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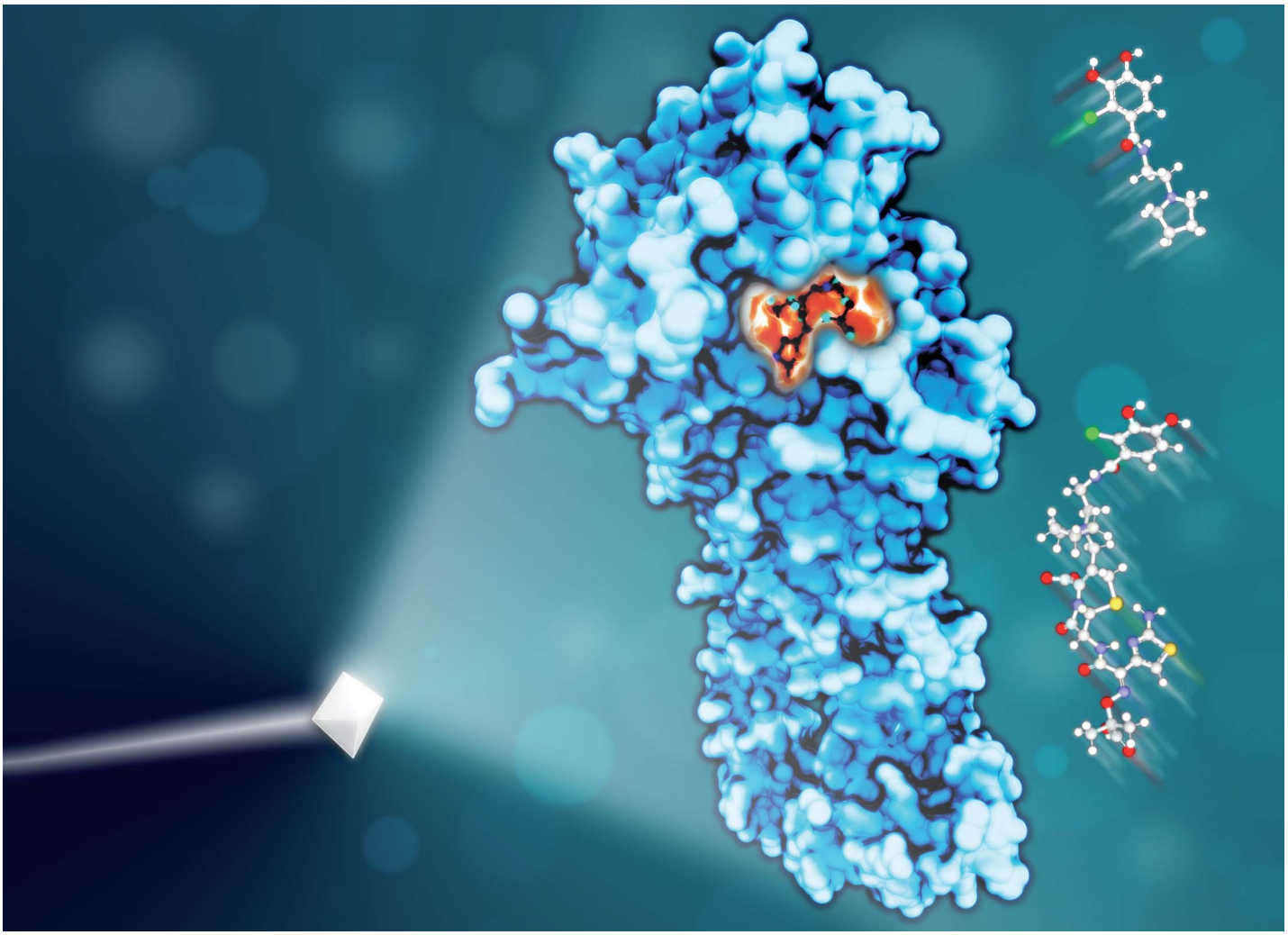
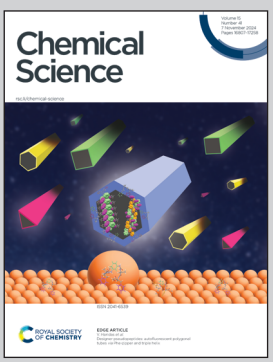


Showcasing research from the Ineos Oxford Institute for Antimicrobial Research, University of Oxford, United Kingdom.

Structural basis of *Pseudomonas aeruginosa* penicillin binding protein 3 inhibition by the siderophore-antibiotic cefiderocol

To enable development of new antimicrobials it is necessary to understand the mechanism of binding of existing pharmaceuticals to their target proteins. In this work, X-ray crystallography, protein inhibition measurements and mass spectrometry were used to inform on binding of the cephalosporins ceftazidime, cefepime, and Shionogi's cefiderocol, to their Gram-negative bacterial transpeptidase target, penicillin binding protein 3 (PBP3). The cephalosporins undergo fragmentation upon binding to PBP3. The results will aid development of cephalosporins with improved PBP3 inhibition properties.

As featured in:



See Christopher J. Schofield *et al.*, *Chem. Sci.*, 2024, **15**, 16928.

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