

# ANNUAL REPORT

## 2021



INTERNATIONAL  
CENTRE FOR  
ANTIMICROBIAL  
RESISTANCE  
SOLUTIONS

# 2021 YEAR IN REVIEW



HELLE KRARUP, *Director of Operations and acting Executive Director*  
ROBERT SKOV, *Scientific Director*

If 2020 was the year that ICARS moved from concept to reality, 2021 was the year that ICARS sprang into action. Despite continued challenges posed by COVID-19, ICARS made great strides in 2021 including establishing itself as a self-governing institution, building a diverse portfolio of projects across Latin America, Asia, and Africa, and advocating for intervention and implementation research to tackle antimicrobial resistance (AMR) at multiple high-level events.

In 2021, ICARS began implementing its first two demonstration projects in Georgia and Vietnam, in the human and animal sector respectively, and approved many new demonstration projects and supporting activities across the world. This milestone follows a dynamic exchange between ICARS research advisors, country ministries and local research institutions to co-develop a range of interventions that tackle specific AMR challenges in each context. This allowed us the chance to refine our unique co-development process and streamline it across different settings while preparing ourselves for the implementation phase of the diverse projects.

Aside from co-developing projects with country ministries, ICARS has also kickstarted new collaborations with national and international organisations on a range of projects to tackle AMR. The UK Global AMR Innovation Fund (GAMRIF) and Wellcome Trust have separately supported ICARS with earmarked funding for collaborative activities, that compliment ICARS existing efforts in Colombia and Zambia. In addition, the Danish Ministry for Foreign Affairs has contributed earmarked funding to support a collaborative project with the International Development Research Centre (IDRC) to investigate the gender gaps in AMR research.

In 2021, ICARS held multiple conversations with potential funders and implementation partners, to explore opportunities to partner, align, and strengthen our activities to increase impact.

ICARS has undergone rapid organisational development to keep pace with its activities. We are pleased to introduce you to our first Board of Directors, our Technical Advisory Forum, and the new members of our expanding core team. To ensure integrity of our work we have also adopted a range of policies that reflect global best practice and our continuous commitment to the highest possible standards of ethical, moral, financial, and legal business.

It is well known that AMR is a major threat to the health of humans and animals, the environment, global food security and economic prosperity – but global awareness and advocacy for AMR remain a big challenge. In 2021, some encouraging steps were made. The Call to Action conference, led by the Wellcome Trust and co-hosted by ICARS, was an invigorating event that brought together low- and middle- income countries (LMICs) and other actors to discuss solutions and share lessons across regions. The ICARS team also presented at multiple conferences, spoke on panels and podcasts, and attended briefings to emphasise the need for urgent global action to reduce drug-resistant infections.

We enter the new year with great momentum. In the first half of 2022, we are excited to finalise, with our Board's support and advice, our four-year strategy with a clear roadmap for delivering our ambitious agenda by 2026. In the following, our second annual report, we are proud to present our key achievements over the past year and the contribution of ICARS to global efforts to reduce drug-resistant infections.



# WHY ICARS?



## VISION

We envisage a world where drug-resistant infections no longer pose a threat to the health of humans and animals, the environment, global food security and economic prosperity.



## MISSION

Our mission is to partner with low- and middle-income countries (LMICs) in their efforts to reduce drug-resistant infections. We do this by working closely with LMICs to co-develop AMR interventions that provide evidence for context-specific and cost-effective solutions for sustainable scale-up. ICARS provides funding as well as the expertise needed to support Intervention and Implementation Research projects across the One Health spectrum that build on the country's National Action Plan.



## WHY?

While much research has revealed successful solutions for tackling AMR; there is still a critical gap in translating this evidence into action. Even though many countries have developed AMR National Action Plans (NAPs), in resource-poor settings the challenge remains for how best to prioritise and implement interventions to reduce AMR. ICARS works with LMIC ministries and in-country research institutions, to identify challenges and develop context-specific, cost-effective interventions to tackle them. Furthermore, the growing rates of drug-resistant infections in animals, humans and the environment are evidence that a siloed approach is not enough, and global efforts to address AMR should span the One Health spectrum.



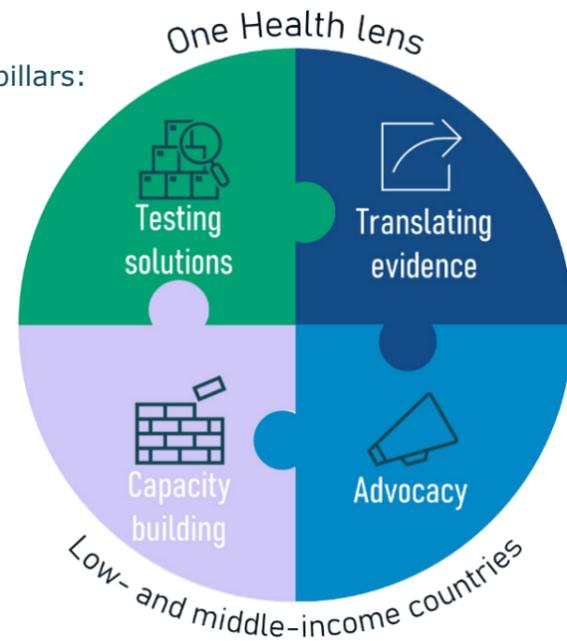
## HOW?

