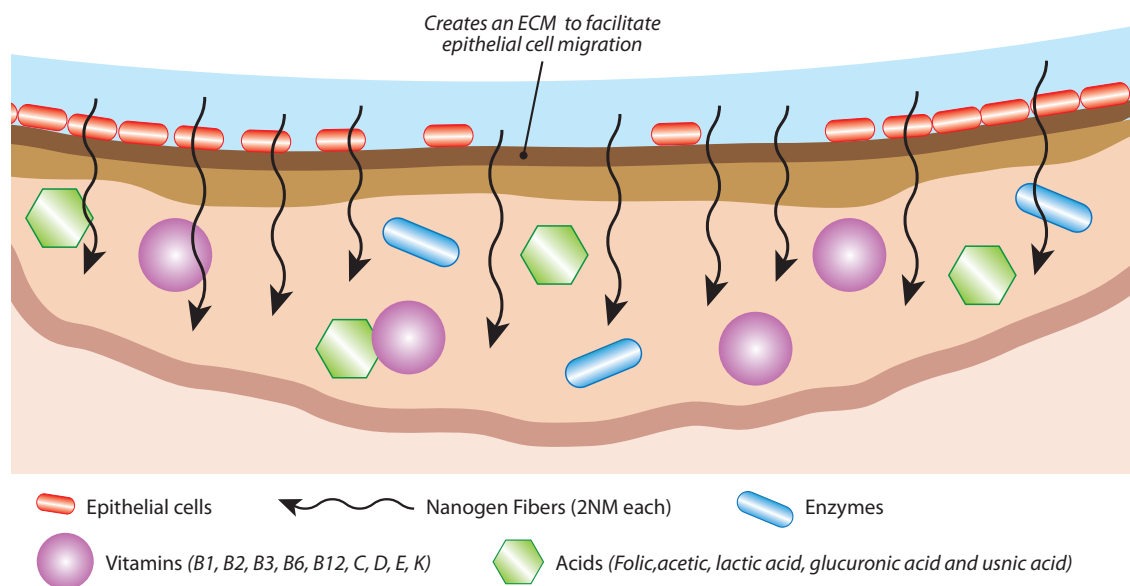


## How Nanogen works



### Wound rebalancing

Creates an Extra Cellular Matrix – ‘collagen mimetic’, creates a scaffold and facilitates epithelial cell migration across the wound bed.

### Cellular communication

- Activates the intracellular signalling pathways that regulate the various steps of wound re-epithelialization and granulation, instructs Fibroblasts and keratinocytes to migrate and proliferate
- Increases the activity of NK cells (Natural Killer Cell), T cells (a type of lymphocyte) and B cells (a type of lymphocyte a constituent of the immune system)

- Nutrients in wound – creates the optimal environment for healing  
Deposits – Acetic, Lactic, Glucuronic, Folic and Usnic acid, enzymes, vitamin B1, B2, B3, B6 and B12, vitamin C, D, E, K and Biotine (vitamin H)

Stimulates the body to produce more of its own Collagen, which supports the body’s wound healing closure mechanism. Stimulating Fibroblast production and subsequently TGF – $\beta$  production will also be stimulated.

### Quantum Biology

We are all made at an atomic level of positive and negative charged particles. Nanogen nano-sized fibres (2 nm) are unique in the world, and impacts at a quantum level. With the same Quantum sized particles, frequency and resonance as the molecular materials in the body (such as collagen and fibroblasts) and facilitate cellular communication.

Nanogen Aktiv fibres are polysaccharides which can significantly promote DNA synthesis and increase cell division, thus delaying the aging of the body.

The stem cells within the product are also proven to regenerate senescent cells (Lymphocyte system all activated – increasing macrophage and fibroblast production).

V-shaped hydroxyl attracts the body’s own stem cells, which then regenerate to help macrophage and keratinocyte development.

