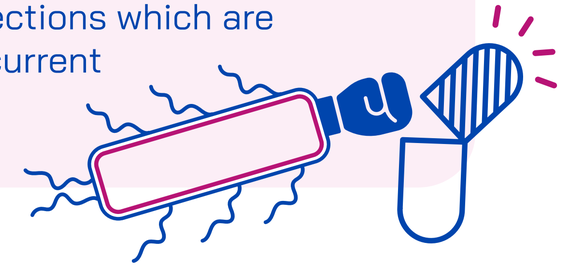
PACE | Pathways to Antimicrobial Clinical Efficacy

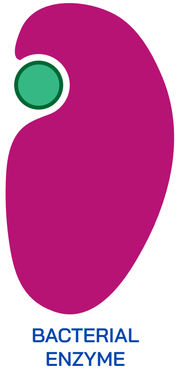
Developing a novel mode of action, bladder-targeted, small molecule, for oral therapy of urinary tract infections

Tackling antimicrobial resistance is a global challenge, including in the management of urinary tract infections which are often recurrent

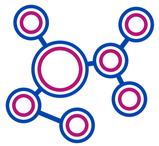


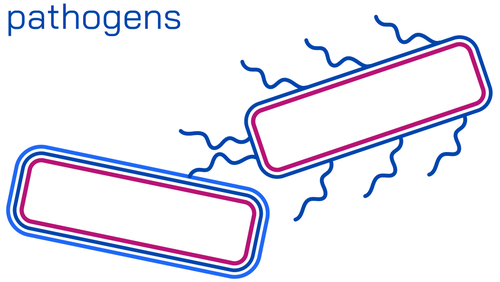
Oxford Drug Design has developed a novel approach by targeting the bacterial enzyme leucyl-tRNA synthetase

Bacteria require this enzyme to produce the proteins they need for survival



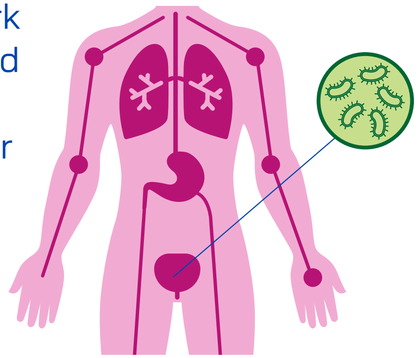
Oxford Drug Design has a proprietary library of small molecules that inhibit this enzyme, and are active against gram-negative pathogens





The leucyl-tRNA synthetase inhibitors work by a novel mechanism and have been shown to accumulate in the bladder

This means other healthy bacteria in the body may be spared and reduces the risk of further resistance developing



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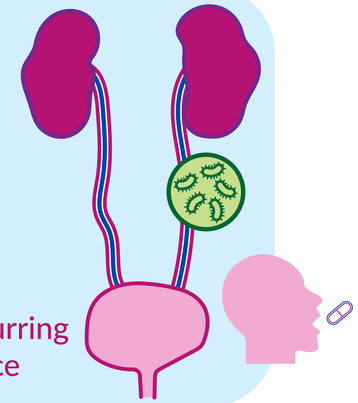
PACE funding and support will allow the team to

- Optimise inhibitor activity against *E. coli* and *Klebsiella pneumoniae*
- Develop the molecules so they can be taken as an oral pill

Success will move Oxford Drug Design closer to its aim of developing a new oral antibiotic for urinary tract infections that maintains the natural gut microbiome

This could benefit patients with recurring UTIs and reduce the risk of resistance



OXFORD DRUG DESIGN