



**STAR-IDAZ**  
International Research  
Consortium on Animal Health



Dr Hong Yin

## EU-China collaboration on pig disease research with a particular focus on African swine fever

A workshop was organised by STAR-IDAZ IRC, the European Union, and the Chinese Academy of Agricultural Sciences (CAAS) in order to facilitate research cooperation on pig diseases, in particular African swine fever (ASF) following new outbreaks in both Europe and China. It was held in Beijing just before the STAR-IDAZ IRC Executive Committee Annual Meeting, and was preceded by a reception at the European Embassy. In his address to the reception Dr Alex Morrow, of STAR-IDAZ IRC set the scene by saying "... animal diseases do not respect international boundaries. Disease outbreaks in one part of the world can rapidly spread elsewhere in the globe with potentially expensive consequences, as we learnt from the porcine epidemic diarrhoea outbreaks in China and the US, avian influenza outbreaks in Europe in 2015 and now, African swine fever, which has recently spread over long distances

Dr. Hong Yin, Director General, Lanzhou Veterinary Research Institute, Chinese Academy of Agricultural Sciences, Head of State Key Laboratory on Veterinary Etiology, Vice-chairman of Chinese Veterinary Association, and Scientific Consultant of the China Animal Diseases Scientific Consultation Committee. He graduated in Veterinary Medicine, from Gansu Veterinary and Animal Husbandry School in 1986, and gained a master's degree in 1996 at Postgraduate School (CAAS). In 2002, he completed his PhD degree at the College of Veterinary

both east and west.”

“These disease outbreaks have highlighted the inadequacy of some of the tools we have available to respond rapidly and successfully to emerging disease challenges. There is no vaccine for ASF.” Dr Morrow described the work of the STAR-IDAZ IRC in this area, and spoke about the proposals submitted for an ERA-Net Co-fund – which would result in a common call later this year for research relating to host-pathogen interaction, for diseases including African swine fever and avian influenza. ERA-Nets are European Commission funded projects supporting establishment of public-public partnerships to prepare, implement, and coordinate joint transnational project calls (see ERA-Net section below). China was invited to join in on this international ERA-Net.

The workshop covered the spread of ASF in Europe and in China as well as progress in controlling the disease and developing a vaccine by research groups in Europe and China. There were also reports from the Global African Swine Fever Research Alliance (GARA) on gaps in the knowledge, and where research is needed, including viral genomics, antigenic diversity of viral strains, and mechanisms of protective immunity.

The report of the meeting and the presentations can be seen on the [STAR-IDAZ website](#)

## International Research Consortium Executive Committee Meeting, Hubei Hotel, Beijing, 13-14th March 2019

The annual IRC Executive Committee meeting was opened by Professor Xurong Mei, Vice President, Chinese Academy of Agricultural Sciences (CAAS), who gave an overview of CAAS research activities. CAAS has over 10,000 staff, most of whom work in research, and a research budget of more than US\$150 million. The meeting, chaired by Francisco Suárez Güemes, of the National Autonomous University of Mexico (UNAM), heard that CSIRO (Australia) would be joining the IRC.

Dr Hong Yin, Director General of the Lanzhou Veterinary Research Institute, CAAS (see biopic below) was elected Deputy Chairperson, and will become the Chairperson when the term of Prof. Suárez Güemes comes to an end after the next Executive Committee meeting.

The progress on developing Lead Roadmaps for priority topics was reviewed: roadmaps for brucellosis, bovine tuberculosis, and porcine reproductive and respiratory syndrome are currently on the STAR-IDAZ website, and others will be added shortly.

Other topics covered included an update on the ERA-Net Co-fund on Animal Health, research calls from consortium members, new priority topics, and links

Medicine, Nanjing Agriculture University. His research interests cover epidemiology, pathogen characterization, diagnosis and integrated control of diseases of veterinary importance, such as FMD, African swine fever, bluetongue, and Lyme disease. He has studied the relationship among pathogens, vectors and hosts such as *Anaplasma*, *Babesia*, *Theileria*, *Borrelia* and their vectors and transmission to their ruminant hosts. He has identified two new species of *Theileria*, *T. luwenshuni* and *T. uilenbergi* of small ruminants with molecular phylogenetic analysis. He has also been working on a vaccine against *Haemaphysalis qinghaiensis*. His group has developed numerous diagnostic methods such as CFT, IFAT, ELISA, PCR, Multi PCR, LAMP. He has published more than 100 papers in international journals and is currently the Editor in Chief of Chinese Veterinary Science.

