

Let's Get to **ZERO** Wound Care Complications



Infection | Pain | Stalled Healing | Limb Loss | Graft Loss

Imbed Biosciences is innovating tissue regeneration with matrix technology offering integrated therapeutic agents designed to simultaneously reduce infection risk, alleviate pain, and support the wound healing environment, with a full line of breakthrough products powered by **SAM™ Antimicrobial Technology**.

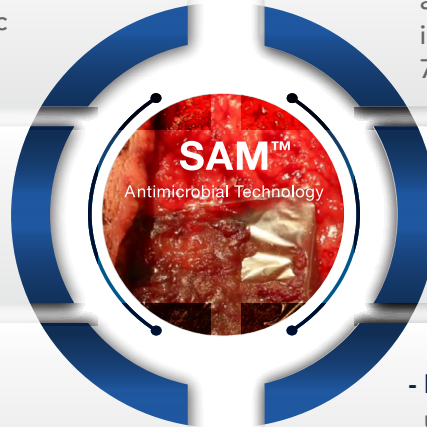


SAM™ Core Technology

- **Fully synthetic**, ultra-thin, porous matrix of bioresorbable polymers, designed to mimic human ECM and resorb within one week^{1,2}

- **Rapidly conforms** to micro-contours of wound bed⁵

- Engineered to maintain a **cytophilic, moist wound healing environment**^{1†}



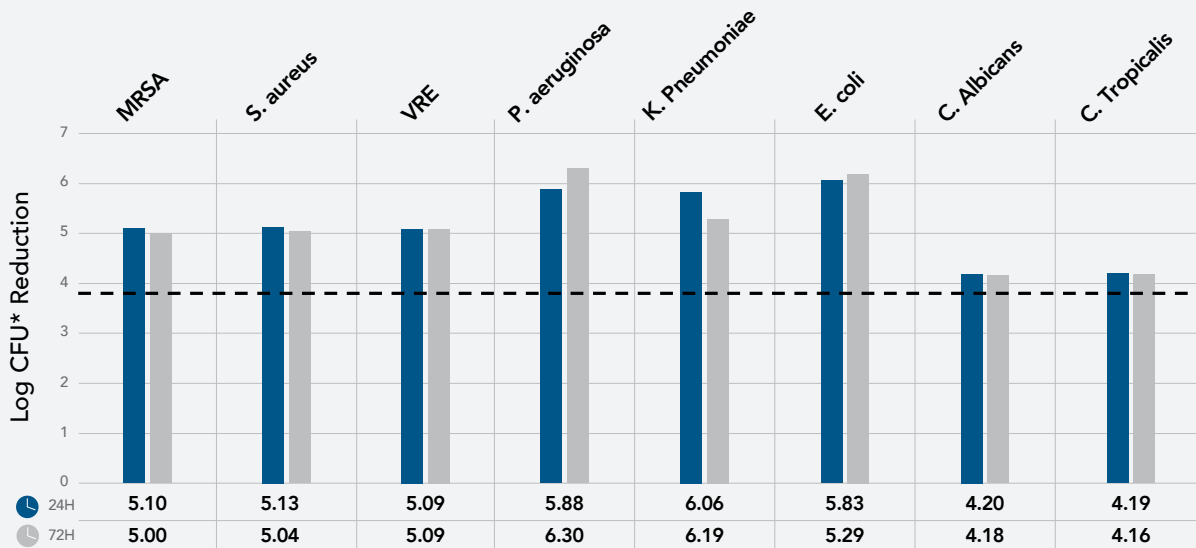
- **Antimicrobial**, with ionic and metallic silver at non-toxic levels, providing 99.99% reduction in microbial burden in the matrix for at least 72 hours^{3,4†}

- **Integrated, therapeutic agents**
 - **Sustained antimicrobial activity** of ionic silver in the matrix⁶
 - **Uniform, unit-dose delivery** of lidocaine HCl in **PainGuard™**⁶

- **Biocompatible**,⁷ **non-pyrogenic**,⁸ and can be used at **onset of tissue repair**, in conjunction with other technologies

510(k)-cleared for use across surgical, burn, trauma, and chronic wounds

Antimicrobial environment reducing bioburden in the matrix^{3,4†}



99.99% Reduction

*CFU = Colony Forming Unit
Note: Reduction compared to untreated controls at time=24 hours and time=72 hours

Also available with

PainGuard™
with Lidocaine

Built on SAM™ Technology, to incorporate broad spectrum **antimicrobial silver + lidocaine HCl** to simultaneously manage infection risk and pain

- **Acute pain relief:** >80% release of lidocaine HCl within 30 minutes⁹
- **Accurate administration:** Uniform, unit-dose of lidocaine comparable to a 4% lidocaine HCl ointment⁹

