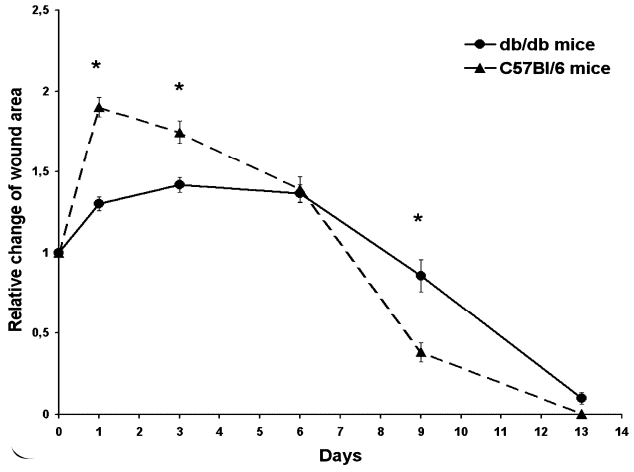
- hydroxyproline, collagen
- Histopathology
- mRNA, IHC, morphometry

The full-thickness wound in db/db mouse and in alloxan treated rats are two models of impaired wound healing in diabetes mellitus.

Delayed wound closure in db/db mice is due to impairment of wound contraction, as well as delayed formation and maturation of granulation tissue. The rate of re-epithelialization is the same as in wild type mice.

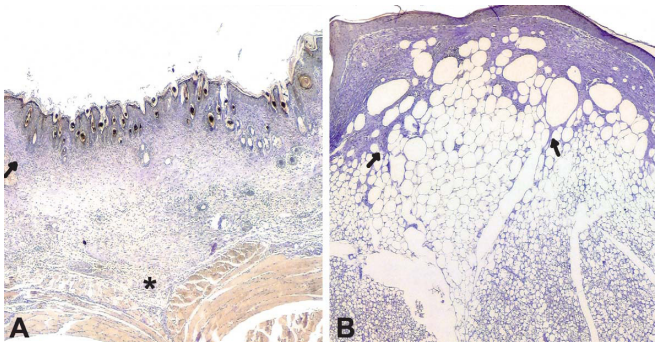
The wide range of different read-outs permits a more precise differentiation of effects of novel therapeutic agents on the wound healing process.

Wound closure in C57Bl/6 db/db and mice



wound area, *p < .05, Mann-Whitney U test

Granulation tissue growth pattern in C57Bl/6 and db/db mice



C57Bl/6 (A) and db/db (B) mice; 25X, van Gieson, Toxicologic Pathology (2009) 37:183

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