

Special Issue

Non-Essential Targets in the Development of Antibiotics and Enhancers of Antimicrobial Therapy

Message from the Guest Editors

Non-essential targets are targets that are dispensable for bacterial growth in vitro and in rich medium, but which may be conditionally important for e.g., invasion or persistence in the host. Targeting proteins and enzymes that are non-essential should, in principle, disarm the pathogen and enable a sustained immune response to clear the infection. However, the conditional essentiality of these targets makes their identification difficult.

Improving our knowledge of well-characterized, virulence-associated targets and finding new conditionally-essential targets in metabolic pathways will lead to a better understanding of the interplay between host and pathogen and will facilitate the discovery of new molecules for the enhancement of antibiotic therapy. In this Special Issue, we aim to assemble some of the more recent insights into non-essential target identification, validation and inhibition.

Keywords

- Antibiotic resistance
- Non-essential targets
- Conditionally essential targets
- Antibiotic adjuvant therapies
- Target-based drug discovery
- Virulence factors
- Combination therapy
- Host-directed therapy

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Deadline for manuscript submissions

closed (31 December 2019)



International Journal of Molecular Sciences

an Open Access Journal
by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed



mdpi.com/si/21944

*International Journal of
Molecular Sciences*
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