	Order code
<b>Nanogen Aktiv membrane</b>	
3cm x 3cm	610101
5cm x 5cm	610202
8cm x 8cm	610303
10cm x 10cm	610404
10cm x 20cm	610408

<b>Nanogen Aktigel</b>	
15 Gram	600403
90 Gram	600406

## Application technique

1. Use an aseptic technique.
2. Coat the wound bed with 2-3mm of Nanogen Aktigel.
3. Allow a couple of minutes to ensure the majority of the Nanogen Aktigel is absorbed into the wound bed.
4. Nanogen Aktigel should be reapplied each time the secondary dressing is changed.
5. Place the Nanogen Aktiv membrane over the wound, ensuring the whole wound is covered.
6. Activate with Sterile Saline if required. The Nanogen Aktiv membrane can stay in place up to one week (7 Days). Can cover with a Wound contact layer (protects the membrane when changing the secondary dressing).
7. Cover with a secondary dressing (GentilFoam).
8. 2 to 4 weeks of treatment is all that is required for most chronic wounds.

Genadyne Pharma  
16 Midland Avenue  
Hicksville  
New York  
11801  
USA

Phone: +1 516 487 8787  
Toll free: +1 800 208 2025  
Fax: +1 877 487 7878  
Email: [info@genadyne.com](mailto:info@genadyne.com)

# Nanogen Aktiv & Aktigel range



## Advanced wound healing from nature

A highly effective solution for the healing of ‘hard to heal’ chronic wounds, proven to save the health system significant amounts of money.



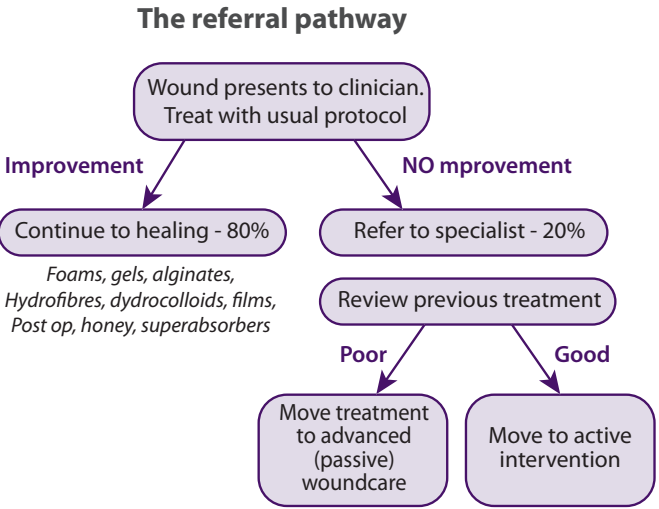
The problem of Non healing wounds

Clinical issues surrounding ‘static’ wounds

- Often the result of a defunct or deficient Extra Cellular Matrix (ECM)
- Inter cellular signalling not occurring (key cells not called to perform their tasks e.g. Fibroblast/Keratinocytes)

Financial cost

- 80% of chronic wounds heal satisfactorily with just advanced wound care products (Gels/Foams/ Alginates/hydrocolloids/superabsorbers etc) and use minimal resources per wound.
- 20% of wounds fail to heal, and take up 80% of all resource/costs of managing wound care (Posnett et al). Often they remain unhealed and are merely ‘maintained’ year after year.
- **Cost effectiveness** – Healing static problem wounds, rather than maintaining wounds for extended periods of time, saves the health system significant amounts

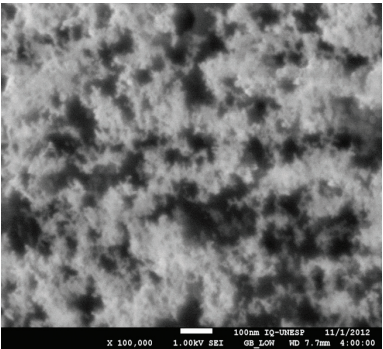


of money. Preventing Amputation saves significant amounts of money and massively improves patients own quality of life.

