

A detailed, colorful illustration of a microbiome. It features numerous rod-shaped bacteria in shades of blue, teal, and purple, some with flagella. These are interspersed with smaller, more complex structures like spores and clusters. The background includes a piece of weathered wood on the left and dark, textured soil or organic matter at the bottom.

Oxford Centre for Microbiome Studies

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HID day 1st October 2018

Who we are

- New initiative based at the Kennedy Institute for Rheumatology on the Old Road Campus
- Funded by Wellcome Trust Institutional Strategic Support Funding (ISSF), Kennedy Trust and collaborators
 - Includes researchers in NDORMS, NDM, Geography, Psychiatry, Dunn School, Oncology, Zoology and WIMM
- Aims:
 - To develop an interdisciplinary and collaborative network of researchers interested in studying the microbiome
 - Pump prime microbiome characterisation in existing or planned studies
 - Enable high-throughout sequencing of diverse bacterial microbiomes
 - (Functional studies of host-microbiota interactions in gnotobiotic models)

Why the microbiome?

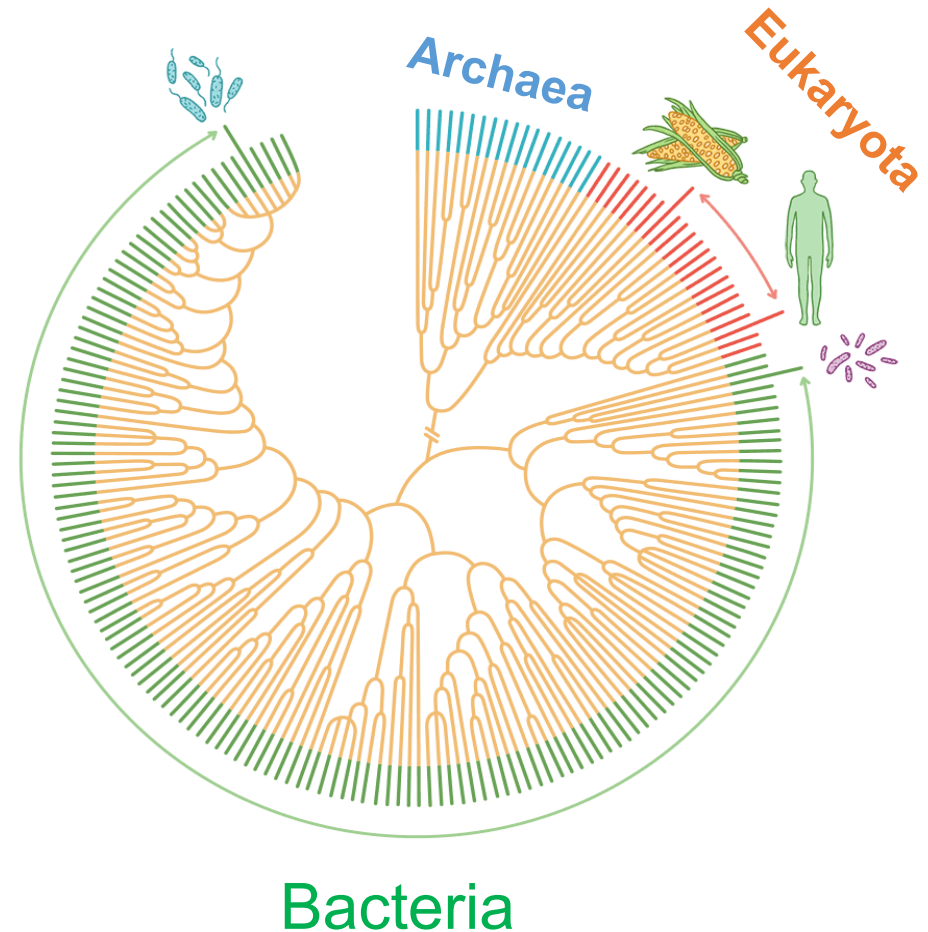
- Growing understanding that we are only partly human



60 trillion
Microbial
cells
(67%)



2 million
Microbial
genes
(99%)



Why come to us?

