Chronic non-healing venous stasis and decubitus ulcers are a significant cause of morbidity and mortality in elderly patients, especially those with diabetes mellitus. Surgical debridement remains the mainstay of the treatment. We hypothesized that a topical formulation of natural proangiogenic protein Thymosinβ4 (Tβ4) (Fig. 1) and “Silvathymosin”, a synergistic combination of Tβ4 and antimicrobial SilverSulfadiazine (Silvadene) could promote chronic wound healing.

RESULTS
The best wound size reduction (Fig. 3) was observed in combination Silvathymosin group on D7 (51%) and D14 (85%). Wound histology (Fig. 4) also revealed the best healing process in Silvathymosin group. In human dermal wounds, Tβ4 application improved the healing rate in venous stasis ulcers but not in pressure ulcers. The non-availability of true animal model for chronic decubiti or ischemic venous stasis pressure ulcers proves to be a major hindrance in optimizing and validating the preliminary clinical findings.

CONCLUSIONS
We conclude that better animal models are needed which can reliably predict wound healing in chronically ischemic wounds resulting from constant pressure in diabetic and non-diabetic animals.