Sustainable solutions to reduce AMR must be supported by political commitment, owned by stakeholders throughout the whole chain, build country-capacity and initiate meaningful behavioural change. At ICARS, we use top-down and bottom-up approaches, engaging with government ministries, local scientists, and practitioners throughout the process, to ensure that interventions meet local needs and have long-lasting impact.

# OUR STRATEGY

The ICARS strategy is based on four interconnected pillars:

1. Develop and test context-specific solutions for AMR mitigation
2. Translate existing evidence into action
3. Advocate for implementation research as an important tool to tackle AMR
4. Support targeted capacity and capability building of AMR champions in LMICs



# OUR ACHIEVEMENTS



## PILLAR 1

### Develop and test context-specific solutions for AMR mitigation

Pillar one is core to much of ICARS activity, co-developing research projects with LMICs to test solutions and strategies that support National Action Plan implementation. Through collaborative projects, we generate the evidence needed for governments, authorities, and other stakeholders to scale up successful interventions and achieve tangible impact on AMR.

In 2021 we...

...started implementing two demonstration projects



### Reducing use of colistin in agriculture by implementing alternatives

**Country:** Vietnam

**Start date:** Autumn 2021

**Partners:** Ministry of Agriculture and Rural Development, medium- and large-scale farms in Vietnam, veterinarians, local facilitators

**Project summary:** Colistin, a critically important antibiotic, is over-used in pig production as a prophylaxis, a therapeutic, and for growth promotion. This project aims to reduce the use of colistin in agriculture by implementing alternative interventions including vaccinations, zinc oxide, and less critical antibiotics. While alternatives are readily available, they are not utilised, therefore this project will test the uptake of these innovations and provide a cost benefit analysis. The evidence generated will determine whether it is feasible and cost-effective for farmers to use existing alternatives. If successful, the evidence could inform policy recommendations and lay foundations for future solutions.

**Progress:** The Ministry of Agriculture and Rural Development has together with the research partners started collecting data on both colistin import and use in the pig industry and visited potential pig farmers to be included in the intervention studies. The project has been slightly delayed due to COVID-19, and restrictions have meant that the team were only able to collect data on colistin import from the North of the country.

**Next steps:** In 2022, the teams will collect data from the South, finalise intervention study designs, and initiate interventions in the second half of the year.

### Optimising use of antibiotics for Surgical Antibiotic Prophylaxis

**Country:** Georgia

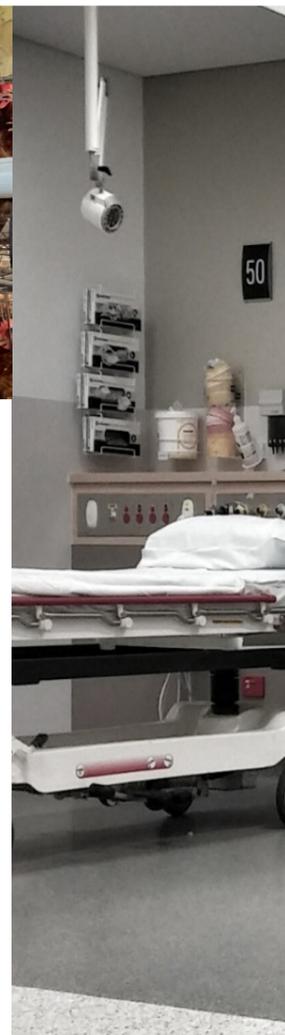
**Start date:** Autumn 2021

**Partners:** Ministry of Internally Displaced Persons from the Occupied Territories, Labour, Health and Social Affairs (MoH), National Center for Disease Control and Public Health (NCDC), WHO Europe, Healthcare professionals from selected hospitals, Georgian academic institutions

**Project summary:** Georgia, like many other LMICs, has a worrisome inappropriate use of antibiotics for surgical prophylaxis characterised by a high use of broad-spectrum antibiotics and prolonged dosing. This project aims to foster the appropriate use of antibiotics for Surgical Antibiotic Prophylaxis (SAP) in selected departments of 10 Georgian hospitals by implementing an antimicrobial stewardship program (ASP) developed from the WHO antimicrobial stewardship toolkit. The project aims to achieve 60% SAP guidelines compliance within 12 months of launching the ASP. In addition to gain a better understanding of the context-specific organisational, behavioural, and economic factors that will support implementation and scale-up of the ASP.

**Progress:** In 2021, the SAP guidelines have been adapted to fit the context through close collaboration with the Georgian Association of Surgeons. The first component of the SAP has been launched in three hospitals, as a result managers and healthcare professionals in the hospitals are highly motivated to achieve the goals of the antimicrobial stewardship program.

**Next steps:** In 2022, we will work with the British Society for Antimicrobial Chemotherapy (BSAC) to develop a MOOC that compliments the project (see page 17), and adjust the data collection and feedback procedures as part of the routine workflow in hospitals.



