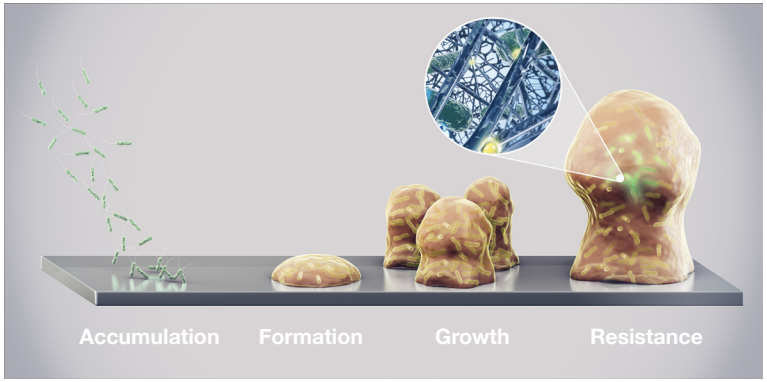
NEXT SCIENCE™

Mechanism of Action

Biofilm Formation, Growth, and Resistance

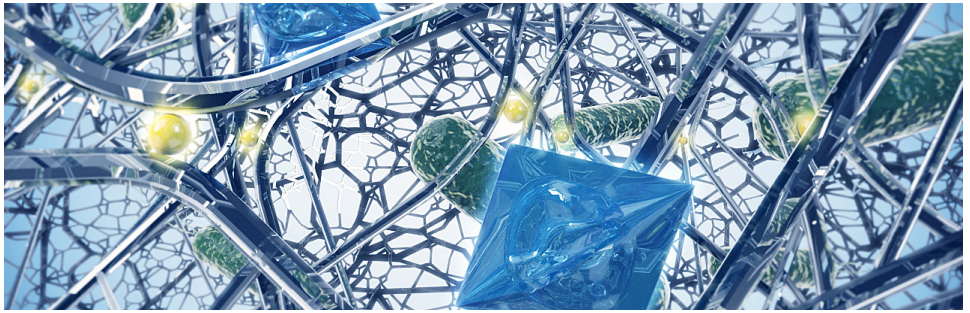
The bacteria in a biofilm are encapsulated by a spongy polymer network shell, which protects them from attack. The polymers in this coating are ionically cross-linked by metal ions.



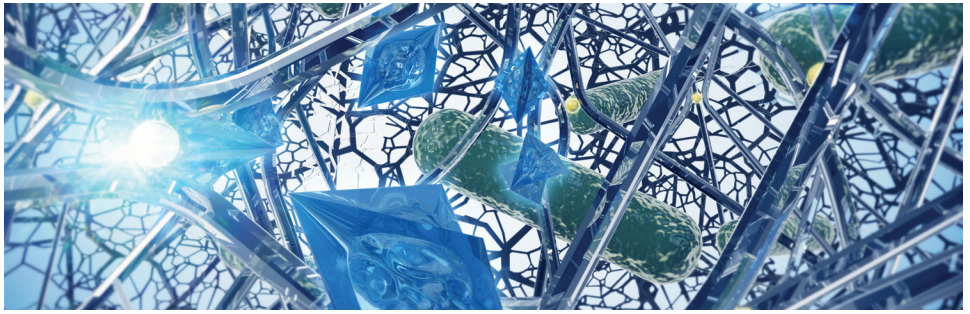
This polymer shell:

- prevents treatment chemicals/antibiotics from reaching the bacteria
- traps waste products from the bacteria which react with treatment chemicals
- allows bacteria to become sessile and resistant to antibiotics

Destroying the Matrix with Next Science technology



1. The citric acid at high osmolarity in the Next Science solution removes the cross-links between the polymers in the biofilm matrix.



2. The surfactant in the product then brings the polymers into solution.

3. This exposes the bacteria that were previously protected inside the biofilm.