

**BloodSTOP®**  
CONTROLS BLEEDING FAST



**ADVANCED HEMOSTAT  
WITH WOUNDHEAL®**

## Burn Surgery

Escharotomy · Post debridement · Flap surgery · Post harvesting · donor sites  
Split-thickness skin grafting · Permanent skin graft or allograft site

***BloodSTOP® iX has been widely accepted and used  
in millions of patient cases by medical-surgical  
practitioners worldwide for the last 10 years***

***Saves Blood, Saves Lives, Cost-Effective Treatment***



**Award-winner: BloodSTOP iX on donor  
site treatment, healed in 9 days**



***100% absorbable plant-  
based cellulose matrix<sup>1,2</sup>***

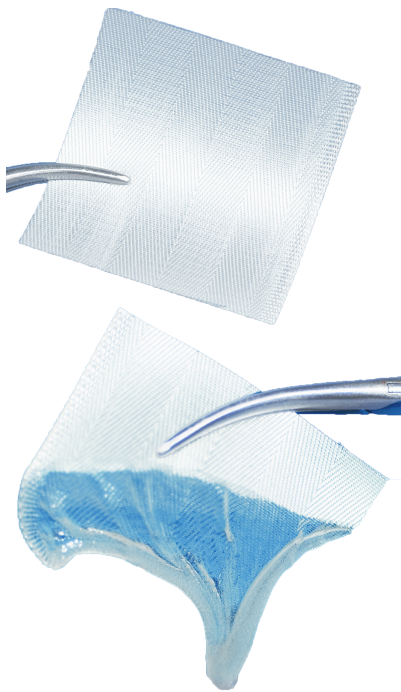
***Power to control bleeding  
Power to heal***

BloodSTOP® iX Advanced Hemostat with WoundHEAL® is a clinically proven, research-based hemostatic dressing and wound healing matrix that provides rapid hemorrhage control, reducing blood loss. It is an all-natural, plant-based, biocompatible, water soluble, etherified sodium carboxymethyl cellulose matrix that utilizes patented technology to achieve superior hemostasis.

BloodSTOP iX Trauma Matrix achieved a 100% survival rate in extremity arterial hemorrhage in a US military study<sup>3</sup>. Research results have been proven worldwide on burn and trauma surgery, prehospital trauma wound, and in battlefield.

Well-established as an ideal hemostatic wound dressing, BloodSTOP iX has demonstrated in an animal model the ability to modulate endogenous tissue cytokines, as well as to bind to cellular receptors on cell membranes and thereby activating Wnt/Frizzled cellular signaling. This leads to activation of endogenous stem cells and cytokines, which brings about angiogenesis and tissue regeneration. Additionally, it has shown to decrease inflammatory cytokines, thereby reducing the infection and inflammation risk, and promoting fast wound healing<sup>4,5</sup>.

## Features and Benefits



- **Rapid hemostasis under a minute<sup>6</sup> (from minor to larger wounds)**
- **Matrix turns into a translucent gel upon contact with blood and exudates, monitors, sticks, seals & protects wound without any blood oozing<sup>6</sup>**
- **No rebleeding and adhesion upon removal of secondary dressing coverage<sup>1,2,3</sup>**
- **100% absorbable and biodegradable without any residue, used on patients with blood thinner medications (CE)<sup>1,2</sup>**
- **Prevents contamination, reduces the risk of infection and inflammation**
- **Softens, loosens, and removes slough and necrotic debris from the wound bed**
- **pH neutral: ~7.2, natural plant-based, nontoxic, no irritation, nonexothermic, reducing pain upon application and removal**
- **Creates a moist wound environment that assists with natural granulation and epithelialization, promotes wound healing and proliferation of tissue growth**
- **No reported adverse patient events**
- **Conforms to any wound: acute, chronic, surgical and trauma injury wounds**

## Why use BloodSTOP iX for burn surgeries?

- **Decreases blood loss and operative time**
- **Facilitates more aggressive operation due to control of hemorrhage**
- **Minimizes ligation and cauterization**
- **Improves healing rates**
- **Keeps moist field and does not interfere with graft uptake**
- **Maintains skin integrity throughout the burn recovery phase**
- **Can be used with negative pressure wound therapy (NPWT)**

<sup>1</sup> Ferretti L, Qiu X, Villalta J, Lin G. Efficacy of BloodSTOP iX, Surgicel, and Gelfoam in Rat Models of Active Bleeding From Partial Nephrectomy and Aortic Needle Injury. *Urology*. 2012;80(5):1161.e1-1161.e6. doi:10.1016/j.urolgy.2012.06.048

<sup>2</sup> BloodSTOP iX has European Union CE Class III absorbable implant and Class IIb topical wound certification, and for use with anticoagulant medications (blood thinners). BloodSTOP iX currently has US FDA 510(k) clearance for topical wound hemostasis.