### ...approved nine new projects

Using the co-development and application processes developed in 2020, ICARS approved nine new projects in 2021. Approval of each project is conditional on a positive scientific review of the proposal by the Technical Advisory Forum, comprised of ten renowned experts from around the world (see page 31), who provide technical recommendations to ICARS.

1	<b>Country:</b> Colombia	<b>Reducing the use of antimicrobials through improved provision of colostrum management protocol in piglets and a vaccination to control for E. coli in weaning pigs.</b>
	<b>Sector:</b> Animal health	
	<b>ICARS funding:</b> 532,190 USD	
The aim of the project is to evaluate the effect of two interventions alone and in combination, i.e. improved uptake of colostrum and vaccines, to enhance the piglets' immune system, thus reducing the incidence of diarrhoea and the need to use antimicrobials. <i>This project is complemented by an additional project, co-funded by GAMRIF (See pillar 2)</i>		
2	<b>Country:</b> Georgia	<b>Improving microbiological diagnostics through capacity strengthening and testing the feasibility of Rapid Antimicrobial Susceptibility Testing (RAST) and MALDI-TOF</b>
	<b>Sector:</b> Human health	
	<b>ICARS funding:</b> 85,855 USD (+ 279,738 in Pillar 2)	
Results from these supporting projects will provide evidence on the cost and feasibility of scale-up, qualitative findings on whether the procedures are acceptable for clinicians using them, and context-specific BSI surveillance protocols and data collection tools. <i>These two projects, spanning pillar 1, 2 and 4, compliment the Georgia SAP project (case study 2) and the poultry project below.</i>		
3	<b>Country:</b> Georgia	<b>Reducing the inappropriate use of antibiotics in the poultry industry by providing evidence to farmers.</b>
	<b>Sector:</b> Animal health	
	<b>ICARS funding:</b> 498,432 USD	
This project aims to demonstrate that eliminating the use of antibiotics as growth promoters on broiler farms in Georgia does not compromise animal welfare, productivity and farm income. Findings from the project will support legislative changes regarding antibiotic-use in the poultry industry and inform the barriers and facilitators of uptake among other farms to reduce the use of prophylactic antibiotics. Project results will be disseminated to the wider community of poultry farmers to support uptake in the poultry industry.		
4	<b>Country:</b> Kyrgyzstan	<b>Facilitating Appropriate Antibiotic Use in Respiratory Tract Infections in Children in Kyrgyzstan</b>
	<b>Sector:</b> Human health	
	<b>ICARS funding:</b> 524,260 USD	
With increasing vaccine coverage, and a range of causes of respiratory infections, only a small proportion of these illnesses require antibiotics. This project aims to facilitate appropriate antibiotic use for treating children with respiratory tract infections in Kyrgyzstan, by measuring C-reactive protein (CRP) using a rapid point-of-care test.		
5	<b>Country:</b> Tanzania	<b>Mitigating the spread of antimicrobials and resistant microbes through treatment of manure.</b>
	<b>Sector:</b> Environment	
	<b>ICARS funding:</b> 564,699 USD	
This project seeks to find a composting solution that can be practically implemented to curb the spread of, and environmental contamination with antimicrobial residues, resistant microbes and genes emanating from commercial poultry manure.		

6	<b>Country:</b> Tanzania	<b>Optimising vaccination and biosecurity regimes to tackle AMR in commercial poultry production in Tanzania.</b>
	<b>Sector:</b> Animal Health	
	<b>ICARS funding:</b> 564,637 USD	
This project aims to optimise a range of vaccine and biosecurity interventions that are available, relevant, and currently underutilised. In addition to generating a social and economic case for sustainable investment.		
7	<b>Country:</b> Zambia	<b>Changing antimicrobial prescribing and use practices among vets and farmers to reduce antimicrobial use and residues in intensively produced poultry</b>
	<b>Sector:</b> Animal Health	
	<b>ICARS funding:</b> 558,168 USD	
By developing and implementing poultry treatment guidelines, complementary targeted education and training, as well as supporting incentives for behaviour change, this project aims to optimize prescribing and use practices among veterinary personnel, farmers and Agrovets shops.		
8	<b>Country:</b> Zambia	<b>Reducing unnecessary use of antibiotics for urinary tract infections (UTI) and blood stream infections (BSI) in hospitals and at community clinics, while also reducing healthcare costs</b>
	<b>Sector:</b> Human health	
	<b>ICARS funding:</b> 559,654 USD	
This project will introduce an antimicrobial stewardship programme (AMS), tools and training, adapted from core components of WHO's practical toolkit. By translating these best-practice materials to fit the context the project aims to reduce unnecessary use of antibiotics for BSIs and UTIs in hospitals and at community clinics by 20% over three years, while also reducing healthcare costs.		
9	<b>Country:</b> Zambia	<b>Supporting project co-funded by Wellcome Trust to test and implement the Responsive Dialogue toolkit</b>
	<b>Sector:</b> Human Health	
	<b>ICARS funding:</b> 0	
To compliment the above project, the Wellcome Trust in partnership with ICARS, are supporting Eden University to test and implement a Responsive Dialogue toolkit to tackle AMR in three community settings in Zambia. Through community conversations, the project will gather evidence on antibiotic-seeking behaviour, identify drivers of antibiotic use in relation to UTIs, and develop community-informed and contextually relevant solutions that address AMR and antibiotic use.		



