

NEWS

AUGUST 2022



STAR-IDAZ
International Research
Consortium on Animal Health



Message from IRC Chair

We are very pleased to hear that the secretariat (SIRCAH) that has supported the IRC over the last 6 years has been successful in getting funding from Horizon Europe for a further 4.5 years from October this year. This recognises the impact that the current project has made in coordinating animal health research globally. The next phase of funding will enable the IRC to build on its current programme and increase the contact with industry, which is important in ensuring the delivery of animal health solutions, including vaccines, diagnostics, drugs, and other control strategies. There will also be more emphasis on developing the regional networks, which have been successfully revived

during the pandemic with virtual meetings.

The need for a coordinated approach to researching animal diseases has been emphasised by the spread of African swine fever which is now a global problem, and with the outbreaks of avian influenza in wild birds and in poultry production in different regions. The review on African swine fever that the IRC commissioned has been widely circulated and downloaded over 250 times since April. Also, the need to find alternatives to antibiotic use in animal production is an important step in reducing the emergence of antimicrobial resistance.

Finally, I would also like to welcome Cynthia Baldwin and Linfa Wang to the Scientific Committee and look forward to them adding their expertise and energy to this important committee.

Best wishes,

Hong Yin

Director General, Lanzhou Veterinary Research Institute
Chair IRC

Executive Committee

The Executive Committee represents the 29 members of the IRC. They oversee the direction of the consortium and agree its work on facilitating the coordination of research on animal health. Meetings of the Executive Committee have been held online since 2019, with the number of meetings increased to two a year.

The online meeting on 22 June covered a number of items, including our social media strategy to promote the IRC, the next stage of SIRCAH (SIRCAH2), and work on the priority diseases and topics. There was also a discussion on creating a 'One Health'

Working Group in collaboration with GloPID-R. This working group would include experts from animal health, human health, and environmental sectors, as well as quadripartite representatives. The working group would develop roadmaps, identify research gaps, recommend coordination of research funding, and encourage uptake of research findings into practice and policy.

The Executive Committee hope to have the next meeting in person, and consider the priorities for the IRC in the next phase of SIRCAH funding.



SIRCAH2 – further funding secured

We are pleased to report that the proposal for further funding for the SIRCAH (Secretariat for the International Consortium on Animal Health) was successful under the European Commission Horizon Europe 2022 Call for proposals. SIRCAH is currently a five-year EU-funded project, with the 12-month no cost extension, that will come to an end in September 2022. With the announcement of 4.5 years of further funding, under SIRCAH2 'Support for the International Research Consortium on Animal Health', the Secretariat will be able to continue to facilitate and support STAR-IDAZ IRC in achieving its objectives by providing organisational and communication support. Defra, WOAH (founded as OIE), CABI, UKRI-BBSRC and Kreavet will be partners in SIRCAH2, which is anticipated to begin in Autumn 2022.

SIRCAH would like to thank you all for your support and commitment to STAR-IDAZ IRC and look forward to continue working with you over the next few years.



African Swine Fever – review and GARA Meeting

A review of research achievements and challenges in ASF since the 2018 gap analysis was commissioned by the IRC and published as the 2022 African Swine Fever Virus Research Review in April 2022, in collaboration with USDA and Global ASF Research Alliance (GARA). It contains a thorough literature review, ongoing research updates from scientists in the field, and incorporates feedback from leading researchers in this area. The full ASFV review can be found on the STAR-IDAZ IRC website [here](#).

The review was commissioned and distributed throughout the STAR-IDAZ network, and provided a basis for the gap analysis sessions at the GARA Scientific Meeting in the Dominican Republic. At the GARA meeting a number of gap analysis sessions were held to identify where the research effort needs to be focused. The gap analysis report will be used to review the ASF roadmaps, and update them.

The ASF road maps are published on the [STAR-IDAZ IRC website](#).

Influenza – review and workshop



The IRC '2021 Influenza Research Review' published in mid-July 2021, identified what has been achieved since the previous gap analysis meetings in 2013/14/15 and the current gaps in the knowledge. The review was commissioned at a time when there is increasing concern about avian influenza outbreaks in poultry, and also in the wild bird populations.

