# Can microrobots improve the safety of dairy products?

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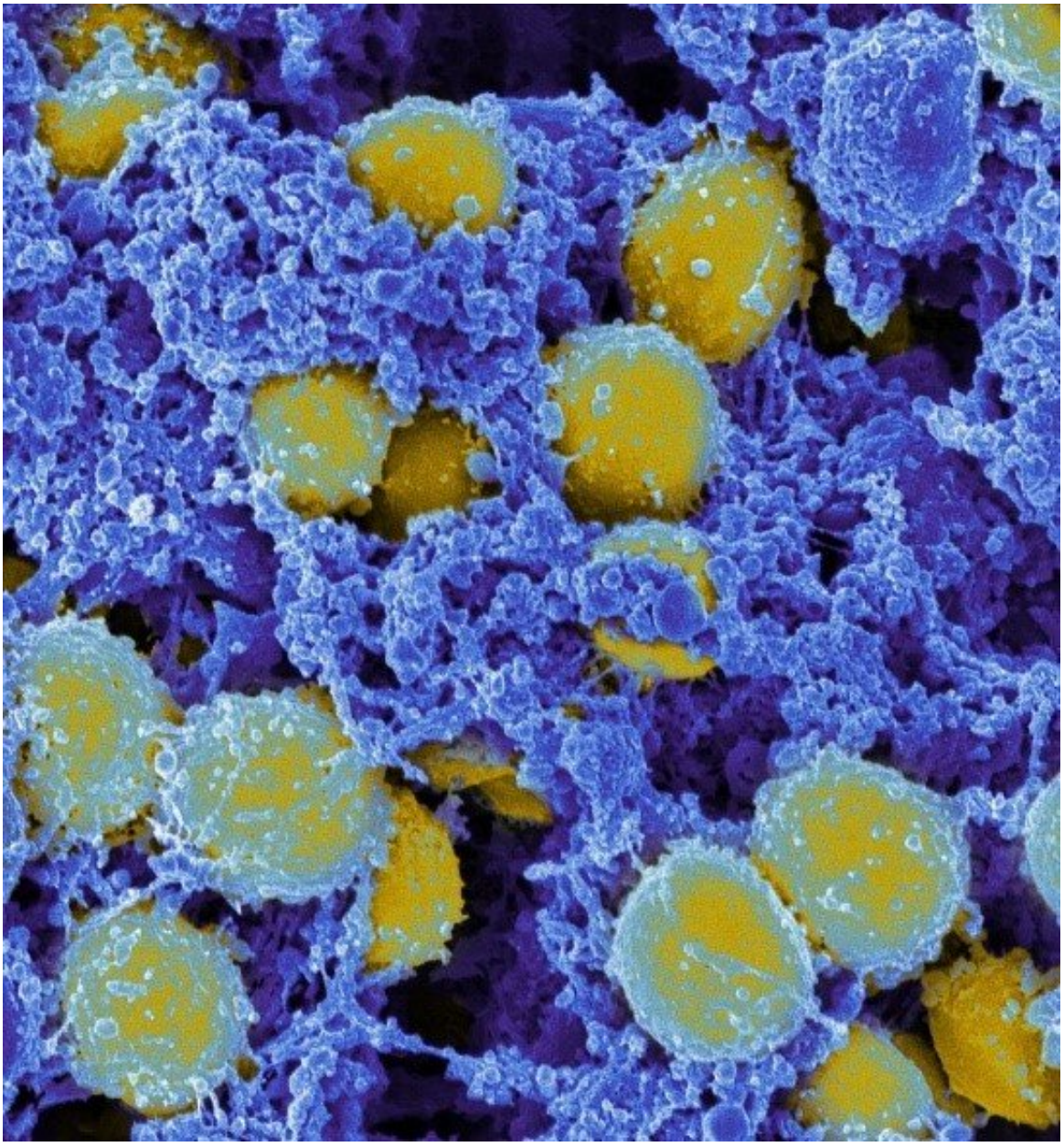

Scanning electromicrograph of Staphylococcus aureus bacteria. Credit: NIAID

The Staphylococcus aureus bacterium commonly causes infections in dairy cows, leading to inflammation of the udder tissue, or mastitis, and lower milk quality. In research published in the journal *Small*, investigators developed magnetic microrobots that can efficiently bind and isolate S. aureus.

The team used their nanoscale "MagRobots," which are loaded with antibodies against an S. aureus protein, to remove S. aureus from milk, without affecting other naturally occurring microbes.

"This research brings microrobotics towards a new frontier: animal veterinary health and safe foods," said corresponding author Martin Pumera, Ph.D., of the University of Chemistry and Technology Prague. "Microrobots, due to their size, are able to solve challenges faster than tradition technologies."

**More information:** Swarming Magnetic Microrobots for Pathogen Isolation from Milk, *Small* (2022). DOI: 10.1002/smll.202205047

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