"2021 has been an exciting year for ICARS where LMIC countries have shown a great interest in working with ICARS to gather evidence for feasible context specific and cost-effective solutions that can be implemented to mitigate AMR. The intervention projects have been co-developed with local researchers to ensure local ownership and commitment, two critical components for developing sustainable solutions."

- Dr. Robert Skov, Scientific Director, ICARS

## ICARS co-development process with in-country project teams



Tanzania, October 2021



Kyrgyzstan, November 2021



Ghana, November 2021



## ...hosted roundtables to reveal gaps in gender and AMR research

In December 2021, ICARS partnered with the IDRC in Canada to kick start a dialogue on gender and AMR research gaps, through a series of expert roundtables. The themes emerging from the roundtables were synthesised and used to inform a Request for Proposals (RFP) that launched in early 2022.

The successful project (led by a sub-Saharan African institution, potentially partnered with an Asian institution) will be funded to:

- synthesize the current evidence
- identify priority knowledge gaps
- develop guidance on how to strengthen a gender lens in AMR intervention and implementation research projects in LMICs.

With a shared commitment to reveal priority research areas, ICARS and IDRC are hopeful that these initial steps will spark further reflections and activities in and beyond our organisations and activities. ICARS' engagement in this project was funded by an earmarked contribution of 650,000 DKK (approximately 99,000 USD) from the Danish Ministry of Foreign Affairs.



*"We are proud to be partnering with ICARS to push the needle on the integration of gender analysis in AMR research. COVID-19 has laid bare how health crises deepen existing inequalities. It is imperative that the international development and global health communities apply these hard-learned lessons to the slow-moving antimicrobial resistance pandemic. This work is extremely timely, and I am excited about the potential of this project to inform IDRC's AMR portfolio and support our grant recipient research teams strengthen the gender-responsiveness of their work to promote equitable and sustainable responses to this global challenge."*

**- Santiago Alba-Corral,  
Director of Climate Resilient Food Systems Program, IDRC**





# PILLAR 2

## Translate existing evidence into action

There is a wealth of research evidence, tools and methodologies that have reduced drug-resistant infections, but the uptake of research into practice remains a major challenge. As evidence is often produced by academic researchers in high-income settings with little input from ministries and decision-makers, the translation of evidence into policy and action can be a major hurdle. At ICARS we aim to support the translation of AMR evidence into policies, programmes, and practices in LMICs. Through analysis of existing research, we identify evidence-based solutions for different contexts and work with local researchers and ministries to overcome the barriers to successful implementation.

### In 2021 we...

#### ...partnered with the UK Global AMR Innovation Fund (GAMRIF) and Porkcolombia



In October, ICARS and GAMRIF joined hands to kickstart an innovative project led by Porkcolombia to improve uptake of disease diagnostics at pig farms in Colombia. With funding from ICARS and GAMRIF, interdisciplinary experts on the ground are assessing the challenges and opportunities around the uptake of diagnostic veterinary services in Colombia, and their potential impact on the reduction of antibiotic use in farming. Results from the pilot will serve as an example for other countries to consider how to improve access to veterinary diagnostics to improve sanitary status of farms, increase understanding of disease occurrence and provide a variety of information on herd health and the different pathogens that cause swine diseases.



*"Through this project, an articulated work will be carried out between different institutions, which will allow a broad transfer of knowledge and the formulation of regional policies, to integrate the results of this work in policy dialogues in Latin America."*