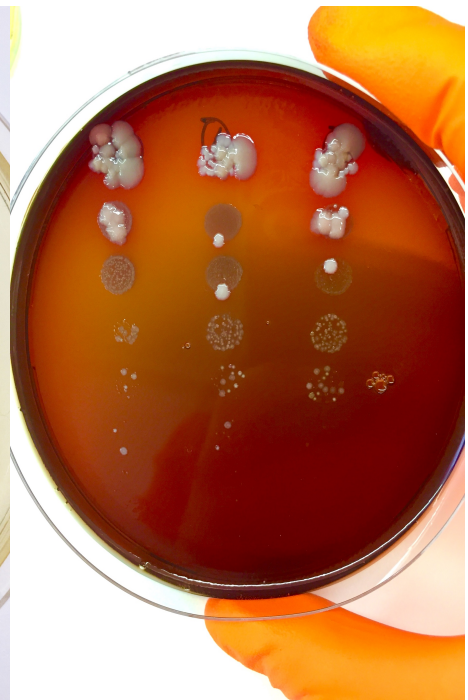
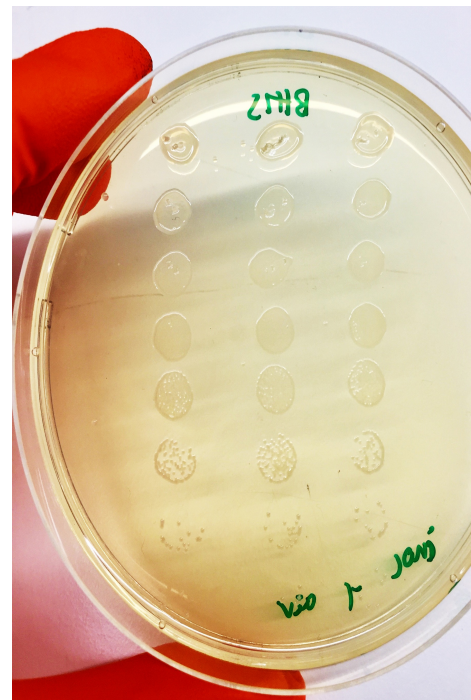
- We have 2 full time technicians and will recruit a full time bioinformatician
 - Their time is free for CMS collaborators
 - Cost price for other users
- All reagents are charged at cost price
- We provide full design and experimental support
- Our goal is to provide core infrastructure that supports complete analysis of the microbiota



What can we offer?

- Advice on setting up microbiome studies
 - Ethics, MTAs etc
 - Study size and bioinformatics advice
 - Questionnaires
- Study set up
 - Assembly of stool kit components and use of CMS postal service
 - Storage of samples with associated databases
 - Input of study data into databases
 - DNA and RNA extraction and preparation for sequencing
 - We recommend you contact the WTCHG to discuss sequencing
 - Library preparation for next generation sequencing
 - In-house microbiome analyses based on QIIME and DADA2
- Growing and analysis of bacterial strains

The glamorous life of a microbiologist...



How much does it cost?

Estimated COSTS £	Per sample:
KITS (contents & postal service)	£10.00
DNA/RNA extraction	£8
16S sequencing (outsourced)	£30
Metagenomics/transcriptomics (outsourced) *	£200+
Metabolomics (outsourced) *	£200+

** Depending on sample number and protocol*

Staff COSTS (to be determined)	
Technician support	
Bioinformatician	

Current projects

- 16S sequencing of stool samples from patients before and after taking prebiotics (Nuffield Department of Clinical Neurosciences)
 - Kit reagents, receipt, sample storage, eventual nucleic acid extraction, preparation for sequencing and bioinformatic analysis
- Metagenomic analysis of stool samples from patients with arthritis before and after treatment (Kennedy Institute/NDORMS)
 - Kit assembly, receipt, sample storage, nucleic acid extraction, preparation for sequencing, sending for metabolomic analysis, input of dietary questionnaire data
 - Bioinformatic analysis performed by collaborators

Future projects we're looking for

- Groups who are interested in:
 - including microbiome analysis into their ongoing studies and future grant applications
 - correlating immune and microbiome profiling in diverse diseases
 - cross-disciplinary collaborations
 - understanding functional impacts of the microbiome

Who to contact

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