[†] As demonstrated *in-vitro*

Let's Get to **ZERO**

Per Patient Costs of Complications

\$54K

Infection (SSIs): \$54,000 is the average incremental cost per SSI patient, with a **U.S. hospital averaging 250 SSIs/year.**¹⁰⁻¹⁴ **SSIs extend hospital length stay by ~10 days.**¹³

**\$37K-
\$110K**

Burn Care Complications: Delayed wound healing or skin graft failure occurs in **32% of wound care cases** and cost per patient can range from **\$37,000 - \$110,000.**¹⁵ Infection is a significant predictor of graft loss.¹⁶⁻¹⁸

\$16K

Pain: \$16,000 is the average hospital readmission cost per patient.¹⁹ ~10% of surgical patients are readmitted within 30 days following discharge,²⁰ and **20-28% of readmissions are pain related.**²¹

SAM™ Clinical Support

Infection Risk Reduction

Prospective study of high-risk (diabetic) foot and ankle surgical wounds. (N=22)²²

0%

SSI rate vs. historical 13% expected SSI rate in this high-risk population

100%

heal rate of per-protocol population in an average of 21 days*

*In 2 patients, time to healing was delayed secondary to weight-bearing dehiscence.

Large case series in high-risk arthroplasty patients. (N=100)²³



Supportive Wound Healing Environment

Prospective study of stalled DFUs and VLU non-healing for an average of 40 weeks. (N=32)²⁴

91%

of wounds **healed completely or improved significantly** within 12 weeks

73%

average wound area reduction within 12 weeks

Pain Reduction

Facility evaluations with PainGuard™ across a wide range of wound types highlight early positive results, such as:

In a bunionectomy case: Able to **halt opioid use** 24 hours after surgery with **ZERO pain.**²⁵

In a pediatric split-thickness skin graft donor site case: A typically-used bupivacaine injection was not required for donor-site pain, and **no postoperative pain was reported** during hospitalization.²⁶

Let's Get to **ZERO** – Together.

Product Ordering Information

Surgaflex™

SAM™ Antimicrobial Technology

Product Size (cm)	Product Size (in)	Product Number / Reference	Product Description (sterile, individually packaged)
2 x 3 cm	0.8 x 1.2 in	SF 0203	Surgaflex™, 2 x 3 cm
4 x 6 cm	1.6 x 2.4 in	SF 0406	Surgaflex™, 4 x 6 cm
4 x 20 cm	1.6 x 7.9 in	SF 0420	Surgaflex™, 4 x 20 cm

Surgaflex™

SAM™ Antimicrobial Technology

PainGuard™
with Lidocaine

Product Size (cm)	Product Size (in)	Product Number / Reference	Product Description (sterile, individually packaged)	Total Lidocaine Quantity per Piece (mg)
2 x 3 cm	0.8 x 1.2 in	SFPG 0203	Surgaflex™ PainGuard™, 2 x 3 cm	2.4 mg
4 x 6 cm	1.6 x 2.4 in	SFPG 0406	Surgaflex™ PainGuard™, 4 x 6 cm	9.6 mg
4 x 10 cm	1.6 x 3.9 in	SFPG 0410	Surgaflex™ PainGuard™, 4 x 10 cm	16.0 mg
4 x 20 cm	1.6 x 7.9 in	SFPG 0420	Surgaflex™ PainGuard™, 4 x 20 cm	32.0 mg

Pelashield™

SAM™ Antimicrobial Technology

Product Size (cm)	Product Size (in)	Product Number / Reference	Product Description (sterile, individually packaged)
10 x 23 cm	3.9 x 9.1 in	PS 1023	Pelashield™, 10 x 23 cm
15 x 15 cm	5.9 x 5.9 in	PS 1515	Pelashield™, 15 x 15 cm

Pelashield™

SAM™ Antimicrobial Technology

PainGuard™
with Lidocaine

Product Size (cm)	Product Size (in)	Product Number / Reference	Product Description (sterile, individually packaged)	Total Lidocaine Quantity per Piece (mg)
10 x 23 cm	3.9 x 9.1 in	PSPG 1023	Pelashield™ PainGuard™, 10 x 23 cm	92.0 mg
15 x 15 cm	5.9 x 5.9 in	PSPG 1515	Pelashield™ PainGuard™, 15 x 15 cm	90.0 mg



Easy to store and open



Needs NO refrigeration



Long shelf life
(4-years for Surgaflex™ and Pelashield™,
2-years for PainGuard™ products)

ECM = extracellular matrix

† As demonstrated *in vitro*

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