



## Staphylococcal Biology and Pathogenesis

Guest Editor:

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### Message from the Guest Editor

Dear Colleagues,

This Special Issue will focus upon the recent advances in staphylococcal biology, aiming to elucidate its complex mechanisms of pathogenesis. New data on cell wall and surface structures (teichoic acids, lipids, protein A, TcaA, polysaccharide intercellular adhesin) and extra-cellular enzymes (DNases, hemolysins) have demonstrated the wide array of mechanisms utilized by staphylococci to cause persistent infections. Data on how the metabolism impacts antibiotic resistance and macrophage activation (host–bacterial interactions) reveal an extremely dynamic interplay between the host and pathogen. A prophage that enhances persistent bacteremia via novel mechanisms has been identified. Finally, the complex immunological responses to *S. aureus* (allergic response; persistence due to IL-10; hyper-responsiveness in humanized mice; non-protective imprinting) enable a deeper understanding of the host–pathogen interactions. All of this complexity helps to clarify why the development of a staphylococcal vaccine is so challenging.





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## Editor-in-Chief

### Prof. Dr. Nicholas Dixon

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## Message from the Editor-in-Chief

There are very few fields that attract as much attention as scientific endeavor related to antibiotic discovery, use and preservation. The public, patients, scientists, clinicians, policy-makers, NGOs, governments, and supra-governmental organizations are all focusing intensively on it: all are concerned that we use our existing agents more effectively, and develop and evaluate new interventions in time to face emerging challenges for the benefit of present and future generations. We need every discipline to contribute and collaborate: molecular, microbiological, clinical, epidemiological, geographic, economic, social scientific and policy disciplines are all key. *Antibiotics* is a nimble, inclusive and rigorous indexed journal as an enabling platform for all who can contribute to solving the greatest broad concerns of the modern world.

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