<sup>3</sup> Li H, Wang L, Alwaal A et al. Comparison of Topical Hemostatic Agents in a Swine Model of Extremity Arterial Hemorrhage: BloodSTOP iX Battle Matrix vs. QuikClot Combat Gauze. *Int J Mol Sci*. 2016;17(4):545. doi:10.3390/ijms17040545

<sup>4</sup> Peng D, B. Reed-Maldonado A, Banie L, Wang G, Lin G, F. Lue T. Carboxymethylcellulose Activates Dermal Cells and Adipose-Derived Stem Cells Through Wnt/ $\beta$ -catenin Pathway. *J Surg Res (Houst)*. 2021;04(01). doi:10.26502/jsr.10020117

<sup>5</sup> Ju S, Wang K, Qiao L et al. Application of BloodSTOP iX Wound Heal Nanocellulose Matrix for Burn Wound Care. *J Surg Res (Houst)*. 2021;04(01). doi:10.26502/jsr.10020105

<sup>6</sup> Ethox International, Rush, NY, Hemostasis Assessment of BloodSTOP; BloodSTOP iX, GLP-2006-0332, 2006.

# Histology Post Application of BloodSTOP iX

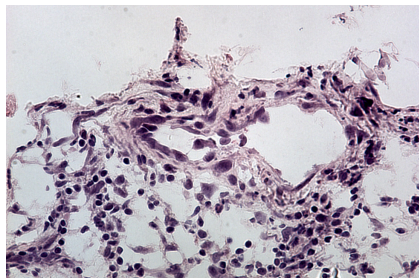


Figure 1. After debridement

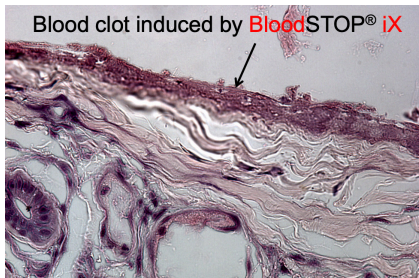


Figure 2. Hemostasis with BloodSTOP iX

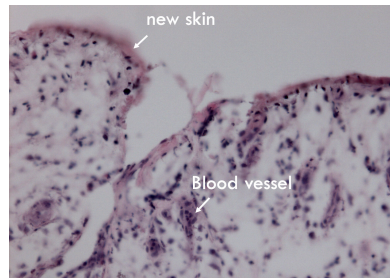
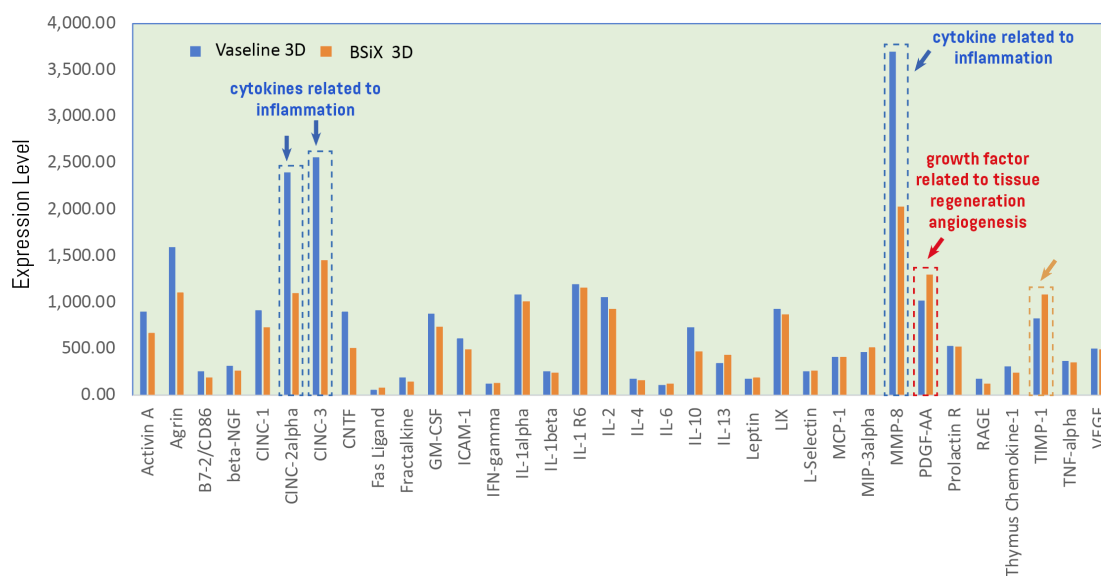


