Basic research on animal health
(with focus on intra-cellular pathogens of animals

Domain suggested by China; intra-cellular pathogens suggested by EC among possible areas to focus on

Research on animal diseases in the FAB flagship

- Jean-Charles Cavitte, DG AGRI

Challenges from China perspective

- SHAO Guoqin, JAAS
- ZHANG Jiyu, LIHPS-CAAS
- LIU Henggui, HVRI-CAAS

Challenges from a European perspective

- Wim van der Poel (WUR) - epizootic diseases (multi species)
- Maisa Peyre (CIRAD) – epidemiology
- Poul Baekbo (Seges) - pig diseases
- Alex Morrow (DEFRA) - intra-cellular pathogens,(rapporteur)

SAPHIR

Strengthening Animal Production and Health through the Immune Response

www.h2020-saphir.eu

Timing: 1 March 2015- 28 February 2019

Budget: total costs €10,5mio of which EU cntribution €9mio

Consortium: 22 beneficiaries (including industry) from 12 countries (9 EU states + CH, NO, China)

Aim: To develop innovative, safe, affordable and effective vaccine strategies effective against endemic pathogens responsible for high economic losses in livestock.

Technical objectives: To generate models and assays for the development of vaccines, to investigate a variety of vaccines and delivery systems and to bring promising vaccines to demonstration.

Targets: Two representative pathogens of pigs (Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) and *Mycoplasma hyopneumoniae*), chickens (*Eimeria* and *Clostridium perfringens*) and cattle (Bovine Respiratory Syncytial Virus (BRSV), *Mycoplasma bovis*) to develop generic vaccine approaches applicable to other pathogens

Coordinator: Isabelle Schwartz-Cornil, INRA;

Isabelle.schwartz@jouy.inra.fr

HORIZON 2020

European Commission

PARAGONE

Vaccines for animal parasites

www.paragoneh2020.eu/

Timing: 1 April 2015 - 31 March 2019

Budget: total costs €9,3mio of which EU contribution €9mio

Consortium: 17 beneficiaries (including industry) from 8 countries (5 EU states + NO, China, Uruguay)

Targets/Objectives:

Ruminant helminths *Fasciola hepatica*, Cooperia spp., *Ostertagia ostertagi*, *Teladorsagia circumcincta* and *Haemonchus contortus* and, the ectoparasitic mites, *Psoroptes ovis* (ruminants) and *Dermanyssus gallinae* (poultry).

Take a number of promising subunit vaccine prototypes and test them in further trials, as well combine some to make multivalent vaccines. For parasites for which vaccines have proved difficult to develop, fundamental studies will be performed to inform on the type of host response that needs to be stimulated to obtain protection. This will feed into the selection of appropriate novel adjuvant systems with which to deliver the vaccines.

Coordinator: Prof. Jacqui Matthews, Moredrun Research Institute

HORIZON 2020

European Commission

Animal health related topics in 2016-2017

2016

- Support for international research on animal health - Collaborative and Support Action (CSA); SFS-12-2016 – SIRCAH project - support to STAR-IDAZ IRC
- Understanding host-pathogen-environment interactions - Research and Innovation Action (RIA); SFS-14-2016 – epidemic and endemic diseases

2017

- Research and approaches for emerging diseases in plants and terrestrial livestock – RIA; SFS-10-2017
- Validation of diagnostic tools for animal and plant health - Innovation Action (IA); SFS-13-2017
- Bee health and sustainable pollination – RIA; SFS-16-2017
- Co-fund on "One Health" (zoonoses – emerging threats) - Cofund (European Joint Programme) ; SFS-36-2017
- Alternative production systems to address anti-microbial drug usage, animal welfare and the impact on health – RIA; SFS-46-2017 - EU-China FAB Flagship initiative.

LINKTADS

http://www.linktads.com/

Recently completed FP7 project on programme level cooperation in animal health tbetween EU and China

"Linking Epidemiology and Laboratory Research on Transboundary Animal Diseases and zoonoses in China and EU"

Main objectives were:

- identify the priority areas, where joint actions are needed
- link the research activities carried out on by European and Chinese research programmes
- ensure a wide-range networking of scientific communities and stakeholders
- provide a long term vision and achieve coordinated planning on future common research
- contribute to the international policies of the EU
- improve the research capacity of organizations by supporting young researchers through exchange programmes and training
- share the results and methodologies within and outside the consortium.

Chinese partners: ShanghaiVRI, HarbinVRI, ChinaAHEpiC, ChinaADC, Huazhong AU

Among the outcomes, epidemiology identified as a particular area of interest (?)

