

Microbiology@UCL Virtual Symposium 2020

Day 1: 28th July 9:00 – 12:30

08:50 – 09:00 Welcome and housekeeping (opening slides)

09:00 Opening: [Joanne Santini](#) (Structural & Molecular Biology and Domain lead)

Session 1 (Chair: [Snezana Djordjevic](#), Structural & Molecular Biology)

09:05 **Keynote: [Rotem Sorek](#)** (Weizmann Institute of Science)
The immune system of bacteria: Beyond CRISPR

09:35 [Mark Marsh](#) (MRC Laboratory for Molecular Cell Biology)
Membrane trafficking plays an essential role in lentiviral pathogenesis

09:50 **George Blundell-Hunter** (Pharmaceutics)
*Characterisation of bacteriophage-encoded depolymerases selective for key *Klebsiella pneumoniae* capsular exopolysaccharides*

09:55 **Georgina Benn** (London Centre for Nanotechnology and Institute of Structural & Molecular Biology)
Imaging the surface of live bacteria with nanometre resolution

10:00 **Samuel Ellis** (Infection, Immunity & Inflammation, GOSH Institute of Child Health)
Impact of binding respiratory syncytial virus G protein on pneumococcal cell division and antibiotic sensitivity

10:05 Poster Session 1 (Chair: China Hanson, Microbiology@UCL Domain Manager)

10:30 [Jason Mercer](#) (MRC Laboratory for Molecular Cell Biology)
Seeing is believing: Super-resolving poxvirus protein architecture

10:45 15min break

Session 2 (Chair: TBA)

11:00 [Jürg Bähler](#) (Genetics, Evolution & Environment)
Natural variant of pyruvate kinase in fission yeast tunes energy metabolism and triggers systems-wide adaptations in cellular regulation and physiology

11:15 **Gabriel Tarrason Risa** (MRC Laboratory for Molecular Cell Biology)
Archaeal roots of eukaryotic cell cycle control

11:20 **Clare Robinson** (Cell & Developmental Biology)
A new software tool for fluorescence calibration to reveal microbial community dynamics

11:25 **James Allen** (Biochemical Engineering)
Can synthetic biology enable the rapid generation of addiction systems to create stable chemical production strains?

11:30 Poster Session 2 (Chair: China Hanson, Microbiology@UCL Domain Manager)

11:55 **Keynote: [Liz Sockett](#)** (University of Nottingham)
*Understanding and applying predatory biology of *Bdellovibrio bacteriovorus**

12:25 Closing: [Celia Caulcott](#), UCL Vice-Provost (Enterprise)
12:30 end

Day 2: 29th July 09:00-12:30

08:50 – 09:00 Welcome and housekeeping (opening slides)

09:00 Opening: [Joanne Santini](#) (Structural & Molecular Biology and Domain lead)

Session 3 Chair: [Richard Goldstein](#) (Infection & Immunity)

09:05 [Eleni Nastouli](#) (UCLH and GOSH Institute of Child Health)
Title TBA, topic: COVID/SARS-CoV-2

09:20 [Lucy van Dorp](#) (Genetics, Evolution & Environment)
Emergence of Genomic Diversity in SARS-CoV-2

09:35 [Christine Orengo](#) (Structural & Molecular Biology)
Computational Strategies for Exploring the Possible Host Range of SARS-CoV-2

09:50 **Cedric Tan** (Genetics, Evolution & Environment)
Metagenomic evidence for a polymicrobial signature of sepsis

09:55 **Ana Roibu** (UCL Queen Square Institute of Neurology)
Sex-specific differences of the gut microbiome and its relationship to the incidence of Parkinson's Disease

10:00 **Emma Wall** (Infection & Immunity)
*Transcriptome analysis of CSF from meningitis patients identifies a novel *Streptococcus pneumoniae* operon that is essential for establishing brain infection*

10:05 Poster Session 3 (Chair: China Hanson, Microbiology@UCL Domain Manager)

10:30 30 min break and ECR talk and poster judging

Session 4 Chair: [Dimitrios Evangelopoulos](#) (Microbial Diseases, Eastman Dental Institute)