Following the dissemination of the review, the IRC together with the USDA-ARS organised an 'Influenza Virus Gap Analysis Workshop'. After having to postpone the workshop more than once because of pandemic restrictions on travel, the workshop was held on June 14-15, at the National Centers for Animal Health, Ames, Iowa. As well as helping to organise the workshop, SIRCAH supported the attendance of several experts from around the world to help provide an international perspective. The workshop focussed mainly on influenza in poultry and in pigs, but also covered the disease in equids and other domestic species. The gaps in the knowledge that were identified will be included in the next Gap Analysis report that will be posted on the STAR-IDAZ IRC website. The report will provide a starting point for constructing roadmaps for the control of influenza.

The full review is available to read or download on the STAR-IDAZ IRC website [here](#).

Scientific Committee

The Scientific Committee (SC) met on 25 January by webinar and 28 and 29 June in Paris, France hosted by ANSES.

At the January SC meeting, members discussed the activities of the influenza, antimicrobial resistance (AMR) and alternatives to antibiotics (ATA), vaccine platforms, emerging issues, vector-borne diseases, African Swine Fever (ASF) and emerging issues Working Groups (WGs). The members were updated on the October Executive Committee meeting, continued funding to the Secretariat through SIRCAH2, and the Regional Networks.

At the June meeting in Paris, the first in-person meeting since the start of the COVID-19 travel restrictions, SC members discussed activities relating to the WGs for influenza, ASF, AMR and ATA, One Health, Vaccinology, vector transmission and control, bovine tuberculosis (bTB), helminths and anthelmintic resistance, coronaviruses, emerging issues, foot-and-mouth disease (FMD), brucellosis, porcine reproductive and respiratory syndrome (PRRS), and diagnostics.

The STAR-IDAZ IRC welcomed two new Scientific Committee members – Professor Cynthia Baldwin and Professor Linfa Wang. Cynthia Baldwin, from the University of Massachusetts, USA, is an experienced investigator in the area of cellular immunology, with her expertise focusing on cellular responses to bacterial and protozoan pathogens of humans and livestock including *Brucella*, *Leptospira*, *Mycobacterium* and *Theileria*. Linfa Wang is a Professor in the Programme in Emerging Infectious Diseases at Duke-NUS Medical School, Singapore and the inaugural Executive Director of the Programme for Research in Epidemic Preparedness and Response (PREPARE) and an expert in zoonotic diseases, bat immunology and pathogen discovery.



AMR and Alternatives to Antibiotics (ATA)

STAR-IDAZ IRC aims to advance the global research agenda on the development of alternatives to antibiotics (ATA) by exploring experts' views on research priorities.

To this aim, several workshops were held from 2019 to 2022 to develop research roadmaps on ATA. The report on the meetings and their outcomes has been circulated to IDRC (International Development Research Centre, Canada), who were partners with the IRC in organising the workshops. The outcomes of the workshops will be used to develop roadmaps into finding alternatives to antibiotics. The IRC work in this area was presented to the WOH (formerly called OIE) AMR Working Group on 27th April 2022.

Future events in this area that are planned by the IRC include a 'One Health AMR session' within the next ALARM (Amrita Legion for Antibiotic Resistance Management) congress (2023), and a workshop on AMR research at the next INIA Iberoamerica meeting in Nicaragua in October 2022.

Vaccinology

At the International Vaccinology focus group meeting organized by the IRC in October 2020, it was decided that a review of the current literature on vaccine platform technology would help inform the animal health research community. A review was commissioned by the IRC, of the current literature on vaccine platform technologies and was published in Vaccine in April 2022 entitled '**Applications of Platform Technologies in Veterinary Vaccinology and the Benefits for One Health.**' The review was authored by Gary Entrican, from the University of Edinburgh and the IRC Scientific Committee, and Mike Francis, BioVacc Consulting. The purpose and scope were to critically review the current literature on vaccine platform technologies with direct relevance to the goals of the STAR-IDAZ IRC, outline the different platform technologies and discuss these in relation to the different challenges for animal vaccinology, and to highlight the importance of One Health and what we have learnt from recent zoonoses. The review noted that the timely introduction of proposed regulatory legislation

with potential to accelerate registration of veterinary vaccines based on well-defined platform technologies offers exciting new opportunities to control animal diseases and have wider One Health benefits.



