

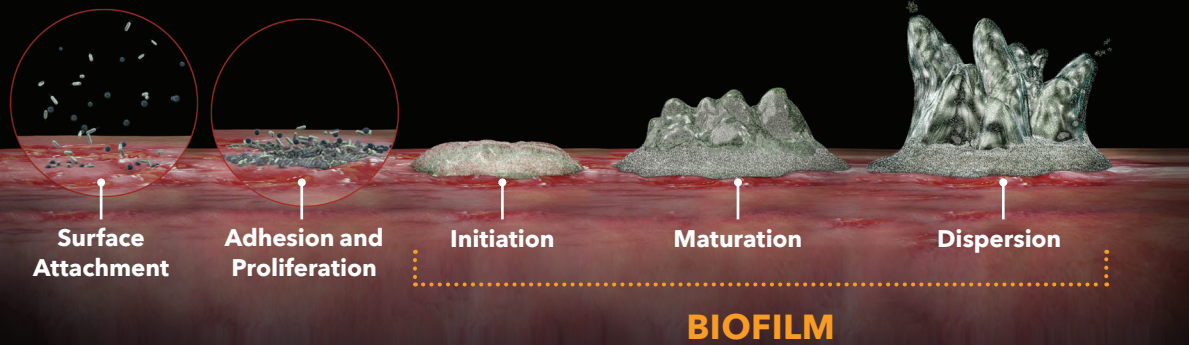
# QUICK FACTS BIOFILM

## MAJOR CAUSE OF DELAYED WOUND HEALING

**What is biofilm?** An aggregate of EPS-encased bacteria tolerant to attack by most immune cells and antibiotics<sup>1</sup>

### How does it form?

Bacteria communicate through electrochemical signaling called quorum sensing. When messaging between bacteria grows strong enough, they begin to behave as a coordinated aggregate. They signal each other to secrete an extracellular polymeric substance, or EPS, that creates a biofilm shield around the bacteria.<sup>1</sup>



**~78%**  
of wounds are infected with bacterial biofilm<sup>2</sup>

**1.7 million**  
U.S. hospital acquired infections per year involve biofilm, contributing to **>500,000** deaths per year<sup>3</sup>

**Biofilm disrupts normal wound healing**

- Resists attack by immune system and antimicrobial agents, including silver<sup>1-7</sup>
- Confers antibiotic resistance<sup>1-7</sup>
- Locks the wound bed in a chronic inflammatory state<sup>1,5</sup>
- Cannot be visually detected, making debridement difficult<sup>1</sup>
- Even after aggressive debridement, biofilm can reform in as little as 24 hours<sup>5</sup>

**\$94 billion per year**  
estimated U.S. cost for biofilm infections<sup>3</sup>

Bacteria in biofilms can become up to **1000 times more resistant to antibiotics** when compared to planktonic counterparts<sup>4</sup>



**Electricity Works Against Biofilm**

**V.Dox Technology is proven to kill biofilm both *in vitro*<sup>6</sup> and *in vivo*<sup>7</sup>**

- **Disrupts** quorum sensing
- **Prevents** biofilm formation
- **Disrupts** existing biofilm infection
- **Restores** functional wound closure

**Procellera™**  
ANTIMICROBIAL WOUND DRESSING  
POWERED BY V.DOX™ TECHNOLOGY

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