

CF-AMR Syndicate Collaborative Discovery Programme to accelerate the development of antimicrobials to treat lung infections in cystic fibrosis

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Background

Many people with cystic fibrosis (CF) manage their health by taking different medications multiple times a day and on a long-term basis, together with physiotherapy and making dietary changes. Antimicrobials are essential for management of acute pulmonary flare-ups, known as exacerbations, and to help suppress or manage long-term chronic lung infections. Treatment failure due to antimicrobial resistance (AMR) is a frequent and significant challenge. Given this and the rise of AMR, new tolerable yet effective treatments are urgently needed.

CF-AMR Syndicate is a strategic partnership between Medicines Discovery Catapult, Cystic Fibrosis Trust and LifeArc which brings together leading experts in CF and AMR from industry, academia and the clinic with people living with CF. Our mission is to accelerate the translation and adoption of new CF antimicrobials and diagnostics to the clinic, through collaboration.

Methods

We recently published our Therapeutic Target Product Profiles (TPPs) which were developed through first engaging with people with lived experience of CF and their multidisciplinary care teams via focus groups, to understand the unmet needs. Outputs from this highlighted the need to identify new drugs for difficult to treat infections from priority pathogens including *P. aeruginosa*, NTM and *Aspergillus*, with fewer side effects, more effective resistance and improved burden of care.

Our Therapeutic TPPs were used to inform the scope of the CF-AMR Syndicate's Collaborative Discovery Programme (CDP) which aims to augment the early-stage pipeline of new antimicrobials treating infections in people living with CF. Our £3M funding call was launched in 2023 and prioritised proposals which specifically addressed the unmet needs highlighted in the TPPs.

Results

The call has generated a diverse portfolio of six exciting new drug discovery projects. The portfolio will be actively managed by the CF-AMR Syndicate providing our collaborators with ongoing access to capabilities and multidisciplinary expertise from the CF-AMR Syndicate. This will help these projects to remain on track and increase the probability of successful translation.

We will give an overview of the CF-AMR Syndicate Therapeutic TPPs and more details of the process and outcome of the Collaborative Discovery Programme funding call.