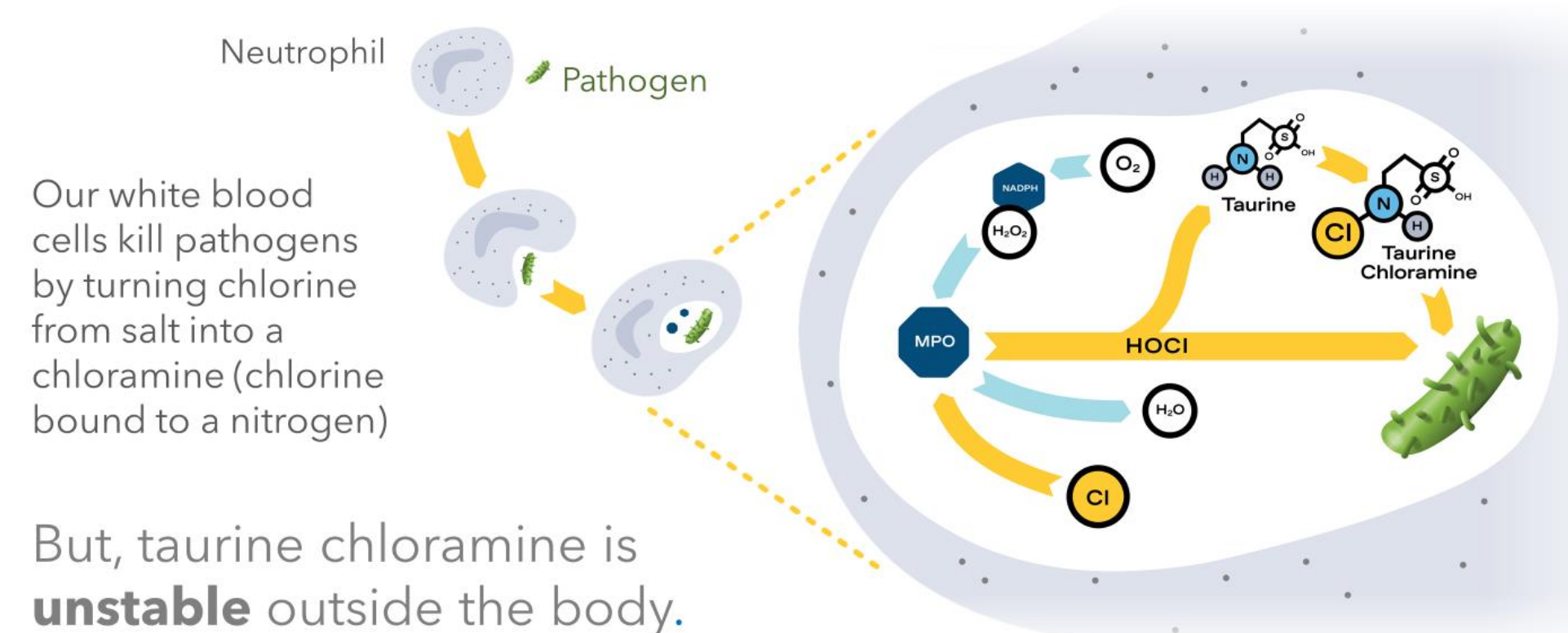


AvantGuard

Extend the Golden Hour...

Infection control for wounds that is safe and effective, even against biofilms, with no resistance generation issues and a multi-year shelf life

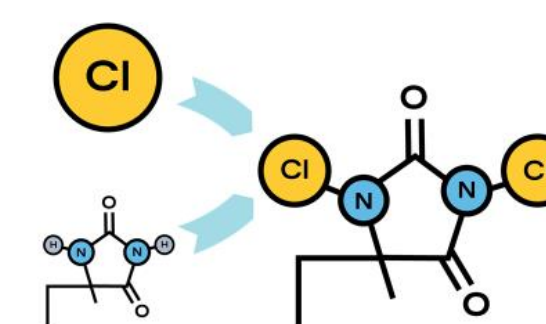
Our body creates taurine chloramine to kill pathogens



