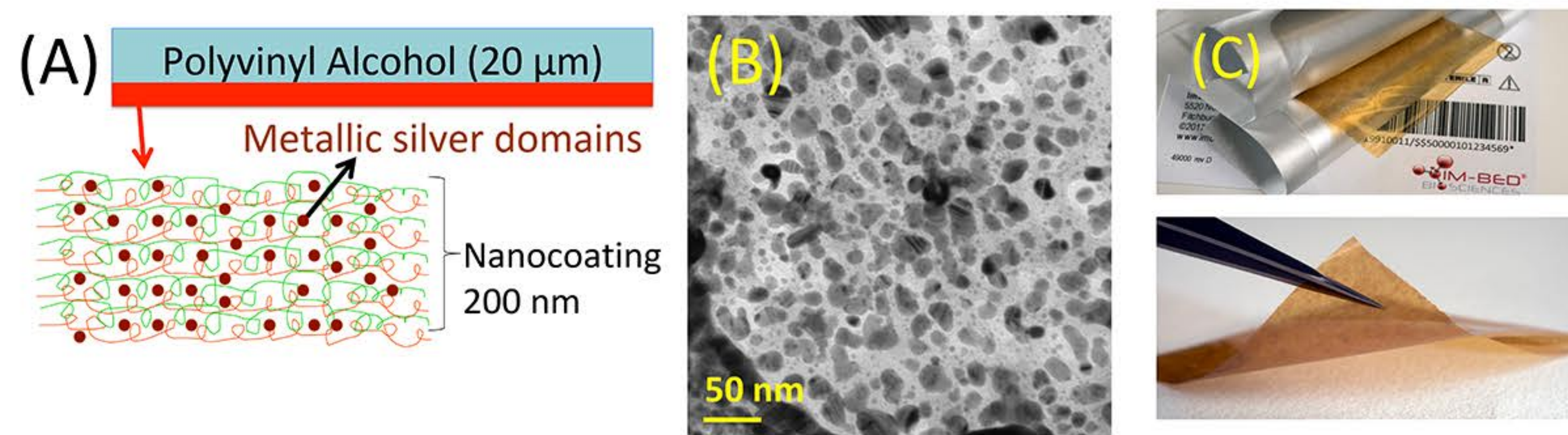


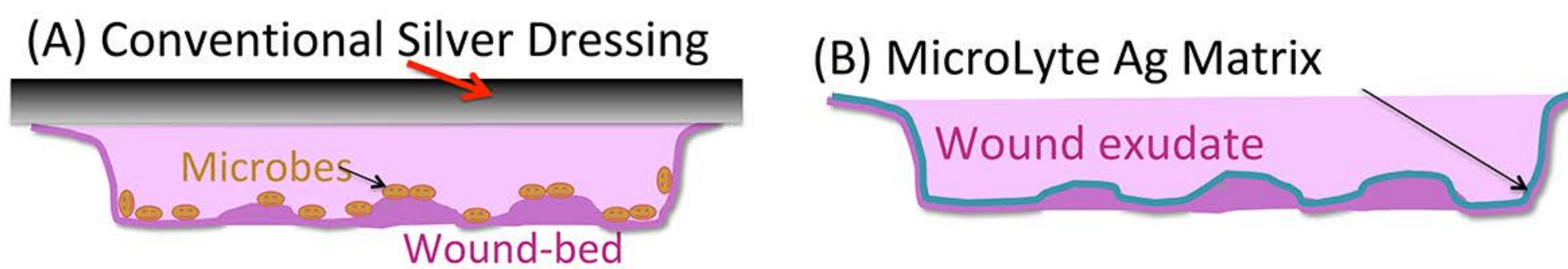
Each year more 2.1 million U.S. patients seek medical care for burns resulting in 5000 deaths from burn complications. 70% of deaths of patients with burns over > 40% body surface are due to sepsis from infections, which underscores the need for advanced antimicrobial therapies.

