

NEWS

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STAR-IDAZ
International Research
Consortium on Animal Health



Francisco Suárez Güemes

Editorial – Chair of the IRC

It is a pleasure to address you in our first newsletter since I took over as Chair of the IRC. The information generated by our network is of great importance and the research roadmaps we plan to launch over the coming months will be vital in informing our network of funders on where best to focus our efforts so as to hasten the delivery of new disease control tools. As ever, the investigation into infectious diseases of animals faces great challenges, one of them being antimicrobial resistance (AMR). It is for this reason that the enthusiastic participation of our partners is very welcome as is the support from the wider animal health research community.

The threat from antimicrobial resistance has received considerable attention in recent years. The European action plan “A European One Health Action Plan against Antimicrobial Resistance (AMR)” which was

published in June 2017, notes that the Commission will “foster international research collaboration on AMR in the animal health sector in the STAR-IDAZ International Research Consortium”. An OIE ad hoc group met in April 2015 and prioritised diseases for which vaccines could reduce antimicrobial use in animals, with a focus on poultry, pigs and fish. Several of the identified diseases are priority topics of the IRC. A ‘Call to Action’ on Antimicrobial Resistance (AMR), organised in partnership with the UN Inter-Agency Coordination Group (IACG), took place in Berlin on 12-13 October 2017. This meeting, which the STAR-IDAZ IRC Chair participated in, brought together international actors in AMR from across the human health, animal health, agriculture and environment sectors to galvanise momentum that will transform high-level commitments into tangible actions as a follow-up mechanism to the 2016 United Nations General Assembly (UNGA) resolution on AMR.

We would like to congratulate our IRC colleague, Cyril Gay of the USDA, on being honoured in the 2017 Presidential Rank Awards, receiving the Meritorious Professional award in part for his international recognition as a leading authority in vaccinology and biodefense research. Cyril is playing a leading role in encouraging research on alternatives to antibiotics, including vaccine development.

African and Middle Eastern Regional Network meeting, Abuja, Nigeria, 12-14 September

A meeting of the STAR-IDAZ Africa and Middle East Regional Network (A&MERN) followed by a research coordination meeting with Nigerian veterinary authorities, research institutes and deans of the Nigerian veterinary schools was organised by STAR-IDAZ IRC Secretariat. It was held in Abuja, and included a visit to the National Veterinary Research Institute, at Vom in Plateau State. The meetings were supported by Zoetis through the ALPHA initiative, a project co-funded by the Bill & Melinda Gates Foundation which aims to develop veterinary diagnostic networks and animal health infrastructure in Ethiopia, Nigeria and Uganda.

The A&MERN meeting elected a new chair and vice-chair to be in position for the next two years. Dr David Shamaki was elected chair of the Network for the next two years, and Dr Mustapha Oumouna elected Deputy Chair. Dr Shamaki is Director of the Nigerian Veterinary Research Institute, and Dr Oumouna is an expert in Immunology and microbiology at the University Mèdèa (Algeria) who has played a leading role in forming the African Vaccinology Network.

The priority topics for research were reviewed and updated, and future collaboration explored.

The Nigerian Research meeting was very well attended, and conducted with an impressive level of commitment and enthusiasm, to increase collaboration, sharing resources and joint application for funding. One of the outcomes of this meeting was the formation of the Nigerian Animal Health Research Network. The generous support of Zoetis to enable the meeting to be held was recognised and appreciated.



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Global Foot and Mouth Disease Research Alliance (GFRA) scientific meeting

The biennial scientific meeting of the Global Foot and Mouth Disease Research Alliance (GFRA) took place in Incheon (Republic of Korea) on the 25 – 27 October 2017. The meeting brought together scientists from the global FMD research community to share and discuss recent advances towards a better understanding of FMD and its control, in order to enhance collaboration on innovative solutions for preventing and responding to outbreaks of the disease. The event brought together about 200 participants, including researchers, vaccine suppliers, policy makers, operation managers, and representatives from intergovernmental organisations (FAO and OIE). STAR-IDAZ IRC representatives also participated in the meeting.

One of the main aims of the meeting was to identify the research priorities and the problems that need to be solved to develop more effective strategies for controlling FMD. The information collated at the meeting will be used to form the basis for a detailed research gap analysis that will be organised by the GFRA in 2018, with a research gap analysis meeting planned for Buenos Aires on 12 – 14 June. The STAR-IDAZ IRC will provide support to this initiative, as the gaps identified will serve to build research roadmaps to guide future research on FMD.

Animal Health Roadmaps

One of the functions of the SIRCAH (Secretariat of the International Research Consortium on Animal Health) is to support the Working Groups in producing animal health research roadmaps. A roadmap for a priority topic, such as bovine tuberculosis, will show all the significant steps that have to be taken, and problems that have to be solved, based on identified Leads, in order to provide a workable solution such as a vaccine.

