

# IHI Call Days | Call 9

## Novel Antibiotic Modalities against Priority Pathogens

Contact person name: Graham Somers Organisation : GSK EFPIA

E-mail: [graham.i.somers@gsk.com](mailto:graham.i.somers@gsk.com)

# Challenges and objectives

- **What problem(s) are you trying to solve**
  - Burden of drug-resistant Infections
    - In EU alone, 800k Resistant Infections 35k Deaths, Cost of €1Bn Annually
  - Insufficiency in novel approaches in the R&D pipeline to effectively combat the increasing emergence and spread of drug-resistant Infections : address the innovation gap
- **Which IHI specific objective(s) are you addressing?**
  - Objective 1 : *Contribute towards a better understanding of the determinants of health and priority disease areas*
    - Increased understanding of health and disease mechanisms at a molecular level.
    - Novel tools or hypotheses for new treatments tested preclinically and/or in early-stage clinical or in silico trials
- **Which unmet public health need are you addressing?**
  - Patients benefitting from Improved Healthcare
  - Reduction in healthcare costs associated with the treatment of resistant infections
  - Availability of anti-infectives for priority patients globally eg including paediatric indications in low resource settings

# Your approach to solve the problem

A platform focused on the 'early stage' development of novel therapeutic modalities and diagnostics

- Models for the identification, characterisation and early stage development of novel anti-infectives
- Development of diagnostics/strategy
- Disease agnostic
  - Case studies with priority pathogens
  - Assess applicability of modalities to broader applications

# Is your project suitable for IHI?

- Novel 'Incubator Concept'
  - Builds on existing capability...
  - Requires the input of multi sector stakeholders in
    - the understanding of resistance mechanisms, and
    - development of diagnostics and
    - medical interventions directed against priority pathogens
    - Modelling and AI
- Substantial budget required to achieve impact
  - 15-20M in kind matched by EU

# Outcomes and Impact

- What do you expect out of your proposal in terms of concrete results/outcomes and impact?
  - Models for the identification, characterisation, and early stage development of novel anti-infectives
    - eg bifunctional molecules, long acting, designed proteins.....
    - *NB Not related to vaccines*
  - Novel therapeutic modalities/diagnostics for progression into the development pathway
  - Development of AI modalities to predict efficacy/resistance of novel modalities
- How do you envisage your proposal to ensure translation from research to innovative solutions that can be integrated/implemented into the healthcare ecosystem
  - High risk strategy with potential for disruptive innovation/high reward
- How does your project proposal contribute to strengthening the competitiveness of the Union's health industry?
  - Novel concept in AMR development
  - Reduce the reduction in Expertise associated with anti-infectives
- How does your project proposal contribute to the expected benefits for patients?
  - Get ahead of AMR, Development of new therapies and diagnostic strategies to ensure the right treatments for the right patient, and ultimately reduce the development of new resistant infections.

# Expertise and resources

- We have ongoing discussions with :
  - Pharma : drug discovery expertise, novel modalities
  - Med Tech : diagnostic expertise
  - Academia : AMR expertise, platform development
  - SME : novel modalities
  - NGO : contributing partners, drug development, diagnostic expertise
- We are looking for:
  - Contributors with novel modalities, (*not already covered with current partners*)
  - Novel efficacy/MoA characterisation models, or models of tractability (*not already covered with current partners*)
  - Access to well characterised banks of relevant pathogens and/or patient samples
  - Development of AI for development of resistance, and efficacy modelling against priority pathogens

