

Moyne Seminar Series 2024 {16th December 2024}

Professor Jay Hinton

Institute of Infection, Veterinary and Ecological Sciences,
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Bio: Jay Hinton is the Professor of Microbial Pathogenesis at the University of Liverpool, UK. He did his first degree in Microbiology, when he was inspired to think genetically by Prof. George Salmond. After his PhD, he moved to the University of Oxford to work on the regulation of virulence gene expression in *Salmonella*, and subsequently moved to Norwich as Head of Molecular Microbiology at the UK's Institute of Food Research.

He has been fascinated by bacterial functional genomics for the past 25 years. In 2003, he pioneered a transcriptomic approach that revealed a "snapshot" of *Salmonella* gene expression during the process of infection of mammalian cells, and in 2006 his team discovered that H-NS protein could silence gene expression at a global scale in bacteria.

After several years running an SFI-funded research team at Trinity College Dublin, Jay moved to Liverpool in 2012 to refocus his lab on the lethal epidemic of bloodstream infections caused by *Salmonella* in sub-Saharan Africa. His group is now using a combination of molecular microbiology, genomics and functional transcriptomics to generate new insights. Recent discoveries include the determination of the role of a single noncoding nucleotide in the over-expression of a key virulence factor in African *Salmonella* ([Hammarlöf et al. 2018, PNAS](#)), an understanding of the step-wise evolution of African *Salmonella* ([Pulford et al. 2021 Nature Microbiology](#)) and the discovery of a novel lineage of *S. Typhimurium* ST313 in Malawi ([Kumwenda et al. 2024, microLife](#)).

Jay was elected as a Fellow of the European Academy of Microbiology in 2018, and as a Fellow of the American Academy of Microbiology in 2022.

Talk Title: How has *Salmonella* become so dangerous in Africa?