## ERA—Net Co-fund on Animal Health – a platform for joint funding activities

A proposal for an ERA-Net Co-fund on International Coordination of Research on Infectious Animal Diseases (ICRAD) was submitted to the European Commission and is currently moving forward through contract negotiations. The proposed project consortium includes 26 research funders, mostly from the

to DISCONTTOOLS.

The completed minutes of the meeting will be available on the STAR-IDAZ website.



## Workshop on IRC Research Roadmaps: Shortening the Innovation Pipeline, Washington DC, 13 December 2018

A workshop, organised by the STAR-IDAZ IRC, held on the 13th December in Washington DC brought together research program owners across the public and private sectors in the USA to discuss how they can engage with the IRC's research roadmaps and move forward collectively to shorten the innovation pipeline and tackle disease in the livestock sectors.

A high-level reception, hosted by the UK Embassy, was held the previous evening to galvanize political support for a global research initiative on developing new and improved animal disease control strategies, including vaccines, to reduce dependence on antibiotic use in livestock production. This would reduce the threat of antimicrobial resistance (AMR) to the public and animal health as well as the environment.

The workshop was opened by Dame Sally Davies, the UK's Chief Medical Officer and Co-Convenor on the UN Inter-agency Coordination Group on AMR and involved a series of presentations.

The workshop introduced the roadmaps which were seen to be a useful tool in focusing gap analysis, prioritising actions and supporting strategy

European region, and declarations of interest for joining the call and participate in the funding were received from other international funding bodies.

An ERA-Net under Horizon 2020 is a funding instrument designed to support public-public partnerships to prepare, implement, and coordinate joint transnational project calls on a specific topic. The instrument mainly provides 'top-up' funding for single joint calls and transnational actions. The themes of intended ICRAD co-funded research call will cover three research areas: I) Improved understanding of endemic and emerging infectious animal diseases (with special focus on African swine fever and avian influenza), II) generic technology platforms for producing novel/improved vaccines and III) High-throughput, rapid, accurate and easy to use in-field diagnostic technologies.

STAR-IDAZ IRC roadmaps will be suggested as source of information for call applicants.

The total amount of committed budget for the first call, which it is hoped will be launched before the end of 2019, exceeds 20 million euros.

## Controlling Bovine Tuberculosis: A One Health Challenge

STAR-IDAZ IRC contributed to the

development. The meeting agreed that they require well developed and regularly updated target product profiles (TPP) with early input from industry and regulators. Also, that the roadmaps should be considered in the wider animal disease control strategy context. As both public and private research funders and programme owners were represented at the workshop they discussed potential barriers to them working together, and how these could be addressed.

[View the full report of the meeting](#)

## Roadmaps

The STAR-IDAZ IRC website currently has the following roadmaps:

Disease roadmaps:

[African Swine Fever](#)

[Brucellosis](#)

[Bovine Tuberculosis](#)

[Porcine reproductive and respiratory diseases \(PRRS\)](#)

Generic roadmaps:

[Epidemiology and development of disease control strategies](#)

[Diagnostic test development](#)

[Candidate vaccine development](#)

## STAR-IDAZ IRC Side Event at the OIE General Session, 29th May

The side event was organised during the annual General Session to provide an update on the activities of the IRC in coordinating global animal health research. The session, was opened by Elisabeth Erlacher-Vindel, Head of the Antimicrobial Resistance and Veterinary Products Department, at the OIE, who spoke about the need for coordination of research to confront the threat of animal diseases and AMR. There were also presentations from Alex Morrow, Stefano Messori, and David Shamaki, who spoke about the Africa and Middle East Regional Network. The meeting finished with a presentation from Jean-Charles Cavitte, of the European Commission who described the EU framework for research and the impact that the IRC is playing in guiding the animal health part of it. The invitees included representatives of potential new members for the IRC including some of the major pharmaceutical organizations.

2019-1 issue of the OIE Bulletin Panorama online newsmagazine on the theme of “Controlling Bovine Tuberculosis: A One Health Challenge”, now published and available on the OIE website [https://oiebulletin.com/?](https://oiebulletin.com/?page_id=150)

[page\\_id=150](https://oiebulletin.com/?page_id=150). It contains a number of articles including: Improving the coordination of research into bovine tuberculosis: the STAR-IDAZ IRC, by S. Messori, A. Morrow, & G. Gifford, <https://oiebulletin.com/?panorama=4-2-1-star-idaz-irc-en>.

