## Elasto-Gel™ in Experimental Wound Healing Studies

## **Burns Research Institute**

Red Cross Hospital
M.H. Hoekstra, MD, Chief of Research
Beverwijk, The Netherlands

Elasto-Gel™ is a hydrogel wound dressing material being a compound water soluble humectant entrapped within a polymeric matrix of acrylamide. The water soluble humectant consist of 65% glycerine. Glycerine seems to have still undefined immunomodulatory properties, influencing the inflammatory response to tissue injury. By it's strong negative charge binding to extra cellular matrix molecules takes place, influencing the break down by immunologic or inflammatory processus. Also, 65% glycerine has a slight but definite anti-microbial activity and in this way bacterial growth will be hampered.

## **Experimental Observations**

Elasto-Gel™ exhibits a DuoDERM®-like wound healing pattern with deepening of the wound bed and wound repair originating from deeper tissue layers. The main differences with DuoDERM® however, seem to be a slower rate at which the break down of necrotic tissue layer and epithelialization takes place, but with a remarkable lack of inflammation. The modulation of the inflammatory response, i.e., inflammation reduction by Elasto-Gel™ can be advantageous in all types of wounds with an excessive state of inflammation, especially in chronic non-healing ulcers.

**Elasto-Gel**<sup>™</sup> is not the ultimate universal dressing material. Too much dehydration of the woundbed, which causes pain, can again impair wound healing. The right therapeutical regimen (amount of dressing changes) has to be sought out to prevent extreme dehydration. In contrast to ordinary hydrogel dressing materials, **Elasto-Gel**<sup>™</sup> induces a clean wound environment by inhibiting bacterial growth, without the toxic side effects of anti-bacterial therapeutics.