



BBSRC-FAPESP JOINT PUMP-PRIMING AWARDS for AMR and INSECT PEST RESISTANCE IN AGRICULTURE: *Understanding and managing resistance, including novel methods, for pathogen and pest control.*

PARTNERSHIP BUILDING WORKSHOP

Ross Fitzgerald
Director of Edinburgh Infectious Diseases,
The Roslin Institute, University of Edinburgh

Ross.Fitzgerald@ed.ac.uk

@jrossfitz 

Priority areas of interest:

- **Host-pathogen interactions & development and transmission of AMR**
- **Epidemiology associated with understanding AMR drivers and reservoirs**

Expertise relevant to the call:

- **Population genomics of Staphylococci at the human-animal interface**
- **Bovine mastitis**
- **Host-pathogen interactions- characterisation of virulence factors**
- **Molecular basis of host-adaptation**
- **Identification of novel therapeutic and vaccine targets**

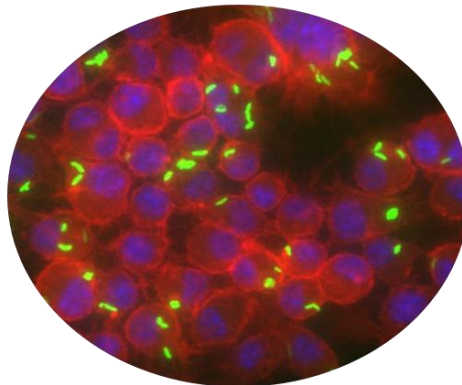
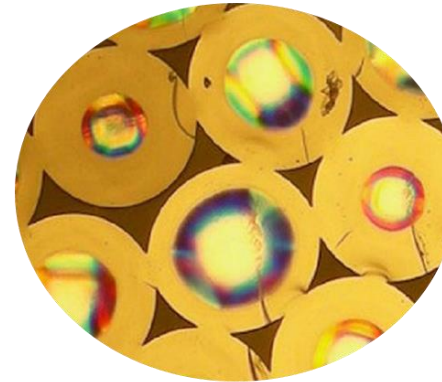
Thematic Organisation of AMR Research in Edinburgh

<http://www.ed.ac.uk/edinburgh-infectious-diseases/amr>

Global and local epidemiology of AMR



Rapid diagnostics



Biology, evolution and physics of AMR



Alternatives to antimicrobials





- World-leading expertise in farm animal genetics & modification
- Expertise in bacterial genomics incl. microbiome analysis
- Large-animal models of infection
- Genome-edited & transgenic animals resilient to infection under development
- International Veterinary Vaccinology Network (MRC/BBSRC-funded)

Staphylococci, Mycobacterium spp, Salmonellae, EHEC, Campylobacter, Rhodococcus

Issues/challenges/solutions relevant to AMR and insect pest resistance in agriculture related to this call?

- Drivers for emergence and spread of resistance
 - management of agriculture/landuse in Brazil
 - AMR in mastitis pathogens
- Spread of resistance from agriculture to humans ?
- Alternatives for control- vaccines/novel therapeutic targets
- Breeding for resilience