SIRCAH has been working with an organisation, Viadynamics (www.viadynamics.com) using their 'Lead model' to help analyse priority topics to clarify problem, identify gaps in knowledge and principle barriers to solving the problems, and developing solutions. Each lead will consider the Research Question ("What are we trying to achieve?", "What is the problem we are trying to solve?"), Challenge ("What are the scientific and technological challenges/Knowledge gaps needing to be addressed?"), and Solution Routes ("What approaches could/should be taken to address the Research Question?"), Dependencies (What else needs to be done before we solve this need) and State of the Art (Existing knowledge including success and failures). Current research projects will be linked to the challenges associated with each lead allowing users to assess the extent to which the challenges are being addressed and identifying areas requiring further attention.

Working with the Scientific Committee and Working Groups, SIRCAH is currently constructing roadmaps for priority topics including bovine tuberculosis, PRRS, Brucellosis, tick-borne diseases, and vaccine development. The aim is to have these

for all of the priority topics. The roadmaps will provide a way of visualizing a complex problem showing the gaps and helping to decide what projects need to be developed to create workable solutions.

When completed the roadmaps will be accessible on the STAR-IDAZ IRC web site and will provide a valuable tool for the research community, including researchers and funders.

GRAbTB Research Gaps and Roadmaps

Bovine tuberculosis (bTB) was identified by STAR-IDAZ as a priority disease and a Research Gap Analysis and Prioritisation Workshop was held in Cardiff in 2014. These gaps were refined and built upon at a gap analysis workshop in Rabat in 2015 when the Global Research Alliance for bTB (GRAbTB), a working group of STAR-IDAZ, led by Glyn Hewinson and Vivek Kapur, was launched. The vision, mission, strategic goals, and governance structure were developed and an MoU signed by 15 partner organisations from 8 countries. Research roadmaps were developed in 2017 from the Cardiff and Rabat gaps for 1) Vaccine development, 2) Diagnostic test development, 3) Epidemiology and control, and 4) Socioeconomics.

On 11 December 2017, a review of the UK-Funded (BBSRC-Defra-NC3Rs) ERADbTB [Eradication of bovine tuberculosis through basic research and discovery] research programme was held in Birmingham, UK involving over 50 researchers from the ERADbTB programme, with the principal investigators presenting the impacts, results and outputs of their research projects. The following day, a GRAbTB Research Roadmap Workshop was held which involved all of those from the ERADbTB review as well as eight additional international experts. Glen Gifford, the IRC Scientific Committee member assigned to bTB, gave a talk titled 'A multisectoral roadmap for zoonotic TB and relevance for GRAbTB' in which he introduced the recently published Roadmap for Zoonotic Tuberculosis (WHO/OIE/FAO/The Union, 2017) and its ten priorities grouped into three core themes. The first of these themes is 'Improve the Scientific Base' with the third priority under this theme being to 'Address research gaps' – a primary focus of the STAR-IDAZ IRC and GRAbTB.

This workshop aimed to validate the research roadmaps developed by GRAbTB to help the IRC identify gaps and guide future funding, and also to support the third priority of the Zoonotic TB Roadmap. The GRAbTB roadmaps were circulated to all before the workshop and an online survey asked a number of questions, the responses to which were used to refine the roadmaps prior to discussion at the workshop. The outputs of these discussions have now been used to help develop lead summaries underpinning the vaccine and diagnostics roadmaps with specific challenges and possible solution routes. Once current and planned research activities from IRC partners have been mapped onto the bTB roadmaps they will be available on the STAR-IDAZ IRC website.

IRC Scientific Committee

The Scientific Committee (SC) met for the first of its biannual meetings in February, which was held at the Kimron Veterinary Institute, in Tel Aviv, Israel. The hosts were Dr Irit Davidson, a Senior Researcher at Kimron and a member of the SC, and Dr Michel Bellaiche, former Director of the Institute and recently appointed Chief Veterinary Officer for Israel.

The meeting was chaired by Dr Wim van der Poel, of the Central Veterinary Institute of Wageningen University and Research Centre.

The meeting examined the development of 'Lead Roadmaps' for the six priority topics that had been previously selected, bovine tuberculosis, PRRS, brucellosis, African swine fever, veterinary vaccinology and helminthoses. Other priority topics to be taken forward include FMD, vectorborne diseases, coronaviruses, and innovative anti-infective approaches (including alternatives to antibiotics). The meeting also considered which topics should be added to the list of priority diseases. Other topics covered in the meeting were the SC representation on the working groups, Open data, IP and early engagement with industry, the agenda for the Executive Committee meeting in Madrid, and assessing the impact of the IRC.

The SC was also able to interact with researchers during a tour of the Kimron laboratories and learn about coping with transboundary diseases when in the crossroads of Asia, Africa and Europe. The SC members were also treated to a cultural and historical tour of the old city of Jerusalem, to get to grips with 3000 years of history.

