

ThermoReversible Technology Provides a Pathway to Better Wound Outcomes

BACKGROUND

The patient is a 54-year-old female who had a surgical procedure for back pain with fusion of the lower back in 2017. The patient subsequently had multiple procedures from the orthopedic and neurosurgeons for infected hardware which had to be removed. The patient was first referred to the wound care clinic at Tucson Medical Center in 2018.

The patient was then later referred to our clinic in mid-2018. At that time the donor site for the pelvis was infected along with the wound. Multiple procedures and partial closures of the wound were performed over the next four years. In 2020 the patient moved out of state and was lost to follow up. Six months later the patient returned to Tucson where her care was initiated again. At this time the patient had multiple weekly visits for debridement at our wound care clinic. The care involved amniotic tissue and multiple debridements. These treatments showed some improvement for short periods of time. Two secondary closures were performed, however each time the wound reopened and was infected.

PROTOCOL CHANGE

The patient's wound progress became stagnant with no significant change from January to August of 2022. At that time a new protocol was initiated. The wound was debrided and a regiment of ThermoSet Wound Cleanser and ThermoSet Wound Hydrogel was initiated. The wound was re-cleansed every three days and the wound hydrogel was re-applied.

OUTCOME

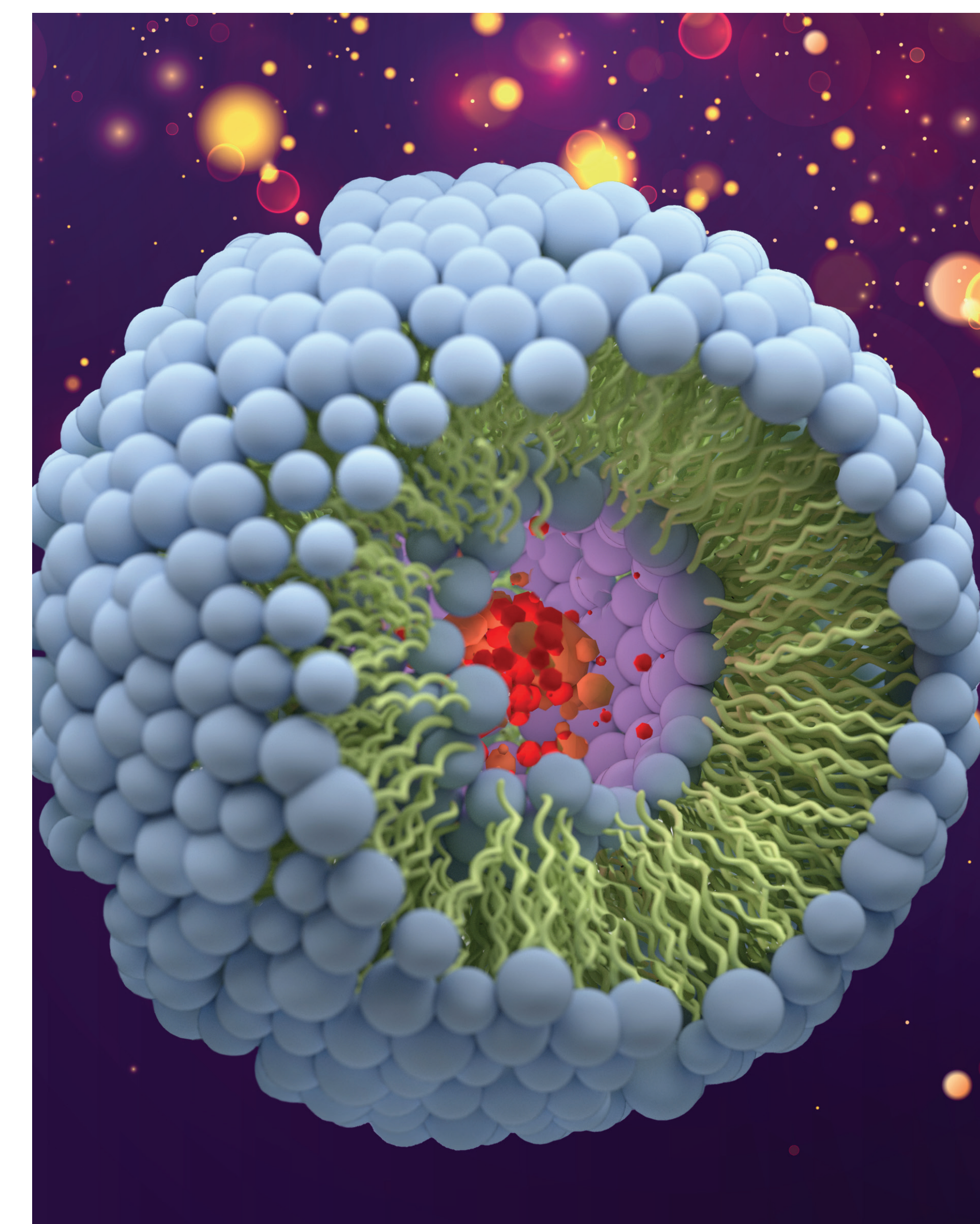
At commencement of the protocol change in August the width of the wound was 1.5 cm and the depth of the wound was 1 cm. These measurements had been relatively constant with no significant change since January. With the commencement of treatment improvement was clearly visible and was progressing toward closure within weeks. As of 11/11/22 the width of the wound has reduced to .8 cm and the depth of the wound has been reduced to .4 cm. Based upon the patient's previous response to treatment, the use of ThermoSet Wound Cleanser and ThermoSet Wound Hydrogel provided a much better outcome with rapid improvement of the wound healing.