- **Corina Zambrano Moreno, Executive Vice-President, Porkcolombia**



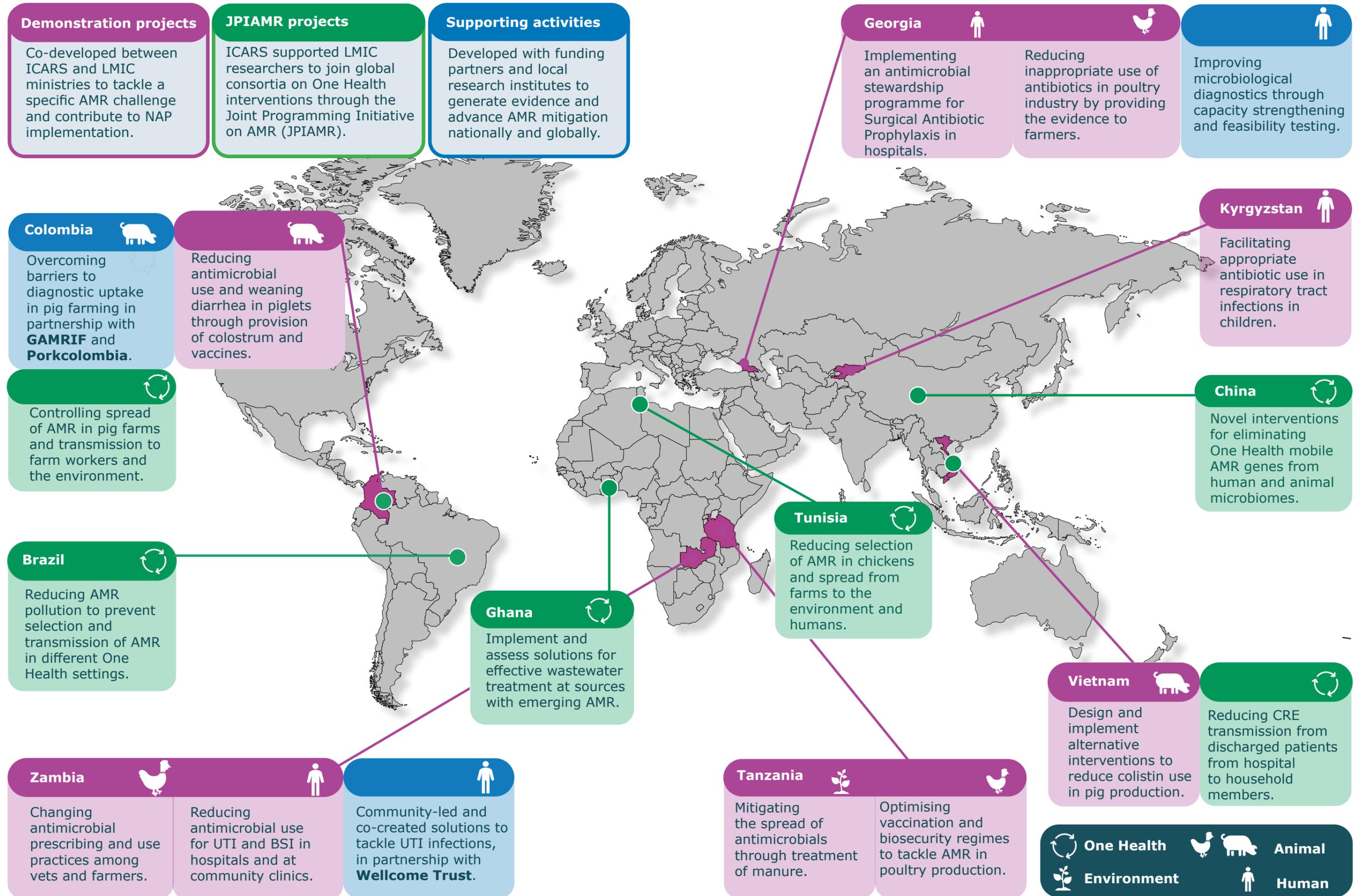
## ...supported six projects in the Joint Programming Initiative on AMR



In 2021, ICARS supported LMIC researchers to join the global consortia on One Health Interventions through JPIAMR. The six projects across Latin America, Africa and Asia will launch in April 2022.

Country	Project title	Lead organisation
China	Novel interventions for eliminating One Health mobile antimicrobial resistance genes from human and animal microbiomes (MOB-TARGET)	Jiangsu Academy of Agricultural Sciences
Colombia	FARM interventions to control antimicrobial resistance (FARM CARE)	Porkcolombia
Vietnam	Interventions to decrease CRE colonization and transmission between hospitals, households, communities and domesticated animals (I-CRECT)	Hanoi University of Public Health
Brazil	Microbiota intervention strategies limiting selection and transmission of antibiotic resistance burden in the One Health domain (MISTAR)	São Carlos Institute of physics University of São Paulo
Tunisia	Interventions to control the dynamics of antimicrobial resistance from chickens through the environment (ENVIRE)	University of Sousse
Ghana	Targeted removal of ARGs and facultative pathogenic bacteria (FPB) in wastewater from AMR hotspots using modular advanced treatment solutions	University of Ghana

## ICARS project activities



# PILLAR 3



## Advocate for implementation research as an important tool to tackle AMR

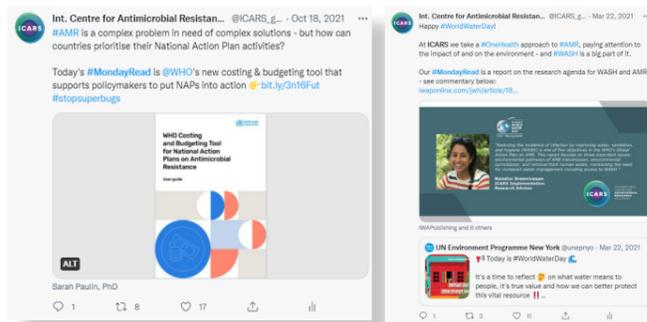
ICARS engages with national and international partners to raise awareness of, promote the need for, and mobilise international commitment for intervention and implementation research as a means to deliver on AMR National Action Plans. We aim to influence funders and policymakers, at a national and international level, to prioritise this area of research and increase their investment. In addition, our goal is to become a recognised 'go to' partner for AMR Implementation Research and intervention development in LMICs.

Due to the COVID-19 pandemic, many of our advocacy activities in 2021 have taken place online, through social media and participation in virtual events such as conferences and webinars. We are pleased to see the interest in our approach grow and our online network expand both in size and diversity.