Other papers cover: establishing a national strategy for bTB control; socio-economic costs of bTB; historical data on bTB outbreaks; bTB global distribution and implementation of prevention and control measures according to WAHIS data; and OIE procedure for self-declaration of freedom from bTB.

In the editorial introducing the issue, M. Éloit, Director General of the OIE, emphasises that national coordination of actions and coherence of programmes are preconditions for success in controlling bTB. Also, that there is an urgent need to replace the current international standard bovine tuberculin and establish a reference standard to develop ‘second generation’ diagnostic tests. This is why the OIE supports the international collaboration established with the aim of developing and validating a replacement international standard bovine tuberculin. The OIE also supports the research being undertaken to develop innovative

# Scientific Committee

The Scientific Committee had the first of their two annual meetings at CABI's Science centre at Egham, near London, on 31st January and 1st February 2019.

The meeting reviewed the progress on the roadmaps that have been produced so far, and agreed the need for a roadmap in genetics for disease resistance. A new roadmap for research on integrated pathogen control would be developed, and working groups on Vector Borne Diseases and another on Diagnostics would be further researched for the next meeting. It was also agreed to investigate publishing the generic IRC roadmaps, possibly as a report from the Scientific Committee, or as a commentary or letter to the editor. A number of appropriate journals were considered for this.

The next meeting of the Scientific Committee will be held in Seattle on 12th August, as many members of the committee will be attending the International Veterinary Immunology Symposium which is to be held there on the 13-16th. Alex Morrow will be presenting at the IVIS meeting on a generic roadmap for veterinary vaccine development.

approaches to diagnosis and prevention, in particular, through its involvement in the STAR IDAZ platform.

## IRC Members

The complete list of members is:

1. Danish National Veterinary Institute (DTU Vet), Denmark
2. National Institute of Agricultural Research (INRA), France
3. French Agency for Food, Environmental and Occupational Health & Safety (ANSES), France
4. Ministry of Health, Italy
5. Ministry of Agriculture, Nature and Food Quality, The Netherlands
6. National Institute for Agriculture and Food Research and Technology (INIA), Spain
7. Department for the Environment, Food and Rural Affairs (Defra), UK
8. Biotechnology and Biological Science Research Council (BBSRC), UK
9. Regional Consortium; Universiteit Gent (Ghent University), Université de Liège, the Federal Public Service Health, Food Chain Safety and Environment (Unit Contractual Research) and CODA-CERVA (Veterinary and Agrochemical Research Centre)
10. Kimron Veterinary Institute, Israel
11. International Livestock Research Institute (ILRI), Kenya
12. Tanzania Veterinary Laboratory Agency (TVLA), Tanzania
13. National Institute of Animal Health, National Agriculture and Food Research Organisation (NIAH), Japan
14. Agriculture Research Services, United States Department of Agriculture (USDA ARS), USA
15. National Institute of Agriculture Technology (INTA), Argentina
16. Ministry of Science, Technology and Productive Innovation (MINCYT), Argentina
17. Canadian Food Inspection Agency (CFIA), Canada
18. Zoetis

19. OIE-World Organisation for Animal Health
20. Bill and Melinda Gates Foundation (BMGF)
21. HealthforAnimals (Global Animal Medicines Association)
22. Diagnostics for Animals (Manufacturers of Animal Health Diagnostics)
23. European Commission
24. Regional Consortium; Nigerian Animal Health Research Network led by National Veterinary Research Institute Vom
25. National Advisory Council on Animal Health (CONASA) and the National Autonomous University of Mexico (UNAM), Faculty of Veterinary Medicine and Zootechnics (FVMZ)
26. Australian Animal Health Laboratory, CSIRO, Australia

## SIRCAH

SIRCAH, funded by the European Commission through H2020, is run by a partnership including Defra (UK Department for Environment, Food and Rural Affairs), World Organisation for Animal Health (OIE), CAB International, BBSRC (Biotechnology and Biological Sciences Research Council), and AnimalhealthEurope (association representing animal medicines industry in Europe). It provides organisational and communication support to the IRC, facilitates research gap analysis including the provision of literature reviews for working groups, maps funding activities against identified research needs, and helps mobilise resources to address them. The Secretariat also plays an important role in advocacy for the consortium and bringing in new members.

## Further Information

For further information about the IRC please visit [www.star-idaz.net](http://www.star-idaz.net). Research funding organisations and programme owners interested in joining the IRC or researchers interested in joining the working groups should contact the STAR-IDAZ IRC Project Office:

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### SIRCAH

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