Preparedness and Response of life science and health RIs

11 May 2021
Our Remit

• The Pirbright Institute provides the UK with capacity to predict, detect, understand and respond to endemic and epidemic high consequence viral diseases of livestock and viruses that spread from animals to humans
• Focus on fundamental and applied science that sets us apart from both universities and other governmental organisations
• Understanding host (and vector) responses to infection underpinned by facilities and services that represent a national capability
Pirbright Infrastructures

National Virology Centre: The Plowright Building
Pirbright Infrastructures

National Vaccinology Centre: The Jenner Building
Pirbright Infrastructures

- **Houghton Facility**: SPF Chicken Rearing
- **Biggs Facility**: Poultry Experimental Facility
- **Brooksby Facility**: High Containment Animal Facility
- **Insectary Facilities (PMI; IS4L)**
What new challenges will the UK face in the next 30 years?

What are zoonoses and how prevalent are they?

Zoonoses are diseases transmitted from animals to humans

They comprise:
- 60% of all infectious diseases in humans
- 75% of all emerging infectious diseases

Source: UNEP Frontiers 2016 Report

#COVID19

Sorvillo et al., 2020
ChAdOx1 vaccines trials show two doses boost immune response in pigs

Tested two other candidate vaccines, antibody and T cell responses comparable to responses in humans
Host-switching of viruses
Moved high throughput testing equipment to NHS labs and provided over 60 highly trained staff
Helped establish new high throughput laboratory

Trained over 400 new staff diagnostics and biosecurity
G2P consortium will provide biological information of new SARS-CoV-2 variants

Variant surveillance
COG-UK and NHS T&T

Biological significance and recommendations for scientific work
G2P-UK

Variant risk assessment (epidemiological and biological)
PHE and NERVTAG

Borders risk assessment
JBC/PHE to DfT

Surveillance of variants of concern
PHE to DHSC

Border and travel policy

UK public health measures