## In 2021 we...

### ...boosted advocacy in the virtual space

ICARS global profile has grown rapidly in the virtual space through our website and social media. In 2021 ICARS launched its new website, a virtual home to showcase ICARS strategy, mission, projects, and news. Over the course of the year, it had 1.7K users from 106 countries. On social media, ICARS has a growing dedicated following, with more than 2500 followers across LinkedIn and Twitter, a figure that more than doubled in 2021. ICARS contributed to several virtual campaigns including participation in a Twitter chat organised by IDRC for One Health Day and as a named partner in the ECDC World Antimicrobial Awareness Week Campaign. In addition, we have engaged with followers through our weekly #MondayRead feature that highlights recent AMR research relevant to ICARS remit.



Users to the ICARS website in 2021



## ...utilised international events to advocate for the uptake of IIR to tackle AMR

### Call to Action on AMR

In November 2021, ICARS joined Wellcome Trust, the Fleming Fund, UN Foundation, UNICEF, World Bank and the governments of Colombia, Denmark, Ghana, Indonesia, Thailand, and Zambia to co-host the third Call to Action on AMR Conference. The event gathered 400+ participants, from more than 68 countries, to share lessons and best practice from LMICs on how to prioritise and implement NAPs. The key takeaways from the event have since been synthesised into a report and case study series that showcase country solutions, across the one health spectrum, to promote cross-regional learning.

### Further event highlights from 2021



### ...seconded an expert to the WHO AMR Division

The quadripartite collaboration between WHO, Food and Agricultural Organization of the United Nations (FAO), World Organization for Animal Health (OIE) and United Nations Environmental Programme are joining efforts to develop a One Health priority research agenda on AMR.

In 2020 ICARS committed to support this strategic agenda which will guide countries in the design and impactful implementation of One Health AMR action plans. The agenda addresses the key question of how to optimally prevent, control and mitigate AMR across sectors. As part of this collaborative agreement, since February 2021, ICARS' Senior Scientific Advisor, Tine Rikke Jørgensen, was seconded to the WHO AMR Division. Since joining the team she has performed an extensive agenda scoping process including a global survey and literature review, as well as broader advocacy for tackling AMR across the One Health spectrum.

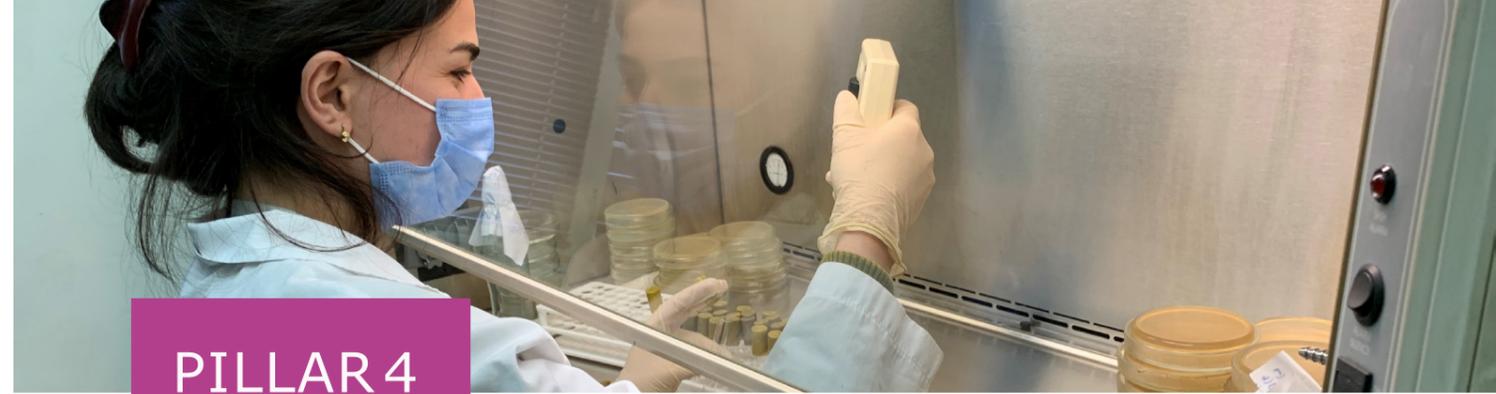
### ...kick started a partnership with the Global AMR R&D

In July, we announced a partnership with the Global AMR R&D Hub to strengthen efforts to translate evidence into action to mitigate AMR. The collaboration will harness the power of the Global AMR R&D Hub's Dynamic Dashboard to explore the current landscape of Operational and Implementation Research within LMICs, to connect AMR interventions with concrete outcomes. In doing so, the partners hope to be able to develop a pathway from knowledge to shape policy, programmes and practice, as well as providing recommendations to research funders.