A follow-up meeting will be organised by the IRC with key experts working on various platform technologies, along with representatives from EVI, ZAPI, CEPI and IVVN, to identify knowledge gaps that need to be addressed to move these platforms forward.

The Global Veterinary Vaccinology Research and Innovation Landscape survey report was published in January 2022. The report provides analysis of the survey on the Global Veterinary Vaccinology Research and Innovation Landscape conducted by UKRI-BBSRC, on behalf of STAR-IDAZ IRC and other veterinary vaccinology research funders and programme owners. The survey provides important insight

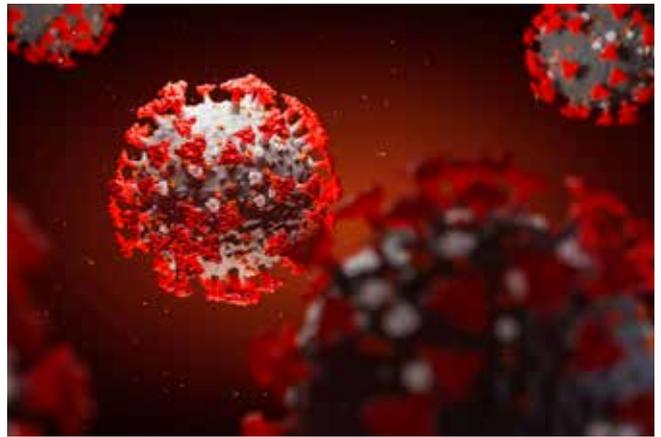
into the key gaps, priorities and barriers that need to be addressed in the future. The full report is available on the STAR-IDAZ IRC website here.

Coronavirus UK-ICN

The Covid-19 pandemic highlighted the fact that more research into coronaviruses is needed to enable the world to be better prepared for future potential epidemics of coronaviral diseases. The **UK International Coronavirus Network (UK-ICN)** was launched with funding from BBSRC and Defra for over four years.

The UK-ICN is led by Prof. Julian Hiscox (Institute of Infection, Veterinary and Ecological Sciences), and is hosted at the University of Liverpool. It will establish and sustain global research and innovation partnership to generate knowledge, tools and intervention strategies for control of coronaviruses. The scope of the network includes: pathogen biology (including e.g. seasonality, transmission, ecology and evolution); host response and effective intervention strategies. The scope will be underpinned through a One Health approach focused on comparative animal and human coronavirus biology. The IRC was actively involved in defining the remit of the network, and in June 2022 was invited to join the UK-ICN Management Board.

The network has an open membership, register as a member [here](#).



Forthcoming event:

September 28 – 30, 2022: Cutting Edge Virtual Symposium on Coronaviruses with Disease-X Potential in collaboration with CSIRO and US FDA [Hybrid Meeting], (Geelong, Australia)

The network hosts a monthly virtual seminar series focused on coronaviruses. For more details including the programme, please see [here](#).

Regional Networks

AMERN

The Africa and Middle East Regional Network has agreed they would like to meet more regularly, approximately every 4 months. AMERN met virtually on 11 January and 10 May 2022. At the January meeting, the Regional Network were updated on STAR-IDAZ, IRC and SIRCAH as well as activities relating to Vaccine Platform Technologies, African Swine Fever (ASF), and alternatives to antibiotics (ATA). This was followed by a number of presentations about research programmes with external partners' involvement that focused on issues of regional interest, with an introduction from Network Chair Mustapha Oumouna. The presentations were on the German Government-funded OHRECA (One Health Research, Education and Outreach Center in Africa) and BUILD (Boosting Uganda's Investments in Livestock Development) projects, and a number of World Bank-supported initiatives. At this meeting, there were representatives from Kenya, Senegal, Israel, South Africa, Iran, GALVmed, ILRI, AU-IBAR, and ERFAN (Enhancing Research for Africa Network).

