

# Matrix Encapsulated, Positively Charged, Nano-Particles Heal Alzheimer Patient's Life Compromising Sacral Wound

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## PATIENT BACKGROUND

It's a global imperative that urgent steps be taken to reduce the impact of pressure ulcers in Alzheimer's disease. According to the World Health Organization (WHO) In 2019 there were an estimated 50 million people with dementia and 60-70% had progressed to Alzheimer's.

Due to the lack of mobility in patients with end-stage Alzheimer's disease, the incidence of pressure ulcers can exceed 38% of patient in the US, according to the National Pressure Ulcer Advisory Panel (NPUAP).

A 77-year-old advanced, non-verbal, Alzheimer's patient presented at the office with a life threatening sacral abscess. To save the patient's life, it was determined that a cationic nano-particle matrix wound dressing should be applied after debridement.

## METHOD

The pressure ulcer was debrided in the office with removal of a large amount of necrotic fatty tissue and muscle with local anesthesia. The wound area was 432cm<sup>2</sup> and 4cm deep. A compounded antimicrobial cream mixed with a nanoparticle cationic polymer matrix\* hydrogel\*\* was applied every day at home. The wound was packed with kerlex and DSD. After four weekly clinic debridement's and noticeable improvement, treatment with only the nanoparticle cationic polymer matrix was continued. All dressings were done by the family.

## RESULTS / DISCUSSION

While initially approaching treatment as palliative care, the potentially life-threatening wound unexpectedly healed in approximately 12-weeks without the need for hospitalization.

## CONCLUSION

This case study mirrors many other successful wounds healed with this proprietary combination of an encapsulated NP cation matrix\* Incorporating cationic nanoparticles into a polymer matrix directly disrupts the biofilm, effectively killing associated pathogens without cytotoxicity, and prevents biofilm regrowth while fully augmenting wound repair.

\*AgFresh® Fentonite® – mccordresearch.com  
\*\*BioRelease® – mccordresearch.com

08/07/23 Wound 24 x 18 x 4 cm



09/18/23 Wound 20 x 17 x 8 cm



10/09/23 Wound 7 x 3 x 2.5 cm – 98% Reduction



10/16/23 Wound 3 x 2.5 x 2.2 cm – 69% Reduction



10/30/23 Wound 2.2 x 0.3 x 1 cm – 99% Reduction



11/14/23 Wound 2 x 0.3 x 0.5 cm – 99% Reduction



AgFresh® is a combination of two patented technologies, Fentonite® and BioBlock®, that provide a revolutionary approach to wound care. Both technologies are scientifically proven to dissolve biofilms and to inhibit the pathogen communication required to anchor and spread within the wound environment.

Fentonite® is a blend of cationic minerals that have a cationic exchange capacity (CEC) > 10 mEq/100g. The oxygen reactive potential of Fentonite® > 400 mV and the pH is less than 3.5. This combination is unique to Fentonite® and provides the basis for broad-based antimicrobial activity, based upon its antimicrobial characteristics and the communication requirements of biofilms.

BioBlock® is a combination a 3 poloxamers that encapsulate Octenidine to improve its antimicrobial activity within biofilm structures. Each of the three poloxamers have a designated purpose and provide a holistic approach to biofilm and pathogen removal. The poloxamer micelles time release Octenidine into the biofilm and pathogens within the biofilm.



## INVESTIGATORS

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