## Polymeric Microfilm Matrix Delivery Platform



**Fig.** (A) Schematic of the construction of polymeric Microfilm antimicrobial matrix, (B) TEM image showing metallic silver ( $Ag^0$ ) domains in nanocoating, (C) **MicroLyte<sup>®</sup> Ag** antimicrobial matrix (containing ionic ( $Ag^+$ ) and metallic ( $Ag^0$ ) silver), which is an FDA-cleared product based on polymeric microfilm matrix platform

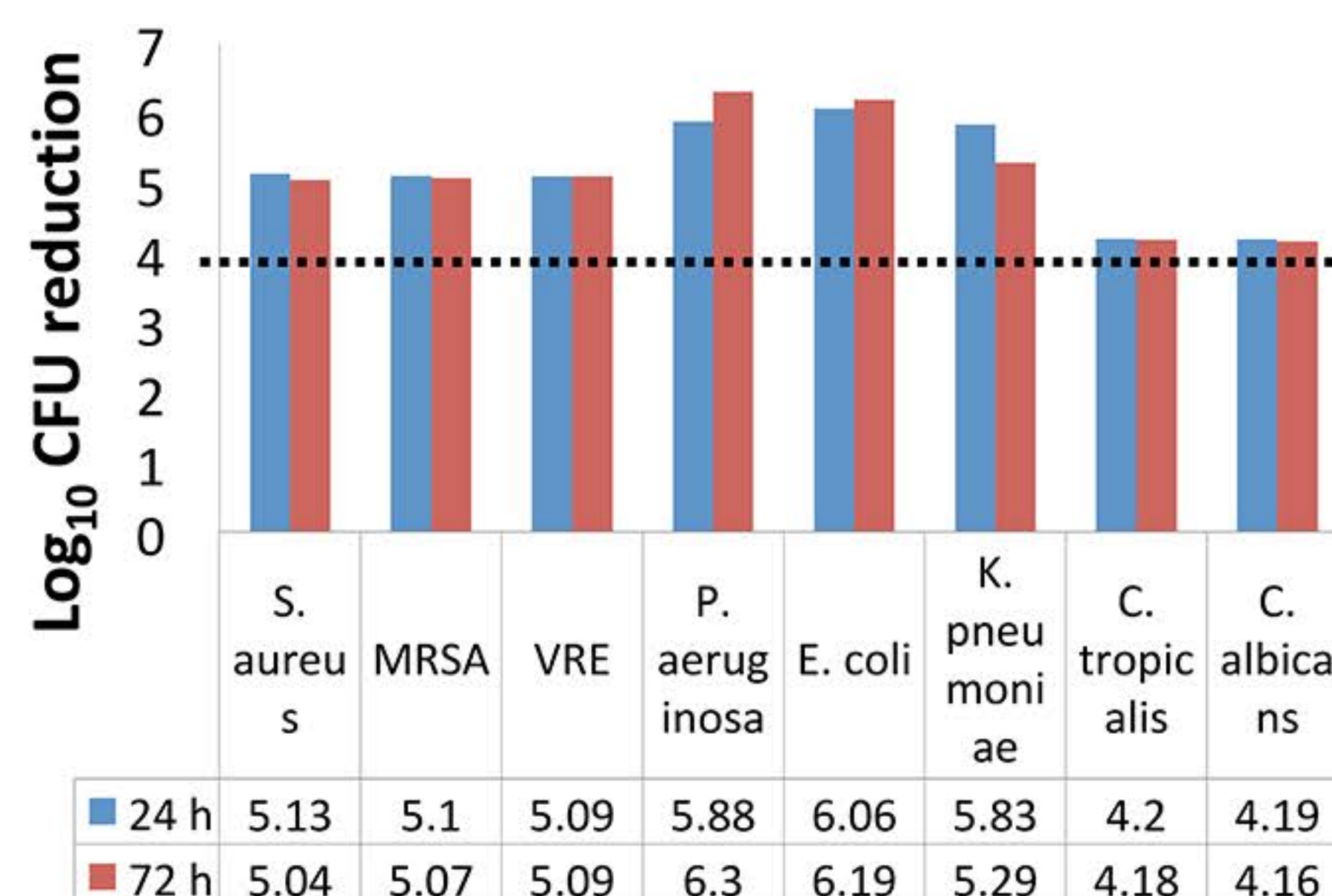