The Scientific Committee's role is to consider the scientific merit of proposals of the Executive Committee (EC); act as a scientific coordinating body; propose research priorities, policies, and guidelines for the EC; identify the need for new Working Groups (WG), define their mission, support them in gap analysis and research prioritization, report on their progress to the EC and exchange of protocols and



Scientific Committee Meeting 19-20 February 2018, Tel Aviv, Israel

best practice for the IRC to reach its scientific goals. The full mandate and information about the Scientific Committee can be found on the [STAR-IDAZ-IRC web-site](#).

Members of the Scientific Committee are: Don Knowles (Animal Disease Research Unit, ARS-USDA-PWA, USA); Dieter Schillinger (ILRI); Gary Entrican (Moredun Research Institute); Martin Beer (Friedrich Loeffler Institut, Germany); Edwin Claerebout (Ghent University, Belgium); Wim van der Poel (Wageningen University, Netherlands); Denis Kolbasov (Russian Academy for Agricultural Sciences); Stéphan Zientara (Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail, ANSES); Bruno Goddeeris (Ghent University, Belgium); Clara María Marín Alcalá (Centro de Investigación y Tecnología Animal (CITA), Spain); Gustavo Zielinski (Instituto Nacional de Tecnología Agropecuaria, Argentina); Glen Gifford (Canadian Centre for Veterinary Biologics, CFIA, on secondment to OIE); Jeremy Salt (GALVmed); Anette Bøtner, (DTU National Veterinary Institute, Denmark); Irit Davidson (Kimron Veterinary Institute, Israel); Sergio Rosati (University of Turin, Italy).

DISCONTTOOLS launches new website

DISCONTTOOLS, the open-access database identifying research gaps to improve the control and management of more than 50 infectious diseases in animals – has just launched a new website with updated info for most of the prioritised diseases. DISCONTTOOLS aims to help the development of new DISEase CONTROL TOOLS including diagnostics, vaccines, and pharmaceuticals to reduce the burden of animal diseases.

The new website includes a more user-friendly interface for the database, making retrieval of information both easier and more flexible. Customisable searches allow for a more in-depth review of the data available. Research bodies can select their topics of interest, compare the selected topics across diseases and prioritise these diseases across a range of criteria.

Starting out as an EU FP7 project in 2009 for prioritising research gaps in animal health management, DISCONTTOOLS, in 2014 it received financial support of a range of national funders in the EU. With disease information provided by global experts from academia, government bodies and the animal medicines industry, the project also contributes to the [STAR-IDAZ International Research Consortium for Animal Health](#). The gaps identified through DISCONTTOOLS now serve as a baseline on which the STAR-IDAZ IRC, along with public and private bodies can develop road maps and strategic research agendas.

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 HealthforAnimals (Global Animal Medicines Association). 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.

Events in 2018

Scientific Committee Meeting: 19-20 February 2018, Kimron Veterinary Institute, Tel Aviv, Israel

IRC Annual Meeting 2018: 14-15th March 2018, INIA (Instituto Nacional de Investigaciones Agronómicas) Madrid, Spain

Global African Swine Fever Research Alliance (GARA): 12-14 April 2018. 4th Annual GARA Scientific Workshop, Istituto Zooprofilattico Sperimentale della Sardegna, Cagliari, Sardinia, Italy

GFRA (Global Foot and Mouth Disease Research Alliance) in 2018: 12-14 June 2018, Research Gap Analysis Meeting, INTA (Instituto Nacional de Tecnología Agropecuaria) Buenos Aires, Argentina

International PRRS Symposium (IPRRS2018): 11-12 June 2018, held in conjunction with The 25th International Pig Veterinary Science Congress, Chongqing, China

IRC Members

Two new members, from Nigeria and Mexico, have joined the International Research Consortium on Animal Health in the last six months. They are the:

Regional Consortium; Nigerian Animal Health Research Network led by National Veterinary Research Institute Vom;

And, National Advisory Council on Animal Health (CONASA) and the National Autonomous University of Mexico (UNAM), Faculty of Veterinary Medicine and Zootechnics (FVMZ).

IRC Members

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 Economic Affairs (MinEZ), 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. World Organisation for Animal Health (OIE)
19. Zoetis
20. Bill and Melinda Gates Foundation (BMGF)
21. AnimalhealthEurope
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)

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 or Luke Dalton (Defra): Alex.Morrow@Defra.gsi.gov.uk | Luke.Dalton@Defra.gsi.gov.uk.

Alex Morrow (Defra): Alex.morrow@Defra.gsi.gov.uk | Luke Dalton (Defra): Luke.Dalton@Defra.gsi.gov.uk

Stefano Messori (OIE): s.messori@oie.int | Sadhana Sharma (BBSRC): Sadhana.Sharma@bbsrc.ac.uk

Robert Taylor (CABI): r.taylor@cabi.org | Johannes Charlier (AnimalhealthEurope): j.charlier@animalhealtheurope.eu



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