Avantamine™: a better chloramine

Retains benefits of a chloramine

- Broad spectrum efficacy
- Quick kill
- No resistance generation

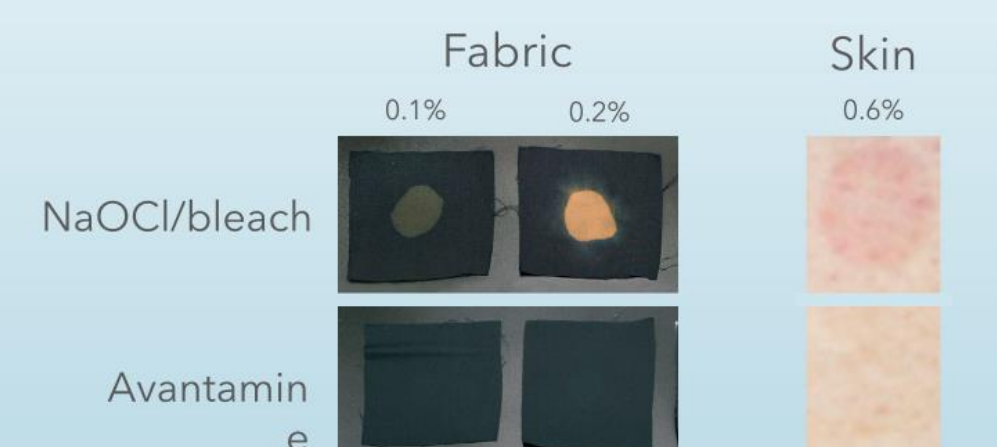


But with greater stability...



Stable transitions between liquid and solid

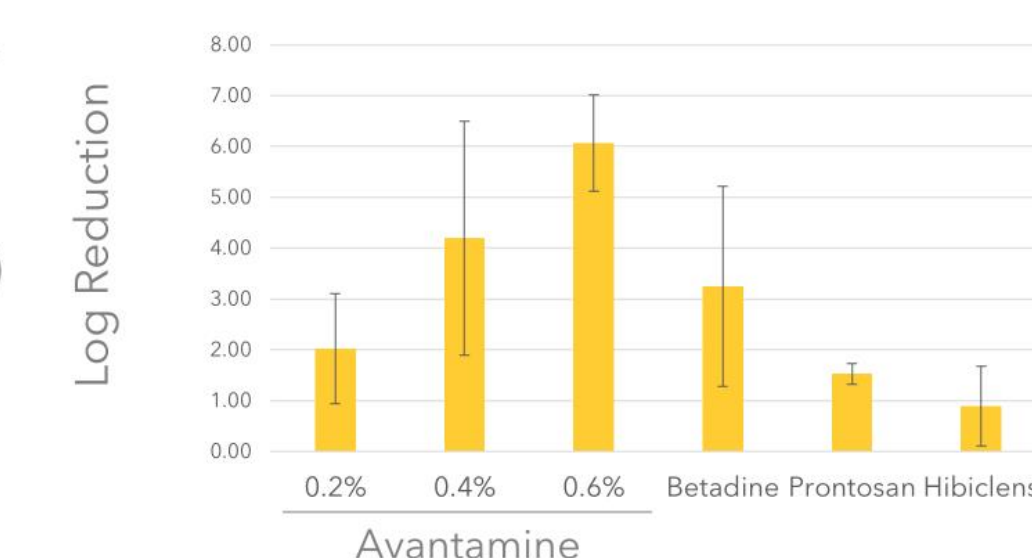
...contains chlorine, but is not bleach



Avantamine superior to all other antiseptics

- EPA Biofilm testing
 - EPA-SOP-MB-19 and EPA-SOP-MB-20 without modifications for 5 minutes
- Avantamine superior to:
 - 10% povidone iodine (Betadine)
 - 4% chlorhexidine (Hibiclens)
 - 0.13% PHMB + surfactants (Prontosan)

