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Access Scientific announces the first non-coated intravascular catheter material—ChronoFlex C[®] with BioGUARD™--proven in vitro to inhibit bacterial attachment and biofilm formation

SAN DIEGO -- Access Scientific, LLC today announced publication, in the journal *Medical Devices: Evidence & Research*, of a groundbreaking study proving the superiority of POWERWAND™ catheter material, ChronoFlex C[®] with BioGUARD™ (as compared with the standard polyurethane) with respect to bacterial attachment and biofilm formation.

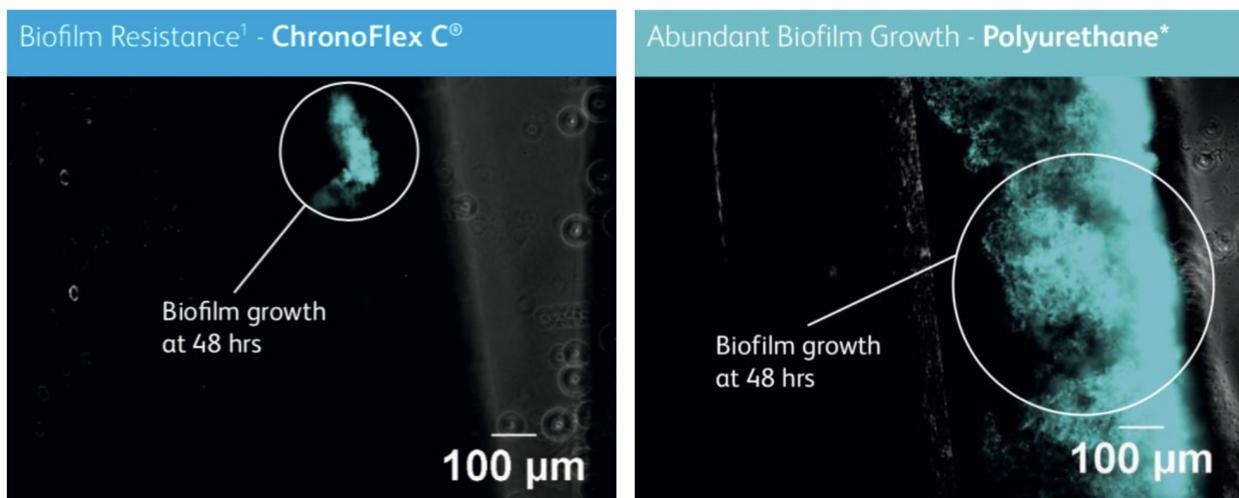
Utilizing state-of-the-art fluorescent microscopy, the study proved a 70% reduction ($p = 0.0133$) in bacterial attachment and biofilm formation using the POWERWAND. Perhaps equally stunning, those bacteria that could attach to the POWERWAND had a 1.5 times greater chance of dying as compared with bacteria attached to the standard polyurethane catheter.



Said the study's principal author, Rahul Pathak MD, "These are truly exciting results that may have far-reaching implications for safer vascular access worldwide. Think of it—if the bacteria can't attach, they can't infect."

In early studies, certain antimicrobial catheters containing chlorhexidine have been shown to decrease bacterial colonization by 44-45% when compared with standard polyurethane. However, recent reports of potentially fatal chlorhexidine anaphylaxis have caused physicians to hesitate in choosing such coated catheters. This new study suggests that by using non-coated catheters made of ChronoFlex C with BioGUARD, bacterial attachment and subsequent biofilm formation—steps that lead to CRBSIs--_can be significantly inhibited without the risk of allergy and anaphylaxis. In support, the company reports over 35,000 catheter-days of published POWERWAND use without a single reported catheter-related bloodstream infection.

"The BioGUARD technology involves multiple proprietary processes that alter the surface characteristics of POWERWAND catheters, making it harder for bacteria to attach and grow," explained Steve Bierman MD, the company's founder and inventor of the BioGUARD process. "For example, scientists have known for some time that micro-patterning on flat abiotic surfaces can prevent bacterial attachment and growth. We believe this is the first time such surface alterations have been proven effective with extruded tubing. The possible implications for infection prevention in vascular access and other implanted devices are exciting and extensive."



Central line associated bloodstream infections (CLABSIs) have been a central focus of CDC and other infection control organizations for years. Now the eighth leading cause of death in the USA, an estimated 41,000 CLABSIs occurred in 2009 with an attributable mortality of 14-40%. Of equal concern are arterial lines, which have been shown in multiple studies to have nearly the same infection rates as central lines.

Findings from the present study have encouraged Access Scientific to expand its BioGUARD technology application from midlines to extended-dwell catheters, central venous access devices and arterial lines. The Arterial WAND™ is expected to launch in the first quarter 2019, with ChronoFlex C central lines scheduled to follow soon thereafter. The POWERWAND EDC (3Fr, 6cm. Extended-Dwell Catheter) was launched in 2017 as the first-ever truly extended dwell catheter and is rapidly setting a new standard of care throughout the country.

“The need for these innovative products has never been greater, as peripheral IVs are staying in longer due to ever-increasing patient acuity and central lines experience significant levels of catheter-related blood stream infections, both creating greater risk of infection,” stated Jeff Goble, Access Scientific’s CEO.

Access Scientific, LLC is a broad spectrum vascular access/infection prevention company. POWERWAND midlines and extended-dwell catheters set the new standard for safety and ease of use. Learn more about the WAND family of products and WAND science at www.accessscientific.com.