

# Use of bio-cellulose gel and a bio-cellulose nano-structured matrix as wound healing accelerator antimicrobial dressings in hard to heal chronic wounds

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## Background:

Chronic and complex wounds require a specialized approach in the area of dressing selection and wound management. A novel bio-cellulose wound healing acceleration gel and a bio-cellulose nano-structured matrix, provides a natural antimicrobial action and an extra cellular matrix (ECM) component which helps to kick start hard to heal chronic wounds, has been clinically observed to initiate healing in complex wounds that had failed all other methods of treatment.

## Methods:

A natural antimicrobial wound dressing was evaluated in a series of case studies. Patients with wounds of various etiologies were treated with a natural antimicrobial, which was applied to the cleansed wound site and covered with a sterile semi-occlusive dressing for a period of 7 to 17 weeks with 2-3 dressing changes per week. The wound was observed closely for any signs of healing initiation and epithelialization.

## Results:

All wounds in the presented case studies showed signs of healing. No adverse effects were reported.

## Conclusion:

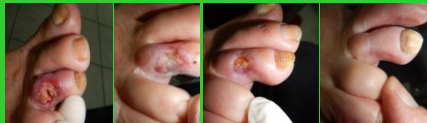
Based on the results from the presented clinical case study observations, it appears that the application of a bio-cellulose gel and a bio-cellulose nano-structured matrix natural antimicrobial dressing may be effective in facilitating healing of hard to heal chronic wounds. Future studies are needed to determine if the natural antimicrobial dressing is applicable in other acute and chronic wound settings.

## References:

1. Wahab N, Guadagnoli J, Wray K, Lubell T. Use of plant based stem cell nanotechnology on nonhealing chronic wounds. Poster presented at SAWC 2015 San Antonio, Tx.

### Case 1

74 year old female HBP, DM  
3 month evolution  
ABI: 0.46  
Exposed bone.  
Epithelialization over bone  
observed at 3 weeks



Initial

Nanogen Aktiv applied

58 Days

84 Days

### Case 2

34 year old female  
CUCI  
Pyoderma gangrenosum



Initial

Nanogen Aktiv applied

23 days

68 Days

126 Days

### Case 3

83 year old female, HBP  
Arterial occlusion with  
previous left leg amputation  
2013  
7 month evolution. Right foot  
arterial ulcer



Initial

Nanogen Aktiv applied

19 Days

56 Days