Log Reduction of EPA Biofilm testing against *P. aeruginosa*

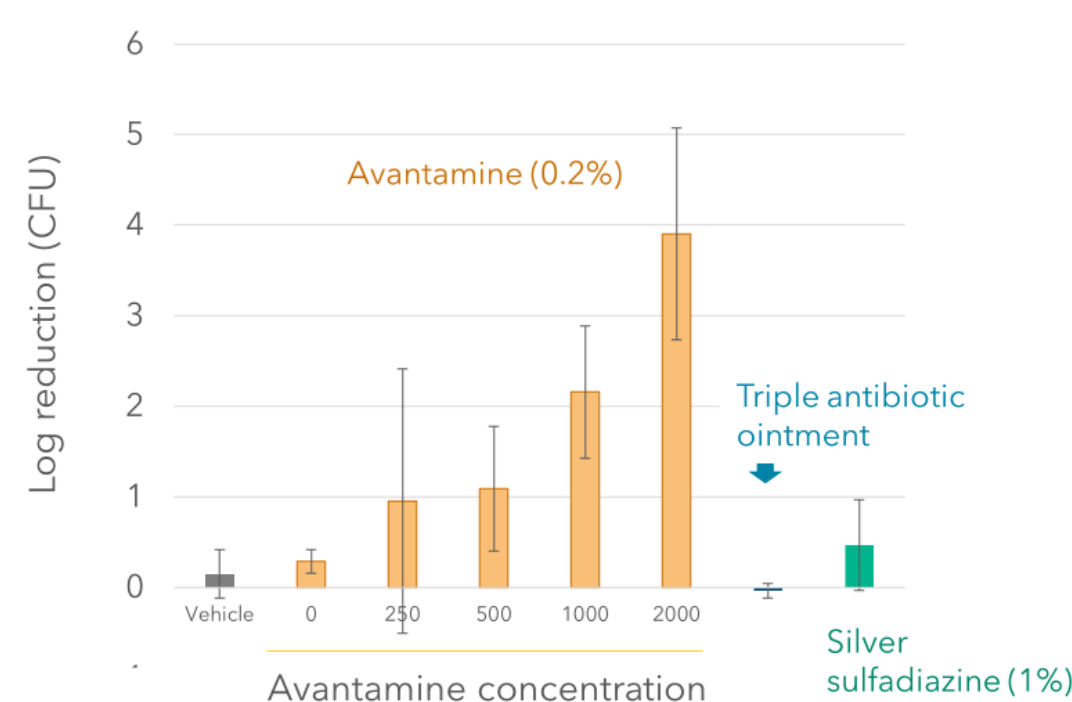


Hydrogel dressing for infection prevention



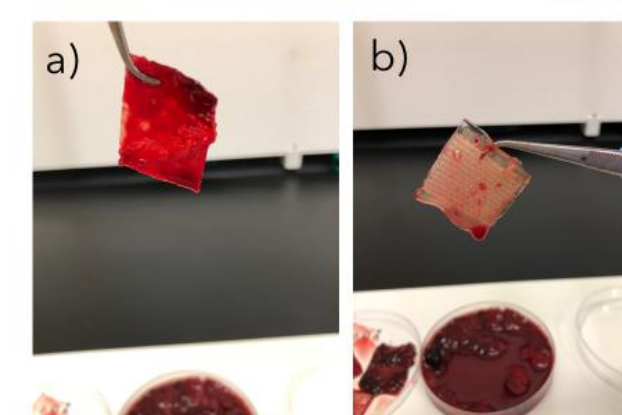
- *Ex vivo* porcine skin
 - 72 hours post-inoculation to form biofilm
 - Treatment for 24 hours
- **Avantamine (gel) better than commercial products at 0.05%**
 - Triple antibiotic ointment (Bacitracin/Neomycin/Polymyxin B)
 - Silver Sulfadiazine Cream USP 1%, Ascend Laboratories

P. aeruginosa 27312 Biofilm Eradication Test
Log reduction versus control



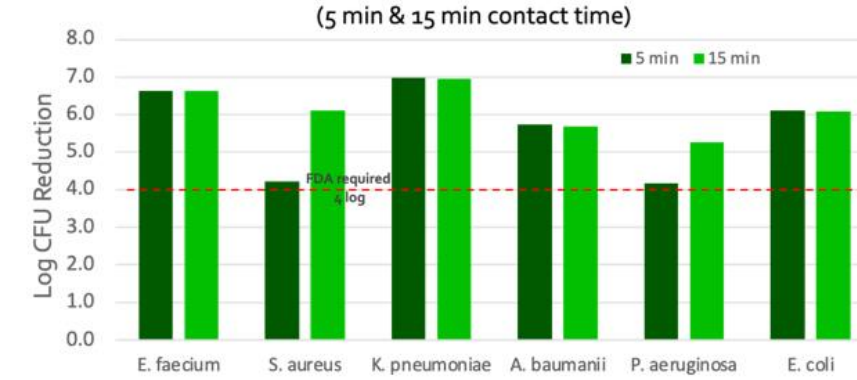
Clotting, antimicrobial combat gauze

- Polymer with anti-adhesion properties bound to kaolin-containing gauze for DoD grant
- Less protein adherence
- Comparable reduction in clotting to QuikClot
- Effective against ESKAPE pathogens from Walter Reed