## Mode of Action



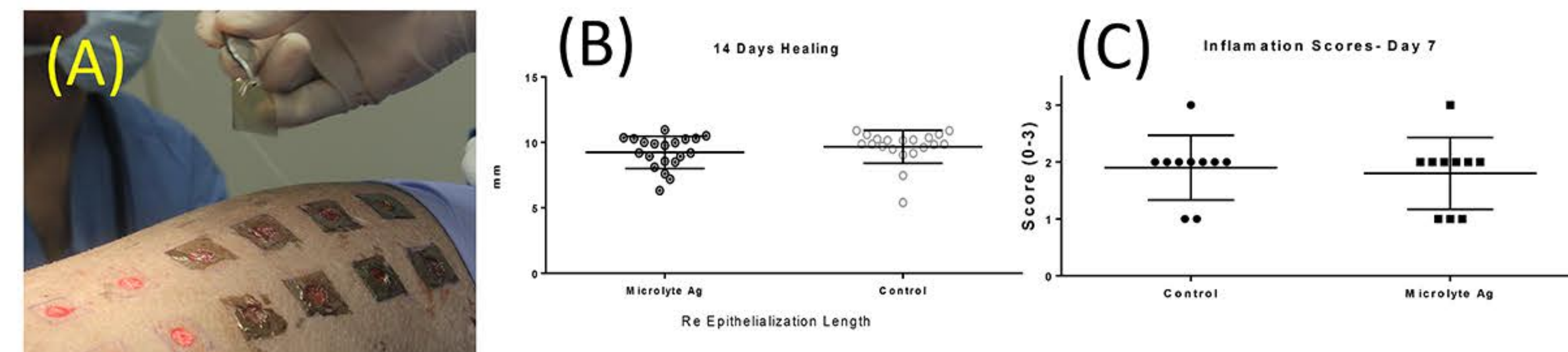
MicroLyte Ag bioresorbable matrix intimately conforms to deep wound-tissue, provides scaffold cell migration and vascularization, and combats bacterial biofilms.

## Antimicrobial Activity

MicroLyte Ag Matrix kills 99.99% of clinically relevant microbes for up to 3 days, in-vitro (ISO 22196)