DISCUSSION

The patient's wound was irregular in shape and had aspects of tunneling. Previously selected treatments did not adequately fill the wound space or stay in constant contact with the wound bed. ThermoSet formed an identical mold of the wound's shape and stayed in place due to its thermodynamics. When the product was

applied, at room temperature, it was water thin. Once within the wound, at body temperature, a thick perfectly molded gel quickly formed. The wound environment remained moist, pH compatible and temperature stable. This combination caused the wound to reactivate its normal healing process and close within weeks.

MILLIONS OF MICELLES CARRY PRESERVATIVES TO DESTROY BIOFILM



ThermoSet™ Technology encapsulates a unique preservative system and distributes its powerful action throughout the millions of micelles to insure long term protection for the hydrogel against microbial contamination. The preservative system is a broad-spectrum antimicrobial that has been shown to be effective against a wide range of bacteria, fungi, and viruses. The distribution of the preservative throughout the millions of micelles creates a large surface area over which the preservative can act, providing long-term protection against microbial contamination.

CASE STUDY

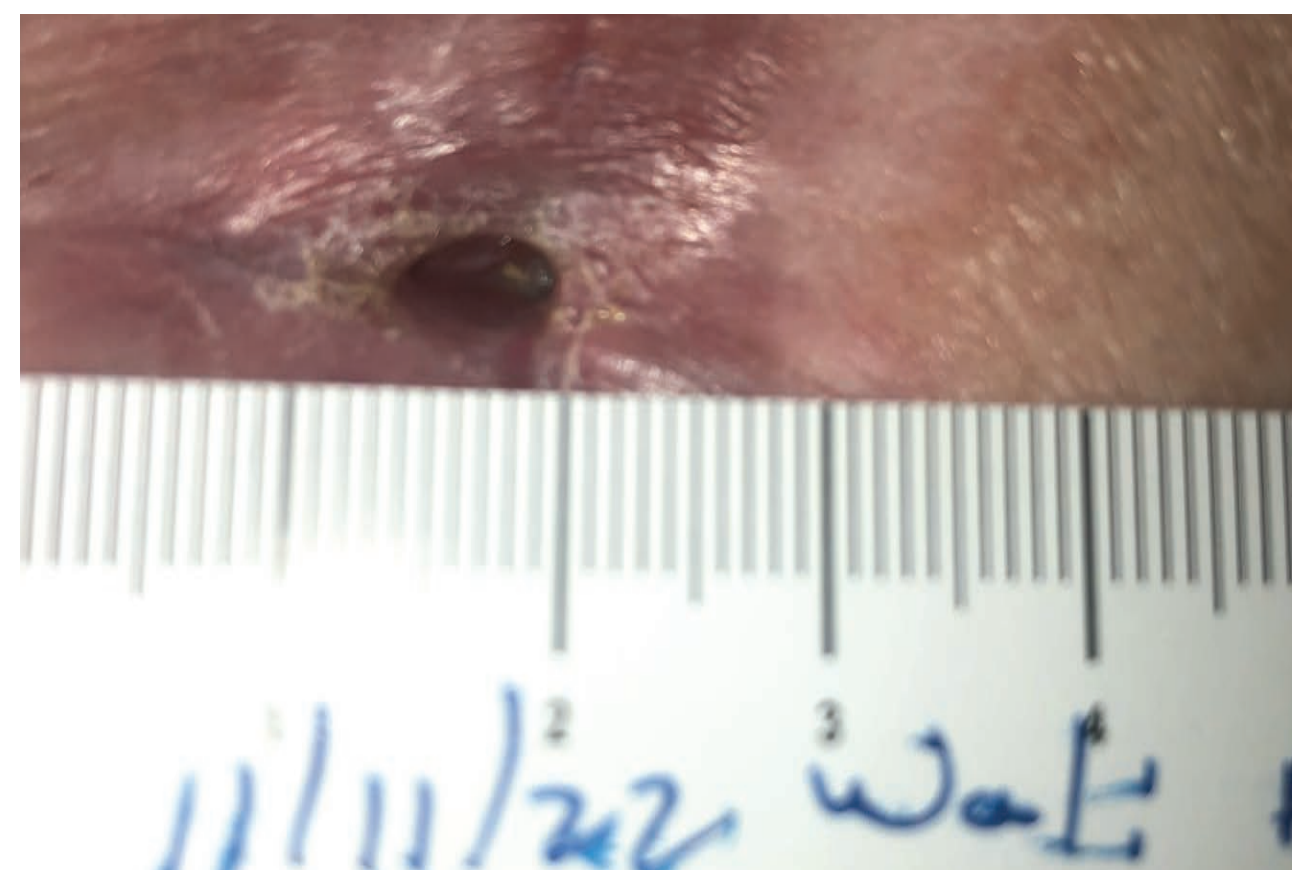
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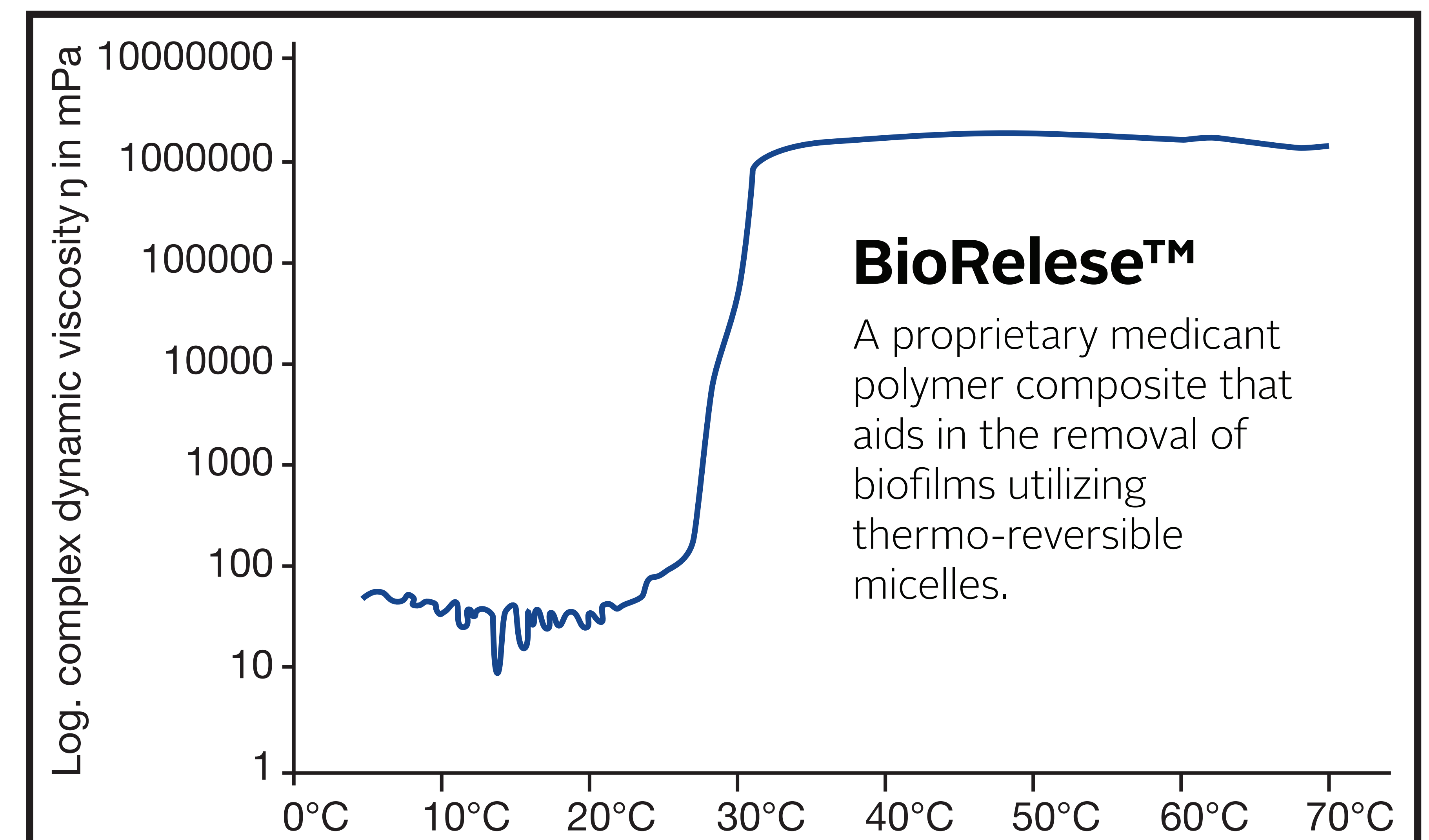
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11/18/22



THERMOREVERSIBLE: FROM WATER-THIN TO A THICK HYDROGEL



INVESTIGATORS

Michael Lavor, MD is Medical Director of Saguardo Wound Care Clinic. He served as Dept. Chairman for General and Vascular Surgery at Tucson Medical Center, and Chief of Surgery and Staff at El Dorado Hospital. He is board certified in general surgery and fellow in the American College of Surgeons. He's past president of the Rocky Mountain Vascular Surgical Society, a Fellow in the Southwestern Surgical Congress.

He was Commander/OIC of a surgical base in Afghanistan, 2012-2013. **Jessica Barcelo (CCMA)** is a clinically certified medical assistant. She served two years as clinical lead for an urgent care center with an additional two-years experience as a wound care specialist.



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