What is Nanogen Aktiv?

A Nano-biotechnology membrane created from plant extracts and stem cells of a plant found only in the Brazilian rainforest.

- Manufactured in a bioreactor for 20 days
- Releases Nanogen fibres into a wound which are only 2nanometers in length, creating an effective Extra Cellular matrix



Nanogen Aktigel

- A gel created from the same plant extract and stem cells as Nanogen membrane, suspended in a gel for quick absorbtion into the wound bed
- 1+1 = 3 – Using Nanogen Aktiv and Nanogen Aktigel together appear to enhance the performance of both products
- Aktigel may be used with any other product, so long as you allow the gel to be absorbed into the wound (2-3 minutes) prior to applying an absorbent secondary dressing

- Effective antimicrobial – provides a bacteriostatic environment in the wound. Wound healing accelerating gel – the gel delivers Nanogen fibres into the wound, helping to accelerate the wound healing processes
- Cost effective – The average price per application is similar to that of a basic Hydrogel, and as such, makes Nanogen Aktigel a very cost effective product choice across most wound types. Nanogen Aktigel may be used on all wounds at all stages.

	Silver	PHMB	Nanogen Aktiv
Bacterial cell wall	Chemical binding, causing structural & receptor damage.	Disrupts cell wall.	No disruption of cell wall.
Bacterial function	Chemical binding disrupts DNA replication.	Disrupts membranes interfering with metabolism, and targeting cytoplasmic components causing cell death.	Reduces cell proliferation without causing cell death.
Overall effect	Bacteriocidal with debris left in wound.	Bacteriocidal with debris left in wound.	Bacteriostatic with removal of bacteria at dressing change. No cell debris.

Change in wound state case studies



Pressure Ulcer after 40 days treatment with advanced Woundcare products



Switched to Nanogen Aktiv use after just 40 days treatment



Diabetic foot – unhealed for 9 months



Healed in ONE WEEK with Nanogen Aktiv



Infected Diabetic foot, avoided amputation (recommended)



Un-healed 8 months Biopsy: vasculitis neutrophilic Pyoderma gangrenosum



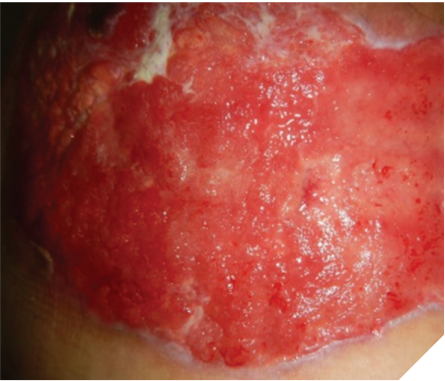
Healed in 19 days!



3rd degree burn - After 15 days of Hydrocolloid treatment



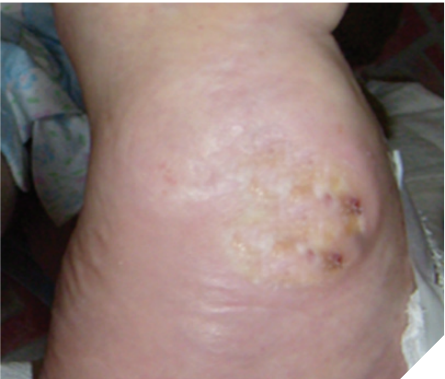
Change to Nanogen – 9 days



After only 29 days



Diabetic Ulcer (Charcot foot) – unhealed in 8 years



Healed in 90 days



Venous leg ulcers – 9 months unhealed



Virtually healed in only 15 days (2 applications)



Leg Ulcer – 9.5cm x 5.5cm deep wound, unhealed for 2 years



Within 5 weeks- shallow 4cmx6cm superficial wound – switched treatment to compression and moist wound healing only. Clearly kick started healing!