

Disease control tools to secure animal and public health in a densely populated world



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Achieving planetary health



DISCONTTOOLS database

- 1) **Disease database – 55 diseases**
- 2) **Gap analysis – diagnostics, pharmaceuticals, vaccines**
- 3) **Prioritisation model**

Applications



Development of research
agendas by public and
private institutions



Development and
evaluation of research
proposals



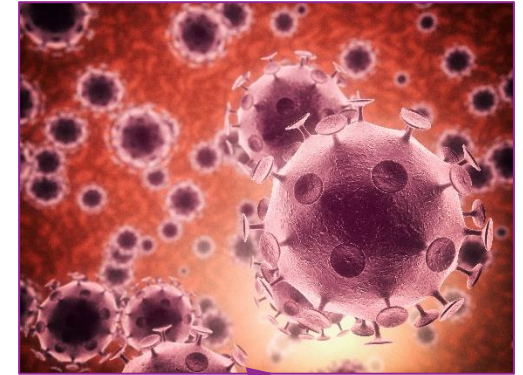
Veterinary education
programmes

Priority diseases?



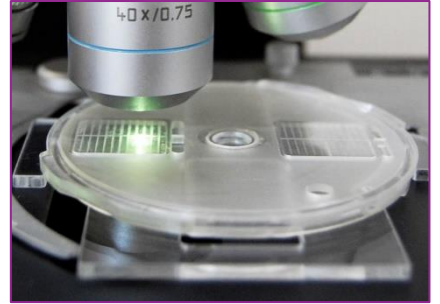
- Henipah viruses
- ASF
- CBPP
- PPR
- Avian Influenza
- RVF

■ Zoonotic ■ Endemic ■ Epidemic



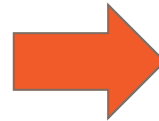
Diagnostic gaps

- Harmonisation, validation and reference panels
- Active surveillance
- DIVA tests
- Going beyond detection of infection
- Exploit rapid technological advances
- Availability in resource-constrained settings



Vaccine gaps

- Vaccines already available
 - Multivalent vaccines
 - Improved delivery methods
 - Improving DIVA performance
 - Animal free models



Convenient, single-shot
vaccine with long lasting
immunity



Vaccine gaps



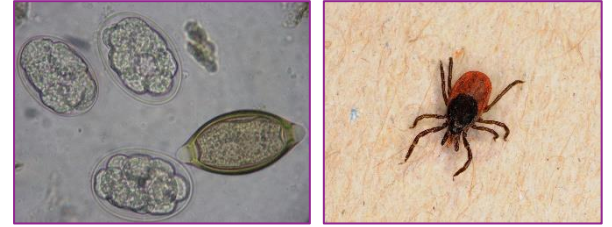
- **No vaccines available**
 - Overcome inhibition through maternal antibodies
 - Elicit mucosal immunity
 - Host immune and immune evasion mechanisms
 - Host-specific immunology models

Therapeutic gaps: AMR

- Bacterial pathogens
 - Antimicrobial stewardship
 - Alternatives to traditional antibiotics
 - AMR \neq AMU
 - Human-animal AMR transmission
 - Cross-resistance
 - Resistance-limiting treatment regimes



Therapeutic gaps: APR



- Parasitic pathogens (protozoa, helminths, arthropods)
 - Integrated control
 - Vaccines, nutraceuticals
 - Deepen understanding of resistance mechanisms
 - Diagnostics and targeted use
 - Chemo-sensitisation
 - Novel anti-parasiticides

The big 5 in animal health research

- 1) Vaccinology
- 2) Antimicrobial resistance
- 3) Climate mitigation and adaptation
- 4) Digital health
- 5) Preparedness



Thanks to:

- > 400 experts
- Stakeholders
- Funders

Country	Funder of DISCONTTOOLS
Austria	FFI Büro für Forschungsförderung und Innovation
Greece	Veterinary Research Institute, Hellenic Agricultural Organization DIMITRA
Italy	Ministero della Salute
The Netherlands	Ministry of Agriculture, Nature and Food Quality
Spain	National Institute for the Agricultural and Food Research and Technology (INIA)
Switzerland	Federal Department of Home Affairs, Federal Food Safety and Veterinary Office, Division of Innovation
UK	Department for the Environment, Food and Rural Affairs (DEFRA)
UK	Biotechnology and Biological Sciences Research Council (BBSRC)



STAR-IDAZ
International Research
Consortium on Animal Health



Thank you!

Further reading:

- DISCONTTOOLS e-book
- DISCONTTOOLS special issue TBED
- ...

VISIT:

www.discontools.eu

