

Abstract for DFCon 2008

Galnobax: A New Molecule for Treatment of Diabetic Wounds

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Purpose: Identification of a new organic molecule for treatment of diabetic wounds, in particular, for diabetic foot ulcers.

Methods: Galnobax, a small organic molecule was identified using Computer-Aided Drug Discovery (CADD) methodologies and experimentally validated by pre-clinical trials.

Findings and Conclusions: Galnobax is a potential multi-targeted treatment for diabetic wound healing. Pre-clinical results indicate faster healing of diabetic wounds by Galnobax as compared to traditional treatments (there is a 21% reduction in diabetic wound closure time as compared to the positive control). Galnobax has been shown to synergistically perform the following:

- a. induce NO at the wound site (53% more than untreated),
- b. increasing collagen formation (68% more than untreated) and deposition,
- c. faster re-epithelization (38% more than untreated),
- d. decrease beta-adrenergic activity, thereby increasing keratinocyte migration,
- e. decrease sorbitol levels leading to lowering of oxidative stress (42% more than untreated),
- f. induce growth factor production at the wound site, thereby increasing neoangiogenesis and cell proliferation.

Galnobax is hence, a multi-targeted treatment for diabetic wound healing. Since Galnobax acts on multiple targets, it is the cumulative and synergistic effect of all the targeted pathways, which makes it a more attractive treatment option for diabetic wound healing as compared to biologics in vogue today.