STAR-IDAZ IRC

- Global alliance of research funders to coordinate research activities on animal health
- Launched in Jan 2016 – not an EU instrument but EC involved
- Main features:
  - Common objectives, based on identified priorities
  - Focus on research outputs
  - Distribution/alignment of research activities, with funding usually according to funders own procedures
  - Sharing of information/results (to the extent necessary/possible)
  - Threshold financial commitment
  - Governance (structure and modus operandi)

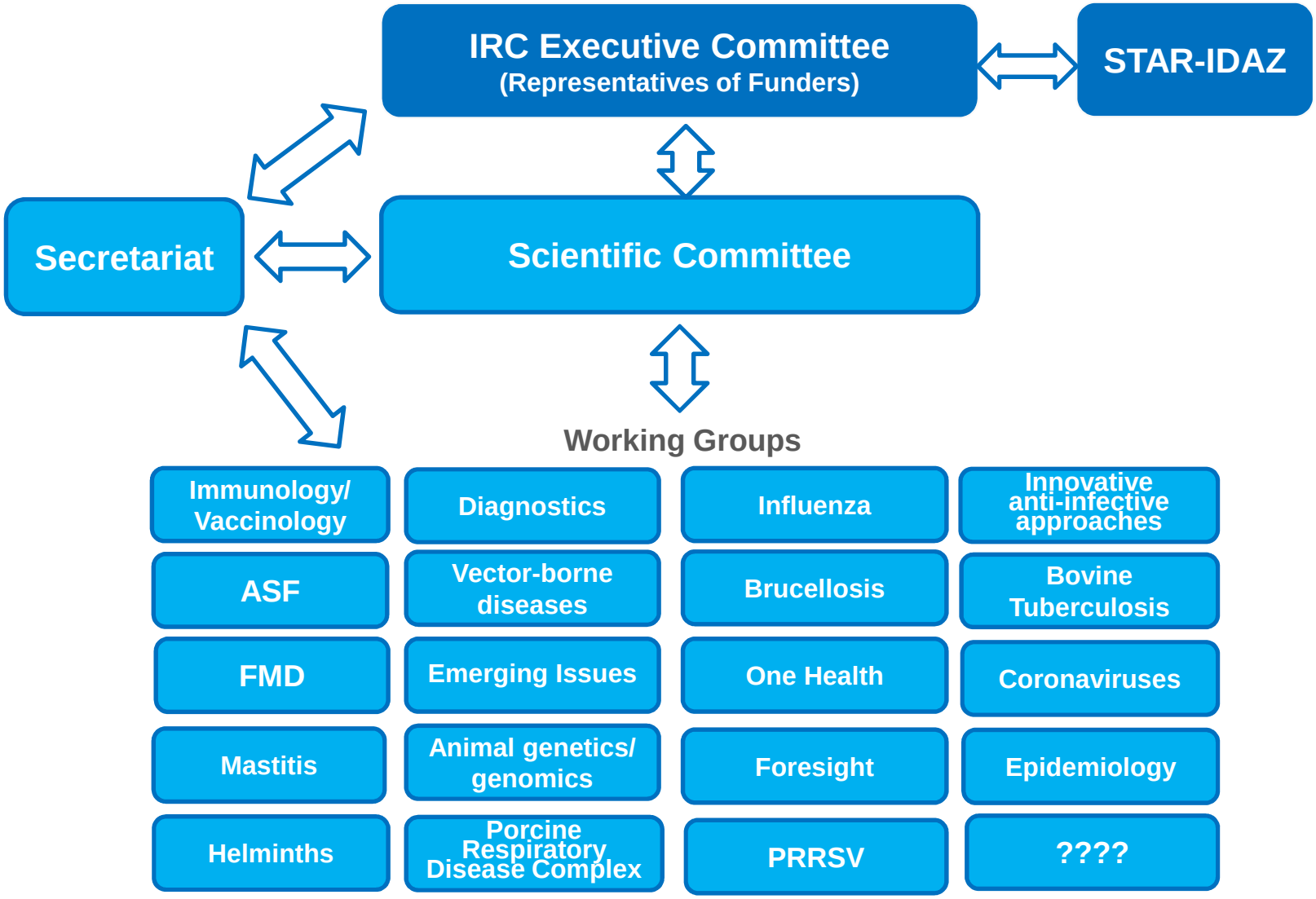
Objectives of STAR-IDAZ IRC

To coordinate research at international level to contribute to new and improved animal health strategies for at least 30 priority diseases/infections/issues

The deliverables include:

- Candidate vaccines
- Diagnostics
- Therapeutics
- Other animal health products and procedures
- Key scientific information/tools to support risk analysis and disease control

STAR-IDAZ IRC Governance Structure



STAR-IDAZ IRC

EU supports the secretariat of STAR-IDAZ IRC through SIRCAH CSA.

In addition, certain topics in SC2 work-programmes are/will be marked as contribution to objectives of STAR-IDAZ IRC

- 16 partners from 13 countries plus one international organisation and three from industry have, as of September 2016, signed Letter of Intent to participate

http://www.star-idaz.net/