



Equipping medical devices with antimicrobial properties to reduce healthcare-associated infections.

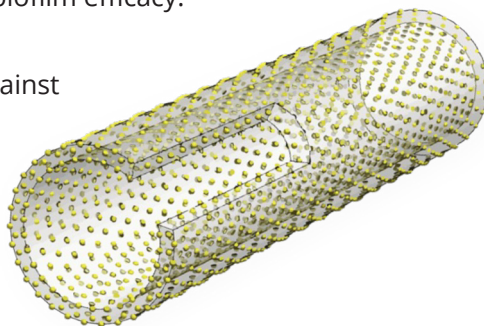
EVÖQ MedTech is a development-stage nanotech innovator bringing a breakthrough antimicrobial platform to the medical device industry.

With EVÖQ's antimicrobial nanoparticles integrated into the material manufacturing process, the next generation of medical devices can be intrinsically equipped with safeguards against pathogenic microorganisms.

## Proven Antimicrobial Efficacy

Validated lab testing of catheters, luers, and fittings manufactured with EVÖQ's proprietary antimicrobial nanoparticles infused throughout the polymer demonstrated:

- Strong antifungal and antibiofilm efficacy.
  - *4+ log reduction*
- Broad-spectrum activity against all bacterial strains tested.
  - *64 strains*
- No degradation of antimicrobial activity; sustained presence for the life of the product.



## Nanotech Breakthrough

EVQ-218 is the first and only non-ionic silver nanoparticle, opening possibilities for widespread therapeutic use.<sup>1,2</sup> The ions in traditional nanosilvers have hindered its medical applications due to toxicity risks and limited stability. With its non-ionic properties, EVQ-218 delivers effective antimicrobial action devoid of cytotoxicity.

## Novel Mechanism of Action

The antimicrobial efficacy of EVQ-218 is rooted in its ability to disrupt bacteria's metabolic processes, without triggering antimicrobial resistance (AMR).

## EVQ-218

- **Stops bacterial growth by sequestering sulfur.**
- **The sequestration of sulfur inhibits metabolic activity within the bacterial cell without compromising cell structures or lysing the cell wall. This blocks activation of bacterial mutations that contribute to AMR.**
- **In contrast, nanosilvers with ions rupture cell walls, triggering activation of AMR pathways.**

## Combating Healthcare-Associated Infections (HAI)

This antimicrobial nanoplatform is well positioned to target the 1 million healthcare-associated infections (HAIs) caused by indwelling urinary catheters annually in the U.S.<sup>3</sup> Bloodstream, pulmonary, and urinary tract infections are a significant cause of morbidity and increased mortality globally.<sup>4</sup>

### The Impact

- For infections that are multidrug resistant, the Centers for Disease Control and Prevention (CDC) estimates treatment costs exceed **\$55 billion** annually.<sup>5</sup>
- Up to 1/3 of all catheter-associated urinary tract infections (CAUTI) in the U.S. are drug resistant,<sup>3</sup> with annual treatment cost exceeding **\$13 billion**.<sup>5</sup>
- Treatment costs for central line-associated bloodstream infections (CLABSI) from central-venous subclavian, internal jugular, and femoral catheters<sup>6</sup> are estimated to exceed **\$12 billion** annually.<sup>5</sup>

Current antibacterial catheters externally coated with silver lose efficacy once inserted, due to natural sloughing of the material coupled with the short life of silver ion emissions. This combination hinders the antimicrobial activity of current products.

By embedding EVÖQ MedTech's nanoparticles directly into the polymer used to make tubing and catheters, manufacturers can combat drug-resistant bacteria and significantly reduce HAI incidence.

### References

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