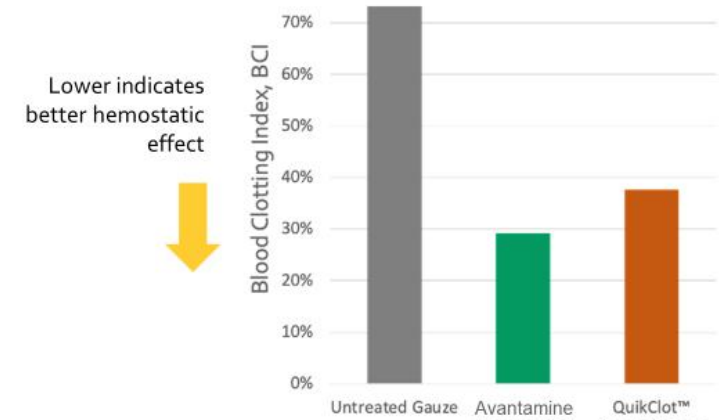


Staining of (a) standard gauze (b) and Avantamine gauze

Killing Efficacy vs. ESKAPE Pathogens (5 min & 15 min contact time)



Hemostasis

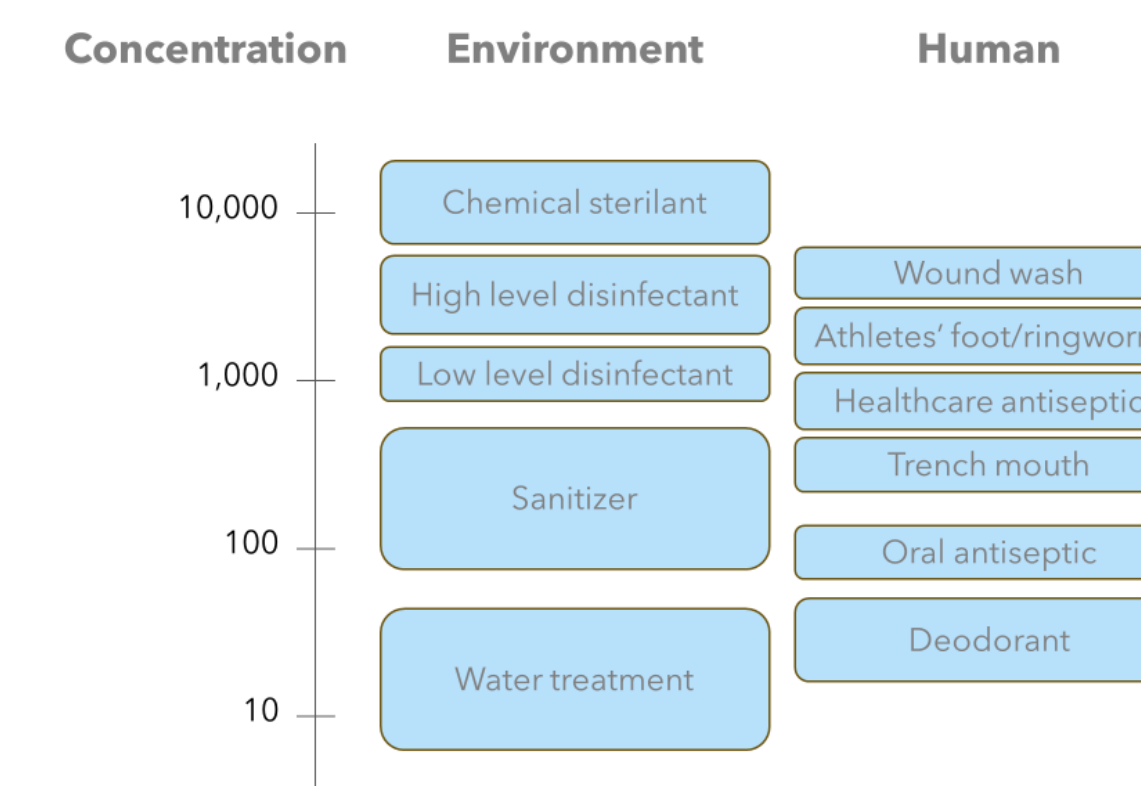


One material, broad range of applications

- **Solid format**
 - Foil pack
 - Powder, tablet, sheet
 - Shelf stable for 3-5+ years
 - Heat stable
- **Mix with water**
 - Adjust to desired concentration



Wide variety of uses based on concentration



Ted Eveleth, CEO

ted.eveleth@avantguardinc.com
+1 518 331-1133

Blurring the lines between antibiotics, antiseptics, and disinfectants, our chemistries target pathogens and their biofilms on skin, medical devices, and other surfaces.