# Cations Alter the Cellular mV Current in Chronic Wounds in Favor of Wound Healing Without Cytotoxicity Charles Andersen, MD, FACS, FSVS, MAPWCA; Robert G. Frykberg, DPM, MPH

#### AgFresh<sup>®</sup> – Moleculight Cases

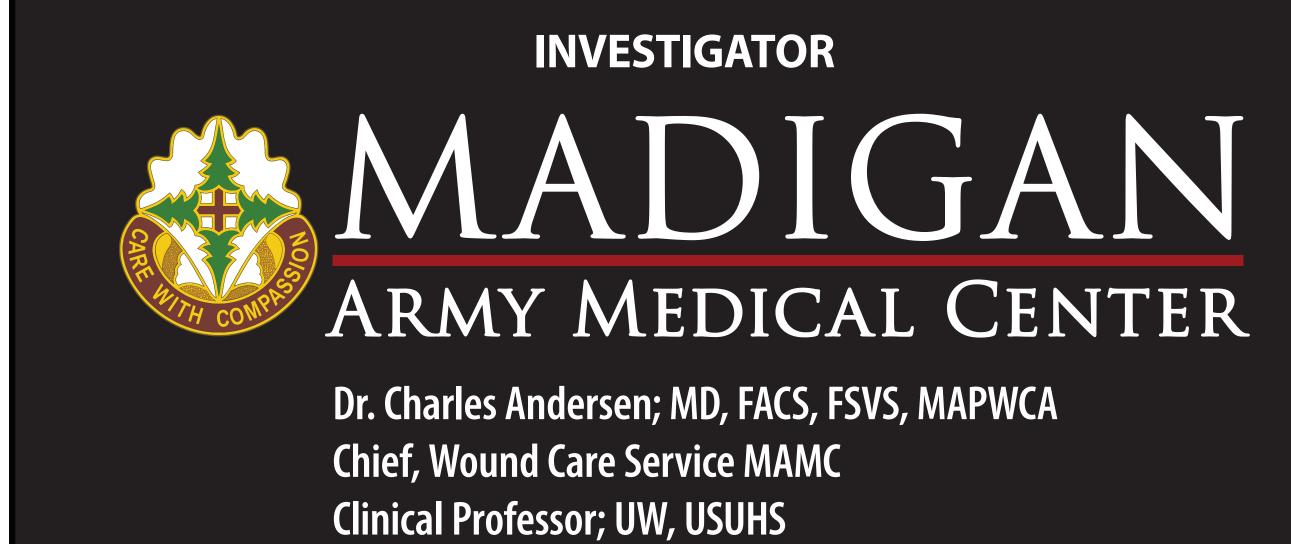
The loss of the bioelectric balance in the wound bed leads to unresolved chronic wounds with inherent biofilms and bacterial colonization. The chronic wound bed is characterized as a negatively charged (anionic) environment. The negatively charged molecules include the membranes of bacteria, biofilms and the anchoring mechanism of the biofilm to the wound bed. In order to remove anionic obstacles to wound healing, a rebalancing needs to take place with the introduction of positively charged (cationic) nano-particle minerals that bind and inactivate anions through an electron attraction process.

#### McCord System

- Fentonite<sup>®</sup> a combination of cationic nano-particle minerals releases a unique balance of cations that have been proven to bind with the anionic biofilms and pathogens causing the loss of their ability to defend themselves due to their permanent membrane deconstruction.
- The following cases represent results utilizing the McCord System with Fentonite<sup>®</sup>

#### **Clinic Protocol for McCord System**

- Clean wound with non-ionic cleaner
- Baseline Moleculight scan
- Debride and cleanse with attempts to remove bacteria if possible (Only clean with non-ionic solution)
- Repeat bacterial scan
- Hydrate wound with BioCleanse<sup>™</sup>
- Apply BioRelese®
- Apply AGFresh<sup>®</sup>
- Apply secondary dressing and compression or off-loading if appropriate
- Change dressing twice per week
- With dressing changes clean with non-ionic cleaner and debride as necessary
- Scan for bacteria pre- and post-debridement

