Prioritising research towards novel vaccines, diagnostics and pharmaceuticals in animal health

Background

- Animal diseases reduce production by at least 20% according to OIE¹
- It is estimated that the public and private sector spend each about €400 million per year on animal health research
- The Action Plan of the ETPGAH² identified gap analysis and research prioritisation as a major hurdle to the delivery of new vaccines, diagnostics and pharmaceuticals

Objectives

- Bring together world leading disease experts to identify technology gaps for the control of infectious diseases of animals
- Develop a database with the identified research needs to inform funding bodies
- Prioritise research needs based on prioritisation and gap analysis model
- Communicate with stakeholders and funding organisations to inform of the results

52 diseases and overall prioritisation score

Epizootic diseases	Score	Food producing animal complexes	Score	Zoonoses	Score
Peste des petits ruminants	385	Poultry coccidiosis	226	Nipah virus	464
African swine fever	373	Paratuberculosis	223	Bovine tuberculosis	359
Rift valley fever	365	Liver fluke	202	Non tse-tse transmitted animal	
Foot and mouth disease	310	Nematodes	193	trypanosomiasis	296
African horse sickness	294	Porcine circo virus type 2	183	Cryptosporidiosis	291
Contagious bovine		Bovine viral diarrhoea virus	183	Salmonellosis	282
pleuropneumonia	269	Small ruminant mastitis	179	Leishmaniosis	262
Classical swine fever	247	Varroa mite	177	Brucellosis	254
Lumpy skin disease	244	Staphylococcus aureus mastitis	175	Leptospirosis	250
Bluetongue	241	Theileria	174	Hepatitis E virus	237
Orthopox	237	Mycoplasma bovis	173	Anthrax	220
Sheep and goat pox virus	218	Swine influenza virus	162	Campylobacter	219
Avian Influenza	209	Swine Actinobacillus pleuropneumonia	159	Q-fever	214
Parapox	152	Bovine respiratory syncytial virus	153	Rabies	212
Swine vesicular disease	118	Swine mycoplasma	143	Verocytotoxigenic <i>Escherichia coli</i>	209
West Nile Virus	118	Bovine herpes virus type 1	107	Chlamydophila abortus	197
		Porcine reproductive and respiratory		Bovine spongiform encephalopathy	180
		syndrome virus	107	Echinococcosis	167
		Environmental/Streptococcal mastitis	83	Congo crimean haemorrhagic fever	162
				Cysticercosis	130

Work programme

- While initially funded under E.U. FP7, DISCONTOOLS was relaunched in 2014 with support from national funders in Austria, Greece, Ireland, Italy, the Netherlands, Spain, Sweden, Switzerland and the UK.
- 11 diseases have been selected for updating of information: avian influenza virus, african swine fever, bovine tuberculosis, campylobacter, porcine cysticercosis, VTEC, foot and mouth disease, nematodes, paratuberculosis, PRRS and swine influenza virus.
- One new disease will be added: porcine epidemic diarrhoea virus

¹ World Organization for Animal Health; ² European Technology Platform for Global Animal Health