

Medical Device Network

EVÖQ Nano's antimicrobial platform proves effective against HAIs

EVÖQ Nano will target the catheter market with EVQ-218 nanoparticle, where healthcare-associated infections often manifest.

Jenna Philpott | February 23, 2024



Evöq Nano are targeting the catheter market, which will be worth \$861.6m in the US in 2030, according to GlobalData. Credit: nito via Shutterstock.

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Shaun Rothwell, EVÖQ Nano CEO

US-based nanoscience company EVÖQ Nano's antimicrobial medical device platform has demonstrated effectiveness against the world's leading pathogens implicated in healthcare-associated infections (HAIs).

Extensive lab tests, conducted in collaboration with leading catheter manufacturers, revealed that catheters embedded with EVÖQ Nano's EVQ-218 nanoparticle demonstrated a strong antibacterial,

antifungal, and antibiofilm efficacy, including a 7-8 log reduction in *Staphylococcus aureus*, a 6-7.5 log reduction in *Pseudomonas aeruginosa*, and a 5-6.5 log reduction in *Candida albicans* – key pathogens in HAIs.

Often linked to indwelling devices such as catheters, notably catheter-associated urinary tract infections (CAUTIs), HAIs stand as a primary concern. By integrating EVÖQ Nano's EVQ-218 throughout the polymer, medical devices gain intrinsic antimicrobial defence. The company is strategically focusing on the catheter market, which, according to a market model on GlobalData's Medical Intelligence Center, will be worth \$861.6m in the US in 2030 (urinary catheters market).

EVQ-218, a non-ionic silver nanoparticle, halts bacterial growth by capturing sulphur, which hampers bacterial metabolism without harming cell structures or disrupting the cell wall. This prevents the onset of bacterial mutations that lead to antimicrobial resistance. Silver has a history of curbing bacterial growth in wounds, commonly used amid rising antibiotic resistance. However, silver ions tend to convert to silver sulphide or silver chloride, diminishing antimicrobial effectiveness.

Earlier this year, Roche's chairman of the board of directors Severin Schwan emphasised the importance of tackling antimicrobial resistance at the World Economic Forum Annual Meeting in Davos, Switzerland, which took place between 15–19 January 2024. Schwan cited companies leaving the antimicrobial sector due to the perception that there is no sustainable business model, as one reason there is a lack of incentive in the area.

In the announcement accompanying the data, EVÖQ Nano CEO Shaun Rothwell said: "With its proven ability to resist microbial growth and biofilm formation without triggering antimicrobial resistance, this platform has the potential to significantly impact device-related infections — much like the antibiotic revolution transformed infectious disease treatment a century ago."