11:00 [Dave Spratt](#) (Microbial Diseases, Eastman Dental Institute)
Developing complex community models for oral Plaque

11:15 [Kristine Arnvig](#) (Structural & Molecular Biology)
*A small RNA regulating *groEL/S* expression in *Mycobacterium tuberculosis**

11:30 **Keynote:** [Serge Mostowy](#) (London School of Hygiene and Tropical Medicine)
*Use of the cytoskeleton to control *Shigella* infection*

12:00 Early Career Researcher speaker and poster prizes: [Joanne Santini](#) (Structural & Molecular Biology and Domain lead)

12:10 Acknowledgements: [Joanne Santini](#) (Structural & Molecular Biology and Domain lead) and [China Hanson](#) (Microbiology@UCL Domain Manager)

12:15 Summation and Close: [Celia Caulcott](#), UCL Vice-Provost (Enterprise)

12:20 end

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e-Poster Showcase Sessions

Q&A with poster presenters at: <https://app.sli.do/event/5uvtpeqq> or go to sli.do Event Code = X622

Showcase 1 (28th July, approx. 10:05 – 10:30am)



- 1.1 **Nawal Al Burtamani** (Infection & Immunity)
Investigating the chromatin landscape effects on HIV-1 latency
- 1.2 **Ganiyu Ali-Balogun** (Institute of Ophthalmology)
Fungal Ice2p has remote homology to SERINCs, restriction factors for HIV and other viruses
- 1.3 **Jason Bland** (Syngulon, SA)
The Syngulon PARAGEN 1.0 Collection: A standardized synthetic bacteriocin gene library for rapid in vitro antimicrobial peptide production
- 1.4 **Gawain Moody** (Biochemical Engineering)
Engineering a glycyl radical-associated microcompartment for biotechnology purposes
- 1.5 **Prantar Tamuli** (Biochemical Engineering; The Bartlett School of Architecture)
Developing computational tools for bio-design application of filamentous Cyanobacteria

Showcase 2 (28th July, approx. 11:30 – 11:55am)

- 2.1 **John Allen** (Genetics, Evolution & Environment)
Nitrogenase inhibition limited oxygenation of Earth's Proterozoic atmosphere
- 2.2 **Kate Berlewen** (Institute of Archaeology)
Conservation of Corroded Archeological Iron: Proposed Model for Microbiological Treatment of a Medieval Axe from Norfolk
- 2.3 **Spyridon Efthymiopoulos** (Civil Environmental and Geomatic Engineering)
Developing a methodology to detect mould hidden behind internal wall insulation
- 2.4 **Morena Ferreira** (Institute for Sustainable Heritage)
Can we control air movement in bookshelves? Towards preventing mould growth in historic libraries
- 2.5 **Andre Pulschen** (MRC Lab for Molecular Cell Biology)
*Live imaging of the hyperthermophilic archaeon *Sulfolobus acidocaldarius* reveals distinct roles for two ESCRT-III homologues in ensuring a robust and symmetric division*

Showcase 3 (29th July, approx.. 10:05 – 10:30am)

- 3.1 **Mislav Acman** (Genetics, Evolution & Environment)
Large-scale network analysis captures biological features of bacterial plasmids
- 3.2 **Margherita Bonetti** (School of Pharmacy)
*Efficacy of drugs alone and in combination against *Trichophyton rubrum**
- 3.3 **Eva Lymberopoulos** (Institute of Neurology)
Using topological data analysis to investigate the relationship between population gut microbiome and Parkinson's Disease
- 3.4 **Amber Vaitkute** (Great Ormond Street Institute of Child Health)
Microbiota and metabolome dynamics associate to clinical outcomes during paediatric HSCT
- 3.5 **Julia Vila-Guilera** (Great Ormond Street Institute of Child Health)
Assessing enteric infection risks in children from exposure to faecally contaminated water pathways in rural tribal Rajasthan, India
- 3.6 **Özge Yetiş** (Infection & Immunity)
*Investigating the risk of transmission of *Pseudomonas aeruginosa* from hospital water to patients via relatedness study by Variable number tandem repeat (VNTR) analysis*