

# **TECHNOLOGY OVERVIEW**

# **Vomaris Antimicrobial Wound Dressings**

V.Dox<sup>™</sup> Technology powers Vomaris's Antimicrobial Wound Dressings, the only bioelectric antimicrobial wound care products in the world. These dressings are robustly antimicrobial without the use of high-volume silver ion release or antibiotics. The dressings can be used in virtually any type of partial or full thickness wound, including surgical incisions; diabetic, venous, and pressure ulcers; and first- and second-degree burns,

Procellera<sup>™</sup> Antimicrobial Wound Dressings from Vomaris reduce the risk of infection<sup>1-5</sup> and promote the skin's natural healing process<sup>6</sup> to optimize outcomes.

# Procellera<sup>™</sup> Antimicrobial Wound Dressing

powered by V.Dox<sup>™</sup> Technology

# V.Dox Technology

V.Dox Technology is a one-of-a-kind bioelectric technology that is redefining infection control and wound healing.

# **Microcell batteries**

• V.Dox Technology employs a patented matrix of microcell batteries<sup>7</sup> that are embedded in the wound dressing and activated or 'turned on' by addition of moisture, which acts as a conductive medium.

# Conductive medium

A conductive medium is any solution that permits the • flow of electrons. Examples of highly conductive media are saline solution, wound hydrogels, and certain serums.

# Electricity

When V.Dox Technology's batteries are activated, electricity is wirelessly generated across the dressing through electron exchange in a process known as an oxidation-reduction, or REDOX reaction.<sup>6</sup>

# How It Works

The skin naturally creates and uses its own electrical energy, which is essential to the healing process. Electrical fields in the skin create surface energy potential, known as transepithelial potential (TEP). When skin is wounded, a change in electrical potential occurs. This is called the 'current of injury', and it drives cell migration and wound healing. V.Dox Technology is designed to mimic the skin's internal electrical activity, harnessing the power of electricity to reduce the risk of infection while supporting the body's natural healing process.

**VOMARIS WOUND CARE, INC.** 1911 East Fifth Street Tempe, AZ 85288 USA +1 (480) 921-4948 (866) 496-8743

V.Dox Technology incorporates microcell batteries imbedded in

the dressing that generate electricity when activated by moisture.







# **Scientific and Clinical Evidence**

Vomaris's technology is scientifically and clinically validated by 29 peer-reviewed publications. Two additional randomized controlled trials are in progress.

Studies with Procellera dressings have shown:

### Reduced risk of infection

- Killed a broad spectrum of pathogens, including multidrug resistant and biofilm-forming bacteria, with sustained antimicrobial impact for up to 7 days<sup>1-4</sup>
- Disrupted existing biofilm infection and prevented biofilm from forming<sup>5</sup>
- Demonstrated electricidal antimicrobial impact vs. silver dressings<sup>1</sup>



53% faster healing at 1 week vs. SOC (p=.015)

### Faster wound healing

- 53% more epithelialized at 1 week with Procellera vs. standard of care (SOC)<sup>6</sup>
- 2.7x faster healing vs. SOC<sup>8-10</sup>

### Reduction in treatment costs

52% average reduction in therapy cost per patient with Procellera vs. SOC<sup>8-10</sup>

### References:

- 1. Banerjee J, et al. (2015). Silver-Zinc Redox-Coupled Electroceutical Wound Dressing Disrupts Bacterial Biofilm. PLoS One, 1-15.
- 2. Kim H, Izadjoo M. (2015). Antibiofilm Efficacy Evaluation of a Bioelectric Dressing in Mono- and Multi-Species Biofilms. J Wound Care, S10-S16.
- 3. Data on file, report #SLM090512CMC01F.
- 4. Nuccitelli R. (2003). A Role for Endogenous Electric Fields in Wound Healing. Curr Top Dev Biol, 58, 1-26.
- 5. Kim H, et al. (2014). Antibacterial Efficacy Testing of a Bioelectric Wound Dressing Against Clinical Wound Pathogens. Open Microbiol J, 15-21.
- 6. Blount A, et al. (2012). The Use of Bioelectric Dressings in Skin Graft Harvest Sites: A Prospective Case Series. J Burn Care Res, 354-357.
- 7. Park SS, et al. (2014, January). Measurement of a Microelectric Potentials in a Bioelectrically-Active Wound Care Device in the Presence of Bacteria. J Wound Care, 24(1), 23-33.
- Brattain K. (2013). Economic Analysis of Wound Healing Costs: Superior Outcomes and Cost Savings with a Microcurrent Generating Device Compared to Other Advanced Wound Care Products. Magellan Medical Technology Consultants, Inc. Presented at the Symposium on Advanced Wound Care, Las Vegas, NV, 2013; (suppl):D6.
- 9. Fife CE, et al. (2012). Wound Care Outcomes and Associated Cost Among Patients Treated in US Outpatient Wound Centers: Data from the US Wound Registry. Wounds, 24(1),10-17.
- 10. Whitcomb E, et al. (2013). Demonstration of a Microcurrent-Generating Wound Care Device for Wound Healing within a Rehabilitation Center Patient Population. J Am Coll Clin Wound Spec, 4(2),32-39.

More information: <u>www.vomaris.com</u> Media requests: <u>mary.maijer@vomaris.com</u>

### **VOMARIS WOUND CARE, INC.**

© 2023 Vomaris Wound Care, Inc. All rights reserved. Vomaris, Procellera, and V.Dox are trademarks of Vomaris Innovations, Inc. JumpStart is a registered trademark of Arthrex, Inc. K-185 Rev A