*"Turning up the volume on AMR requires a strong collaborative ethos that will trigger a move from evidence and data to global policy action. Our partnership with ICARS sets in motion a unique opportunity to foster best practices and pave the way from funding for AMR R&D to impact in LMICs."*

**- Lesley Ogilvie, Senior Scientific Programme Officer, Global R&D Hub.**



### Support targeted capacity and capability building of AMR champions in LMICs

Capacity- and capability building is essential to the process of creating a critical mass of government and research personnel equipped with the knowledge and skills to undertake implementation and intervention research to mitigate AMR. Under this pillar, ICARS support policymakers and professionals in LMICs with relevant training. ICARS aims to fill gaps related to the activities supporting targeted training aimed at improving skills and competencies around intervention and implementation research and the scaling up of ICARS co-developed solutions to tackle AMR.

### In 2021 we...

#### ...started co-developing an e-learning tool for Surgical Antibiotic Prophylaxis (SAP) in Georgia



In partnership with the British Society of Antimicrobial Chemotherapy (BSAC), we are developing a Massive Open Online Course (MOOC) on antimicrobial stewardship in SAP. The course will include a general module and two modules that we have adapted to the Georgian context, we have targeted specific modules in the MOOC to support the successful implementation of our existing stewardship project in Georgia (see page 5).

By creating teaching materials that can be accessed by health care professionals involved in the project, and others working in hospitals all over the country, the e-learning tool will increase awareness on antimicrobial stewardship and share procedures for setting up stewardship for SAP in the Georgian context. In the future, we hope to adapt the tools for use in other low resource settings.



### ...kick started our collaborative project with the International Livestock Research Institute (ILRI)

In June 2021, ILRI and ICARS signed an MOU to mark a shared commitment to establishing an antimicrobial susceptibility testing (AST) center of excellence, based at the ILRI AMR Hub in Kenya. The AST center will fill a gap in the region, provide an important resource for laboratory capacity-building in LMICs in Africa, and support high quality AST across One Health projects. The centre will serve both as a reference laboratory for the CGIAR system, as well as act as a training center to provide valuable training for laboratories participating in ICARS' demonstration projects. As AST is a critical function for good antimicrobial stewardship practices, this will strengthen ICARS' demonstration projects as well as build expertise in LMICs.

### ...partnered with ReAct to test uptake of tools for NAP implementation

The project with ReAct aims to develop and disseminate practical context-specific guidance and applied tools that support NAP implementation in low- and middle-income countries (LMICs), with a focus on the African context. In 2021, the project team conducted desk reviews to understand the use of the existing ReAct toolbox to help NAP implementation. Work was also initiated to conduct a survey, key informant interviews, and focus group discussions across the One Health spectrum in the ReAct Africa network to better understand the usability of the existing tools in the toolbox to support NAP implementation and the existing gaps for context specific tools (i.e., how to prioritise NAP activities).



*"Scarce human resources and technical capacity are main challenges with implementation of National Action Plans for AMR in low- and middle income countries. ReAct welcomes the collaboration with ICARS to engage with local actors and experts in African countries to better understand the needs and gaps and to jointly develop new context-relevant tools for NAP implementation."*

– Otto Cars, Founder and Senior Advisor, ReAct



## ORGANISATIONAL DEVELOPMENT

Following two years of rapid growth and development, **ICARS is now an independent organisation**, governed by an international Board of Directors. As the supreme governing body of ICARS, the Board of Directors holds both strategic and fiscal responsibility and brings a wealth of knowledge and expertise to support ICARS' mission and the further development of ICARS.

During 2021, **ICARS core team grew to 23 staff members** from 13 different nationalities. Headed by a Director of Operations and a Scientific Director, the diverse staff hold a wide range of relevant scientific and operational competencies covering a One Health perspective and with a special focus on implementation and intervention research. When the organisation gained independence in November 2021, Helle E. Krarup was appointed Acting Executive Director to lead the organisation until 2022 when ICARS will recruit its first Executive Director.

To support the integrity of ICARS organisation, projects and partnerships, **ICARS has adopted several policies** on Ethics and Professional Conduct, Conflicts of Interest, Data Protection, Risk Management Anti-Bribery, Fraud and Corruption, and Whistleblowing. Further policies are in development.

Furthermore, becoming a self-governing organisation separated from the Danish Ministry of Health, in 2021 **ICARS set up financial and administrative structures to support its operations**. With a view to efficiency, ICARS will continue to buy services concerning finance, HR and IT from the Danish Ministry of Health and Danish government institutions.

Based on this organisational development, in the summer of 2021 ICARS underwent a thorough due diligence process with the UK Ministry of Health which formed the basis for the decision of the UK Global AMR Innovation Fund (GAMRIF) to earmark funds to ICARS (see page 10).



*"It has been so interesting to take part in ICARS' journey towards independence in 2021. We have built a new organisation from the ground up – of course building on our inheritance from the Danish system – and I am proud of how far we have come together in this endeavour drawing on the variety of competences in the ICARS core team."*

– Helle Krarup, Acting Executive Director and Director of Operations

# STATEMENT BY THE MANAGEMENT ON THE ANNUAL REPORT

The Executive Management and the Board of Directors have today considered and approved the annual report of the International Centre for Antimicrobial Resistance Solutions (ICARS) for the financial year 1 January – 31 December 2021.

The annual report has been prepared in accordance with the State Accounting Rules and ICARS statutes.