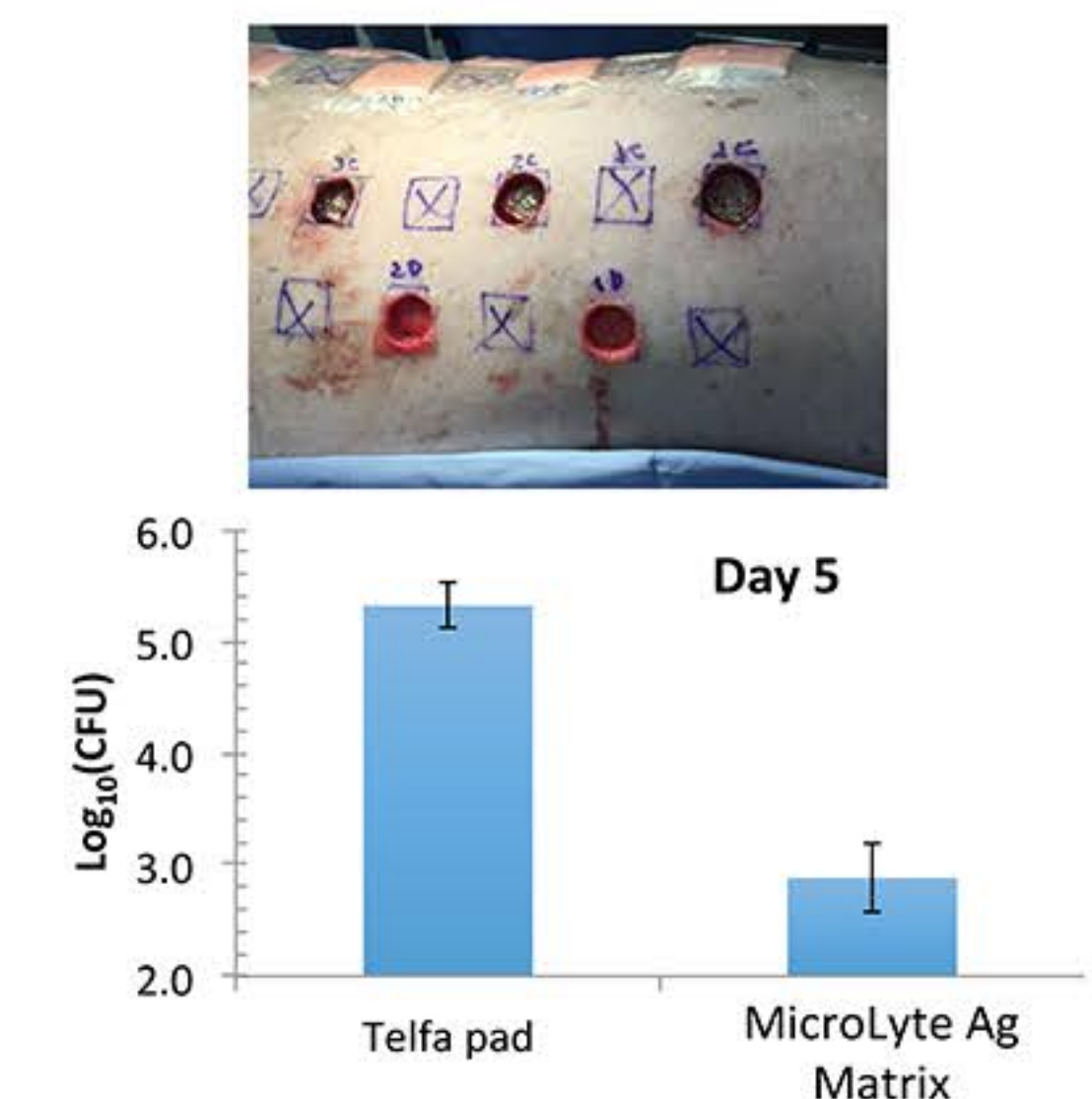
## Porcine Wound Healing Study



(A) Partial-thickness 10 mm dia. wounds on the dorsum of a pig covered with MicroLyte Ag matrix. (B) Re-epithelialization length over granulation tissue bed on day 14 was not significantly different ( $n=20$ ,  $p<0.05$ ). (C) Mean scores (0-3) for inflammation by neutrophilic infiltrates in acute phase of healing (day 7) were not significantly different ( $n=10$ ,  $p<0.05$ ).

## Porcine Wound Infection Study

MicroLyte Ag Matrix reduced bacterial colonization in full-thickness 8 mm diameter excisional porcine wounds (8 month old Mini Yucatan pigs) inoculated with  $2 \times 10^3$  CFU of *P. aeruginosa* day 5 post-surgery. (Top) Gross images of wounds with MicroLyte Ag Matrix conforming to underlying wound-bed (day 0), (Bottom) Bacterial burden in 8 mm dia. harvested wounds (day 5) (Mean  $\pm$  SEM,  $n=10$ ,  $p<0.05$ ).



## MicroLyte Ag Matrix Starts Healing of Chronic Ulcers

**Diabetic Foot Ulcer**  
(68 yr old male;  
open 211 days)



>77% Closure in 26 days

**Non-Pressure Chronic Ulcer**  
(74 yr old female;  
open 44 days)



>90% Closure in 23 days

**Post-Op Pilonidal Cyst**  
(22 yr old female;  
open 37days)



>92% Closure in 32 days

*In a prospective IRB clinical study with 32 patients, 85% of the chronic ulcers, non-healing with available advanced therapies for an average of 21 weeks, had mean 74% wound closure within 4 weeks when treated with MicroLyte Ag Matrix.*