

# CF AMR Syndicate

## Partnering for Impact: LifeArc joins The Cystic Fibrosis Antimicrobial Resistance Syndicate

Managing Partners: **Medicines Discovery Catapult** Alderley Park, Cheshire, SK10 4ZF, UK  
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**LifeArc** Lynton House, 7-12 Tavistock Square, London, WC1H 9LT, UK

[cfamr.org.uk](http://cfamr.org.uk)

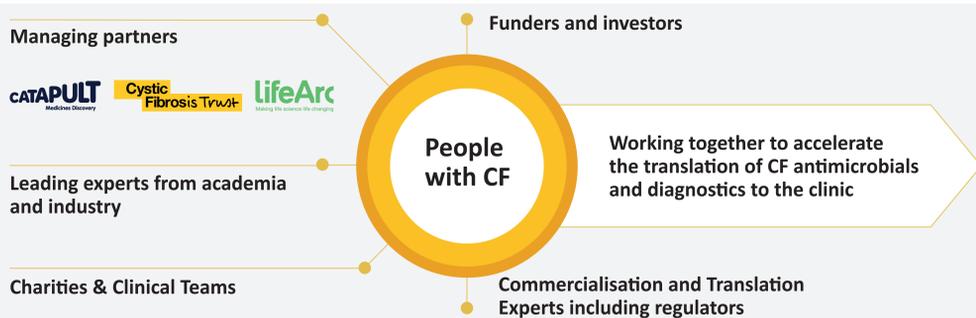


### Cystic Fibrosis (CF) and Antimicrobial Resistance (AMR) Creation of the CF AMR Syndicate

AMR is a leading cause of death globally<sup>[1]</sup>. Antibiotics remain a crucial therapeutic for people with cystic fibrosis (pwCF) as recurrent and increasingly multidrug resistant respiratory infections dominate as a cause of morbidity and mortality<sup>[2]</sup>. While highly effective modulator therapy has had a positive effect on infection, their long term effects are unknown and infections have not been eradicated. There also remains a population of pwCF who are unable to benefit from modulator therapy. There is, therefore, an urgent and unmet need for the development of new antimicrobials to treat respiratory infections in CF.

The managing partners; the Trust, MDC & (since September 2022) LifeArc, work together with pwCF, academics, industry & clinical collaborators globally to deliver the goals of the Syndicate.

### The CF AMR Syndicate



#### Our Mission:

Accelerate the translation and adoption of new CF antimicrobials and diagnostics to the clinic, through collaboration. Bring new treatments to people with CF, faster.

#### Our Goals:

- Build supporting tools and resources for translation of CF antimicrobial therapies and diagnostic development
- Create a unique cross-sector CF AMR Network to facilitate collaboration and knowledge exchange
- Identify, enable and support CF antimicrobial and diagnostic programmes

#### Towards a Toolkit of Enabling Resources



Understand Patient Needs and Priorities & Sector Challenges

Leverage cross-sector expertise to build R&D roadmap

Catalyse collaborative R&D to tackle challenges

### The UK CF Infection Biorepository

A coordinated national network of labs which enables researchers from academia and industry to access well characterised, high quality clinically relevant samples, data and expertise.



#### UK CF Infection Biorepository

1. Make available high quality clinical isolates and reference strains for pathogens of the CF lung through leveraging existing collection, prospective collection & capability, focused on collections not already available.
2. Implement a federated biorepository with a single access point and strategy to ensure seamless access to innovators.
3. Employ effective governance, management, standardized processes and guidance to ensure research quality and maximum impact.
4. Run knowledge exchange to drive continual development aligned with end-user and multi-stakeholder needs. Exploit the Biorepository to facilitate cross-sector collaboration.
5. Deliver a Biorepository and associated business model that enables it to become self-sustaining.

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### Patient-focused Target Product Profiles

The TPPs provide guidance for drug & infection diagnostic developers on the key characteristics and requirements necessary to successfully address the needs and priorities of pwCF.

#### Antimicrobial therapeutic TPPs

(Available via our website)  
A suite of TPPs to guide developers in the requirements of antimicrobials targeting *Paeruginosa*, other gram negative pathogens and NTM.



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#### Diagnostic TPPs

(Under development)  
A suite of TPPs to guide developers in the requirements of diagnostic tests for improved management and treatment of lung infections are under development.

