

# Vaccines (and More) Against Antimicrobial Resistant Infections: The COMBINE Project (Part of the IMI AMR Accelerator)


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DZIF Vaccine Development Workshop  
26<sup>th</sup> January 2022

# IMI AMR Accelerator

Public-Private collaboration to progress the development of new medicines to treat or prevent resistant bacterial infections

**TUBERCULOSIS & NTM**




*Accelerating scientific discoveries and advancing the R&D pipeline of new and innovative agents to treat TB and NTM lung disease.*

**GRAM-NEGATIVES**



*Advancing the R&D pipeline of new and innovative agents to address AMR in Gram-negative bacteria.*

**CAPABILITY BUILDING**



*Accelerating and validating scientific discoveries in AMR. Coordinating and supporting projects across the AMR Accelerator.*



# COMBINE

A coordination role and a scientific mission around capability building

Coordination and support of the Accelerator projects (WP 1-3)

WP4 – Improve the **design and analysis of clinical trials** for vaccines and antibacterial agents (data-driven)

WP5 – Improve **animal infection models and translation to clinical efficacy**

# Bottlenecks in the R&D of vaccines against AMR?

Vaccine Expert Workshop (February 2021) - Focus on *S. aureus*, *C. difficile*, *K. pneumoniae*, Extraintestinal pathogenic *E. coli*

- Gaps in basic knowledge:
  - Role of precolonisation, microbiome, (toxins)
  - Pathogenesis, optimal target(s)/pathway(s)/antigen combination
- Preclinical testing:
  - Lack of reliable animal models (e.g. different pathogenicity)
  - Translation issues
- Clinical testing:
  - Manifold clinical manifestations → Endpoint definition
  - Low incidence, characterisation of study population → Feasibility
    - Lack of surrogates of protection

## Next step (WP4)

Integrative data-analysis to investigate bottlenecks and propose solutions for translation and clinical trial design

- **Open data call: share clinical and matched preclinical data from antibiotics, vaccines, mAbs, successes or failures?**
- **Capability building: Share ideas or expertise?**

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Stay up to date: <https://amr-accelerator.eu/>

## Acknowledgements and disclaimer

The AMR Accelerator projects have received funding from the Innovative Medicines Initiative 2 Joint Undertaking under grant agreement No 853976 | 853967 | 853979 | 853932 | 853903 | 853800 | 853989 | 101007873 | 101034420. The Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme and EFPIA. ERA4TB has received additional support from Global Alliance for TB Drug Development, Bill & Melinda Gates Foundation and University of Dundee. UNITE4TB has received funding from the Innovative Medicines Initiative 2 Joint Undertaking under grant agreement No 101007873. The JU receives support from the European Union's Horizon 2020 research and innovation programme and EFPIA, Deutsches Zentrum für Infektionsforschung e. V. (DZIF), and Ludwig-Maximilians-Universität München (LMU). EFPIA/AP contribute to 50% of funding, whereas the contribution of DZIF and the LMU University Hospital Munich has been granted by the German Federal Ministry of Education and Research.

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