



UNSW
SYDNEY



Development of Novel Antimicrobial Scaffolds

Development of quorum-sensing inhibitors, antimicrobial peptides and mimics, and incorporating them into polymers and biomaterials with the aim of reducing device-related infections.

Competitive advantage

- Portfolio of antimicrobial and antibiofilm agents and scaffolds with novel mechanisms of action
- Antimicrobial coatings technologies with demonstrated in-vivo efficacy at preventing device-related infections
- Recognised international experts in the field of antimicrobial discovery and biomaterials
- Outstanding track record in the area of novel surface strategies for antimicrobial control, with multiple industry-supported and government funding in this area

Impact

- Up to 65% of all hospital-acquired infections are caused by microbial colonisation of surfaces. This is a major health problem that can be prevented by new technologies which will save billions of dollars in healthcare costs and provide substantial economic benefits for industries.

Successful outcomes

- Completed Phase I/Phase III clinical trials for antimicrobial contact lenses
- Antimicrobial prototype devices for major biomedical companies including Cochlear

Capabilities and facilities

- World-class synthetic chemistry facilities including NMR and mass spectrometry, supported by a diverse range of imaging and surface characterisation facilities from the Mark Wainwright Analytical Centre
- Clinically relevant animal models for device-related infections

Our partners

- Biosignal Ltd
- Cochlear Ltd
- Australian Biotechnologies Pty Ltd
- Intellectual Ventures (now Xnova)
- Allegra Orthopaedics

More Information

Professor Naresh Kumar

School of Chemistry

T: +61 2 9385 4698

E: n.kumar@unsw.edu.au

UNSW Knowledge Exchange

knowledge.exchange@unsw.edu.au

www.capabilities.unsw.edu.au

+61 (2) 9385 5008