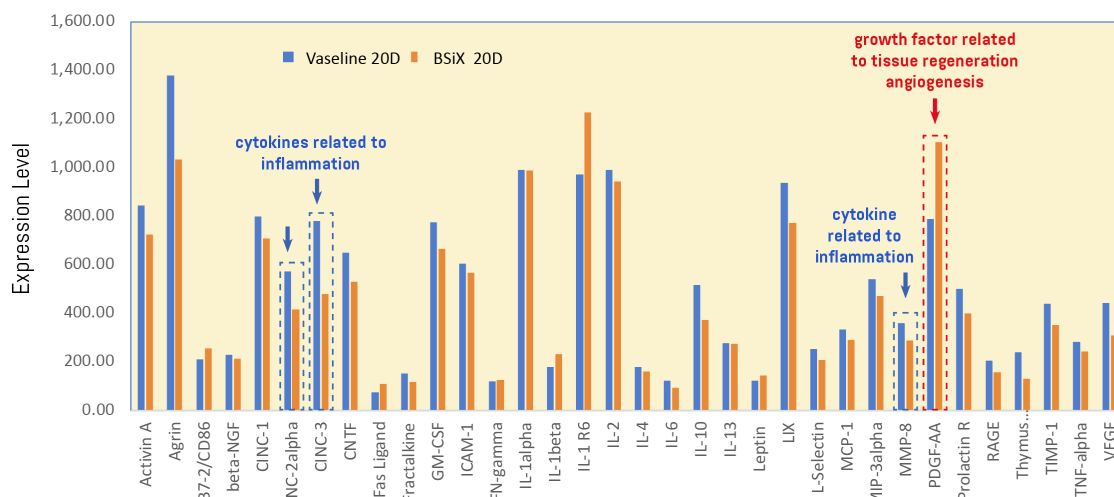
Figure 3. Healing with BloodSTOP iX

## Modulation of Growth Factors in Promotion of Tissue Regeneration in Burn Injury Model

### Cytokine array BloodSTOP iX vs Vaseline Gauze (3 Days)



### Cytokine array BloodSTOP iX vs Vaseline Gauze (20 Days)

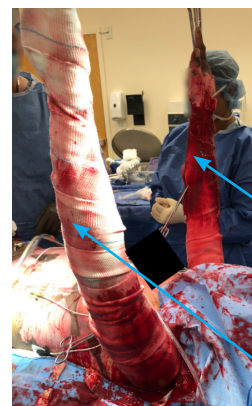




# Fast and Cost-Effective Results in Burn Surgery

## Faster Hemostasis - Under a Minute

40% TBSA* Burn	Treatment Product	Avg. Hemostasis Time	Avg. Cost	
Skin Graft Site (Debridement Site)	BloodSTOP iX	Under a Minute	\$20,500	10× Lower Cost
	Traditional Treatment**	2 hours	\$190,000	
Donor Site	BloodSTOP iX	Under a Minute	\$250	10× Lower Cost
	Traditional Treatment**	1-2 hours	\$2,500	



Arm without BloodSTOP iX covered by a second dressing; still oozing.

Arm with BloodSTOP iX covered by a second dressing; bleeding stopped.

## Faster Healing

40% TBSA* Burn	Treatment Product	Avg. Healing Time	Avg. Cost	
Skin Graft Site (Debridement Site)	BloodSTOP iX	21 days	\$109,668	8× Lower Cost
	Traditional Treatment**	59.4 days or more	\$791,687	
Donor Site	BloodSTOP iX	9 days	\$ 500	50× Lower Cost
	Traditional Treatment**	28 days	\$ 25,000	
Hospital Stay	BloodSTOP iX	10 days	Cost-effective	4× Faster
	Traditional Treatment**	28 days or more	Expensive	



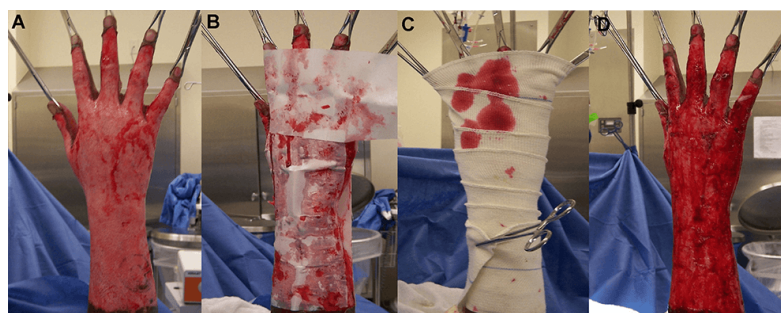
Immediate Hemostasis with BloodSTOP iX



Re-healing of donor site at 7 days from 2nd harvest

\* Total body surface area.

\*\* Usually consists of: petroleum dressing for donor site healing; epi-soaked collagen and silica-based compression dressing, suture ligation, and electrocautery for hemostasis of burn; dermal substitutes, silver products, and antimicrobials for healing of burn.



- A. Intraoperative predebridement
- B. Application of BloodSTOP iX
- C. Wrapping of WoundFLEX Compression Dressing
- D. Removal



Post 7 days with 100% graft uptake



Donor site healed in 7 days

Product Name	Item #	Size	Quantity
BloodSTOP® iX Advanced Hemostat with WoundHEAL®	BS-iX-17	4" × 8" (10 × 20cm)	12 pc/box
	BS-iX-20	2" × 14" (5 × 35cm)	12 pc/box
BloodSTOP® iX Trauma Matrix, Advanced Hemostat with WoundHEAL®	BM-iX-24	3" × 24" (7.5 × 60cm)	1 pc
	BM-iX-25	12" × 12" (30 × 30cm)	1 pc

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**LifeScience PLUS**  
REVOLUTIONARY WOUND CARE

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