

Keywords: antibacterial • antibiotic • drug discovery

This is the second part of a two part issue “New Frontiers in Antibacterial Drug Discovery” whose purpose has been to inform and stimulate discussion in an area which has rapidly emerged as one of international importance; the first part was recently published.[1] This second part, while including reports of novel small molecule drugs including polymixins[2] and avibactam[3], also includes reviews of unusual peptides with antibacterial activity[4,5]. Novel targets[6], and novel ways of avoiding resistance in known targets, are also discussed[7]. New ways of thinking about the problem, of harnessing porins drug delivery[8], or mining the antibiotic resistome[9], for example, are included. Finally, a transcript of a highly informative session “Ask the Experts: How to curb antibiotic resistance and plug the antibiotics gap?” reports the thinking from key players on this important area.[10]

Taken together, this two-part issue covers areas of opportunity in both small and larger molecular systems for possible drug development, along with topics which offer other possible strategies worthy of more detailed investigation. What is clear, is that while the problem is urgent, but tractable, and that while there are many opportunities for interested scientists across a wide spectrum of expertise to make important contributions, effective interdisciplinary and inter-institutional collaborations will be critical for success. A special thanks goes to all authors for their insights in this special issue, which I hope that it will stimulate wider interest in, and the creation of novel ideas for, the development of next generation antibiotics and anti-infective strategies which take us well past the twenty-first century.

Financial & competing interests disclosure

MG Moloney is a Professor of Chemistry at the University of Oxford. The author has no other relevant affiliations or financial involvement with any organization or entity with a financial interest in or financial conflict with the subject matter or materials discussed in the manuscript apart from those disclosed.

No writing assistance was utilized in the production of this manuscript

[1] FMC, 2016

[2] Velkov

[3] Schofield

[4] Knappe

[5] Koenig

[6] Groundwater

[7] Yuk-Ching Tse-Dinh

[8] Ceccarelli,

[9] Corona

[10] ask the experts