

Wessex Infection Network for Genomics (WING)

Who We Are

The Wessex Infection Network for Genomics (WING) is a collaborative working group established to lead, coordinate, and deliver the Serious Presentation of Infectious Disease Genomic Network of Excellence (SPID GNoE) work packages in the Wessex region. Our members include a diverse range of clinical and non-clinical experts, academics, and patient representatives, all dedicated to advancing genomic technologies and improving patient outcomes.


Our Aims and Objectives

Our primary aim is to expand the respiratory metagenomics service by establishing a real-time pilot service capability at Southampton University Hospital NHS Foundation Trust and other national sites. We strive to:

- Share experiences and challenges to facilitate collaboration, shared learning, and innovation.
- Develop and monitor milestones against our implementation plan.
- Support research and innovation by leveraging others' experiences.
- Seek opportunities for grants to maximise knowledge output.
- Collaborate with other UK sites on respiratory metagenomics and related work packages.
- Expand the service to other infection areas based on local and national needs.
- Apply for funding for necessary research and development.

Our Activities

WING is actively involved in various activities, including:

- Implementing the respiratory metagenomics service expansion.
 - Providing a forum for sharing experiences and challenges.
 - Supporting research and innovation through collaboration and grant applications.
 - Developing and monitoring milestones for our site.
 - Expanding the service to other infection areas as needed.
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Central and South Genomics

WING Project Grants

The WING group, initially focused on information sharing, has evolved to apply for and secure grants. Below are some of the key projects currently funded:

AI and Sepsis Project

A project based in Portsmouth aims to utilise clinical data to expand digital methodologies and pathology using AI. The goal is to better understand and describe sepsis. The initial challenge for the first six months is to integrate the data and make it analysable, with the aim of conducting a Wessex-wide test within a year to improve the concept. The AI and sepsis project is funded by both WHP (Wessex Health Partners) and WEMN (Wessex Experimental Medicine Network).

Genomic tools for prediction of prosthetic joint infection

WING members, led by Professor Sam Robson (University of Portsmouth) and Dr Nicholas Norton (University Hospital Southampton NHS Foundation Trust) has secured nearly £20,000 from Wessex Health Partners and the Wessex Experimental Medicine Network to investigate host transcriptomics and biofilm metagenomics in prosthetic joint infections compared to prosthetics removed for non-infection related reasons. This project will enable identification of biofilm community members, pathogens, and host gene response signatures that can distinguish between difficult-to-identify infections in prosthetic joints. The research aims to enhance diagnostic accuracy and improve patient outcomes.

Pre-Doctoral Fellowship

The pre-doctoral fellowship is a significant achievement for the WING group. This fellowship supports early-career researchers in developing their skills and contributing to the field of infectious disease genomics.

Blood Cultures Detection Collaboration

A collaboration project on the detection of blood cultures involves spiking negative cultures and putting them through metagenomics pathways to compare results with standard diagnostic cultures. The aim is to see if they can detect organisms more quickly. A clinical scientist will start working on this project in March 2025.

Contact Us

For more information or to get involved, please contact Dr Kordo Saeed kordo.saeed@uhs.nhs.uk or Professor Samuel Robson samuel.robson@port.ac.uk We welcome inquiries from all interested parties and look forward to collaborating with you.