At the May Regional Network meeting, SIRCAH provided updates on activities relating to Emerging Issues, Vaccine platform technologies, ASF, and influenza. There were a number of invited presentations, including one on the Southern African workshop on One Health coronaviruses bio-surveillance towards prevention, preparedness and response, the Africa One Health Network (AfOHNet), and SEBI Livestock (Centre for Supporting Evidence-based Interventions in Livestock). This was followed by country reports to highlight issues of regional importance and opportunities for resource sharing and collaboration. Representatives from Algeria, Kenya, Nigeria, Tanzania, Uganda, Israel, South Africa, GALVmed, ERFAN and ILRI attended the meeting.

A&ARN (Asia & Australasia)

The Asia and Australasia Regional Network met on 14 December 2021 by webinar, with attendees from China, Australia and Japan. Participants were updated on STAR-IDAZ IRC, Executive and Scientific Committees and SIRCAH, as well as Working Group activities on influenza, ATA, Vaccine Platforms and ASF. This was followed by country reports from those in attendance, highlighting their country or organisations' priorities and main challenges. This Regional Network will next meet virtually on 26 July.

ARN (Americas)

The last Americas Regional Network meeting was held alongside the virtual PANVet (Pan American Association of Veterinary Sciences) Congress on 26 November 2021. This was a useful opportunity to raise awareness of STAR-IDAZ activities as well as the role of the Regional Network. Attendees were given an overview of STAR-IDAZ IRC background and its structure and the research roadmaps, before receiving updates on recent activities relating to influenza and the work of the helminth Working Group. Next, a number of invited Network members gave country reports, from Argentina, Canada, Guadeloupe, and Mexico. There was also an update on the second ICRAD (International Coordination of Research on Infectious Animal Diseases) ERA-Net call. The next meeting of this Regional Network will be on 18 July.



Emerging Issues

Building on the success of the first IRC workshop held back in June 2021, a second Emerging Issues workshop was held on 24 March 2022, bringing together representatives of initiatives, projects and networks working on emerging issues in animal health, and related human health initiatives, to encourage knowledge sharing, coordination and collaboration. There were presentations from **GOARN** (Global Outbreak Alert and Response Network), **EREN** (Emerging Risks Exchange Network), **GloPID-R** (Global Research Collaboration for Infectious Disease Preparedness), **CEEZAD** (Center of Excellence for Emerging and Zoonotic Animal Diseases), and an update on **PREZODE** (Preventing Zoonotic Disease Emergence). An open discussion followed, focusing on issues relating to this field, including One Health, diagnostics, wildlife surveillance and priority knowledge/research gaps in the area.

BTB

The *Mycobacterium bovis* conference that had been postponed more than once, was held in Galway Ireland, on the 7-10 June, bringing experts from around the world to exchange knowledge on bovine TB. Johannes Charlier gave a presentation on the STAR-IDAZ IRC focussed on the roadmaps and the need to update and develop new roadmaps for controlling bovine TB. A plan was sketched out with prof. Vivek Kapur and prof. Glyn Hewinson to revive the Global Research Alliance on bovine TB (GRAbTB) and organise a meeting in early 2023 to review, develop and validate research roadmaps on BTB.



COMBAR Conference

The final COMBAR (Combating Anthelmintic Resistance in Ruminants) conference was held in Athens, Greece in March 2022, marking the achievements of this COST Action project. These included the establishment of a research network covering 30+ countries and the development and dissemination of research roadmaps in collaboration with STAR-IDAZ IRC. Many materials to enhance sustainable helminth control were developed and disseminated.

Finally, the COMBAR Special Issue is now almost complete, with one more paper in the pipeline, on farmer attitudes to the use of diagnostics for helminth control across Europe. Using the roadmaps and gap analysis, COMBAR was able to make recommendations on future research funding. With the action coming to an end, the network is now investigating how to continue activities focused on research coordination. The main route will be via an annual meeting of the Livestock Helminth Research Alliance (LiHRA).

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
27. Lanzhou Veterinary Research Institute (LVRI), China.
28. National Veterinary Institute of Sweden (SVA), Sweden

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 (WOAH), 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. 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: Alex Morrow: Alex.Morrow@Defra.gsi.gov.uk

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The Secretariat for the STAR-IDAZ IRC (SIRCAH) is funded from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727494