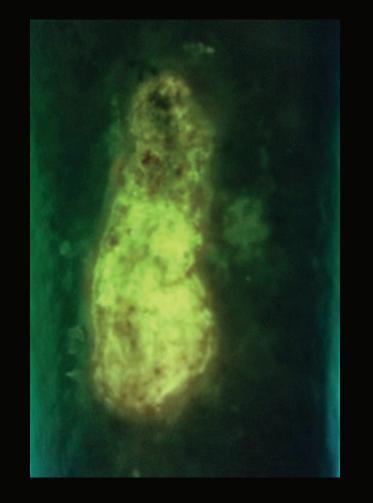


## **PATIENT - AF**

- 58 y/o female with alpha thalassemia
- Left leg ulcer for 22 months Non-healing wound resulting from a vein harvest for popliteal bypass

## **AF – Pre-Treatment**





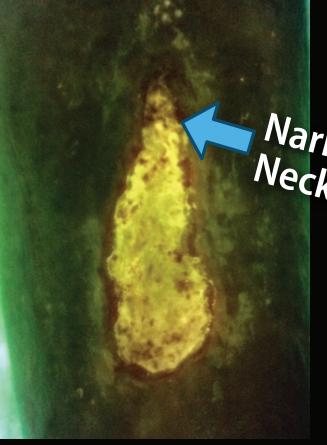






## AF – 12 Days







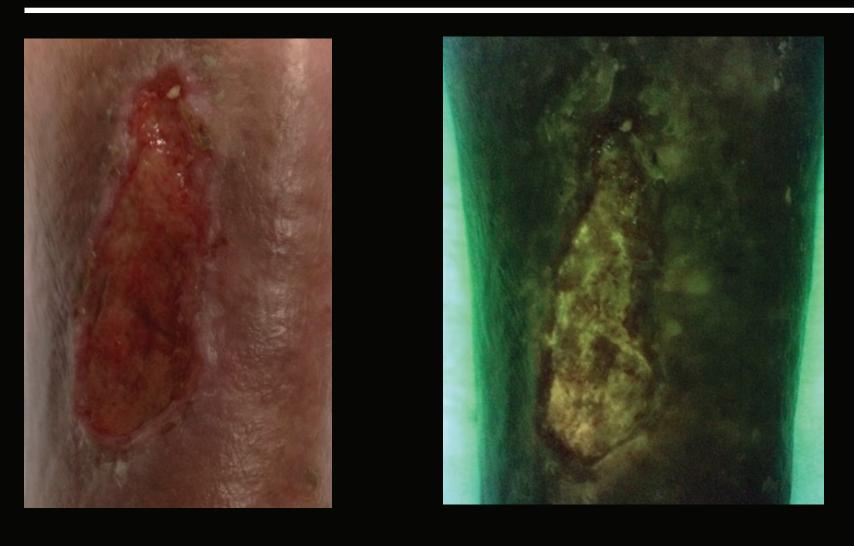
Wound cleaned and debrided; continued with Regranex<sup>®</sup> and EO2<sup>®</sup> therapy; and added BioRelese® and AgFresh<sup>®</sup>

Wound cleaned and debrided. Since initiation of the McCord System, patient has noted an increase in exudate but a significant decrease in pain.

Wound cleaned and debrided. Continued with the McCord System.

Top of wound is narrower with increased granulation tissue.

### AF – 19 Days







- including skin substitutes
- forming new epithelial tissue

• Treated with EO2<sup>®</sup> with Regranex<sup>®</sup> for nine months with no significant change in size of the wound Started on McCord System on 10/13/2023

> Wound cleaned and debrided; continued Regranex<sup>®</sup> and EO2<sup>®</sup>; changed to BioRelese<sup>®</sup> with no AgFresh®

Wound cleaned and debrided; continued Regranex<sup>®</sup>, EO2<sup>®</sup> and BioRelese<sup>®</sup>

Marginal epithelium continues to increase

 Chronic wound present for 22 months that has failed to respond to multiple advanced wound treatments

 Since initiation of the McCord System in combination with Regranex<sup>®</sup> and topical oxygen the wound is