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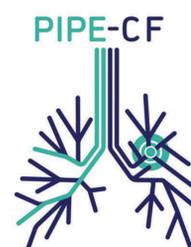
Delivered in partnership with:

### PIPE-CF

A global consortium led by Dr. Jo Fothergill (University of Liverpool) to develop an evidence-based preclinical framework for the development of antimicrobial therapeutics in CF.

#### A Trust Strategic Research Centre with the goals to:

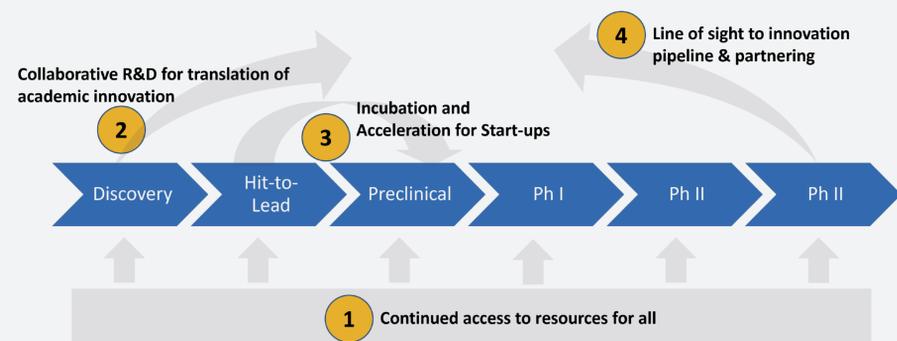
- Recommend appropriate CF pathogen panel(s)
- Develop model systems that capture key aspects of the CF lung
- Compare and benchmark assays to aid choice of screening tools
- Cross-validate to ensure reproducibility
- Produce and maintain open-access guides and SOPs



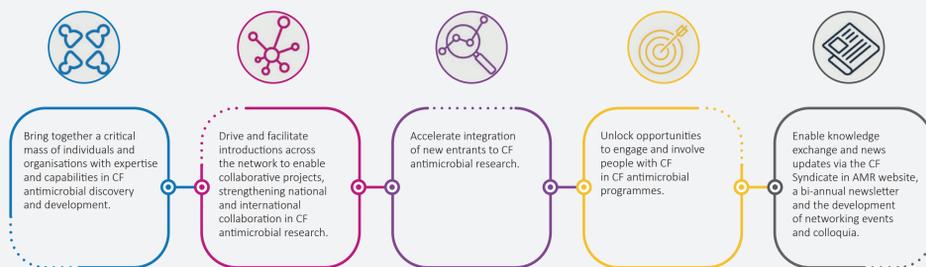
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### Support and Grow the CF Antimicrobial Pipeline

We work with innovators bringing Syndicate-developed resources, expertise and wider network to impact on their programmes. We will launch a new funding call for novel antimicrobials in the discovery phases in early 2023.



### The CF AMR Network Catalysing Innovation



**CF AMR Syndicate Website & Newsletter**  
Blogs / News / Resources

**Events, Workshops & Focus Groups**  
Knowledge exchange & problem solving

**Networking & Signposting**  
Catalysing collaborations

### Conclusions

Through the Syndicate, insights into the needs and priorities of pwCF are made visible, critically helping inform those working in the drug and diagnostic discovery space. The Syndicate is rapidly establishing itself as a unique entity facilitating the acceleration of novel antimicrobial and diagnostic discovery, bringing great science to the clinic faster.

### References

- [1] Antimicrobial Resistance Collaborators. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. *The Lancet* 2022; 399:629-655. [https://doi.org/10.1016/S0140-6736\(21\)02723-0](https://doi.org/10.1016/S0140-6736(21)02723-0)
- [2] Bell SC, Mall MA, Gutierrez H, Macek M, Madge S, Davies JC et. al. The future of cystic fibrosis care: A global perspective. *The Lancet* 2020; 8:65-124. [https://doi.org/10.1016/S2213-2600\(19\)30337-6](https://doi.org/10.1016/S2213-2600(19)30337-6)

### Acknowledgements

The CF AMR Syndicate Steering Committee and all members of the wider community that have supported us with this initiative.

To work with us and/or join our CF AMR Network please find us at:

[www.cfamr.org.uk](http://www.cfamr.org.uk)



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**CATAPULT**  
Medicines Discovery

**Cystic Fibrosis Trust**

**LifeArc**  
Making life science life changing