In our opinion, the annual report gives a true and fair view of ICARS's financial position as per 31 December 2021 and of the results of ICARS's operations and cash flows for 2021.

Further, it is our opinion that the management's review includes a true and fair account of the development in the operations and financial circumstances of ICARS.

Copenhagen, 29 April 2022

## Executive Management:



Helle Englsund Krarup,  
Acting Executive Director and  
Director of Operations



Robert Skov, Scientific Director

## Board of Directors:



Henrik Wegener, Chair



Renu Swarup, Vice-Chair



Jimmy Smith, Member



Isatou Jallow, Member

# INDEPENDENT AUDITOR'S REPORT

## To the Board of Directors of International Centre for Antimicrobial Resistance Solutions (ICARS)

*\*This is an English translation of the Danish Auditor's report. The Danish language version shall prevail on any question of interpretation or otherwise.*

## Audit report on the financial statements

### Opinion

We have audited the financial statements of ICARS for the financial year 1 January to 31 December 2021, which include the accounting practices applied, statement of financial performance, statement of financial position, statement of changes in equity and notes to the accounts. The financial statements are prepared in accordance with the State's accounting rules.

In our opinion, the financial statement is, in all material respects, correct, i.e. prepared in accordance with the State's accounting rules.

### Basis for opinion

We conducted our audit in accordance with international standards on auditing and the additional requirements applicable in Denmark. In addition, the audit was performed in accordance with the standards for public audits and carried out on the basis of the provisions of the Danish Auditor General Act, Section 2 (1) (3). Our responsibilities under these standards and requirements are described in more detail in the 'Auditor's responsibilities for the audit of the financial statement's section of our report. We are independent of ICARS in accordance with the International Ethics Standards Board for Accountants' International Guidelines on Ethical Conduct of Auditors (IESBA Code) and the additional ethical requirements applicable in Denmark, and we have fulfilled our other ethical obligations in accordance with these requirements. We believe that the audit evidence obtained is sufficient and appropriate to provide a basis for our opinion.

### Highlighting of matters relating to the audit

We draw attention to the fact that budgeted figures have been included in the statement of comparison of budget with the actual amounts. These budgeted figures have not been audited and therefore we do not express any assurance regarding them.

### Management's responsibility for the financial statements

The management is responsible for the preparation and fair presentation of financial statements in accordance with the State's accounting rules. The management is also responsible for such internal control as it determines is necessary to enable the preparation of a financial statements that is free from material misstatement, whether due to fraud or error.

In preparing the financial statement, management is responsible for assessing ICARS's ability to continue as a going concern, disclosing, where applicable, matters related to going concern and preparing the financial statement on a going concern basis, except where management either intends to liquidate ICARS, to cease operations, or has no realistic alternative but to do so.

### Auditor's responsibility for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatements, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but it is not a guarantee that an audit conducted in accordance with ISAs and additional requirements applicable in Denmark, as well as the standards for public audits, as the audit is performed on the basis of the provisions of the Danish Auditor General Act, Section 2 (1) (3), will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statement.

As part of an audit conducted in accordance with ISAs and additional requirements applicable in Denmark, as well as the standards for public audits, as the audit is performed based on the provisions of the Danish Auditor General Act, Section 2 (1) (3), we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risk of material misstatements in the financial statement, whether due to fraud or error, design and perform audit procedures responsive to those risks and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not discovering material misstatements caused by fraud is higher than for one resulting from errors, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of the internal controls relevant to the audit to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of ICARS' internal controls.
- Evaluate the appropriateness of accounting policies used and reasonableness accounting estimates and related disclosures made by the management.
- Conclude on the appropriateness of management's use of the going concern accounting principle and whether based on the obtained audit evidence there is significant uncertainty associated with events or circumstances that can create reasonable doubt about ICARS's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to in our auditor's report to point to related disclosures in the financial statement or, if such disclosures are inadequate, to modify our opinion. Our conclusion is based on the audit evidence obtained to the date of our auditor's report. However, future events or conditions may cause ICARS to cease to continue as a going concern.

We communicate with the top management team regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

### Statement on management's review

The management is responsible for the management's review.

Our opinion on the financial statement does not cover the management's review, and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statement, our responsibility is to read the management's review and, in doing so, consider whether the management's review is materially inconsistent with the financial statements, or our knowledge obtained during the audit, or otherwise appears to be material misstated.

Moreover, it is our responsibility to consider whether the management's review provides the information required pursuant to the State's accounting rules.

Based on the work performed, we conclude that the management's review is in accordance with the financial statements and has been prepared in accordance with the requirements of the State's accounting rules. We did not identify any material misstatement in the management's review.

## Report on other legal and regulatory requirements

### Statement on compliance audit and performance audit

The management is responsible for ensuring that the transactions covered by the financial statement are in accordance with the appropriations granted, statutes and other regulations, as well as with agreements entered and common practice. The management is also responsible for ensuring that due financial considerations are taken in terms of management of funds and operations covered by the financial statement. In that connection, the management is responsible for establishing systems and processes that support economy, efficiency, and effectiveness.

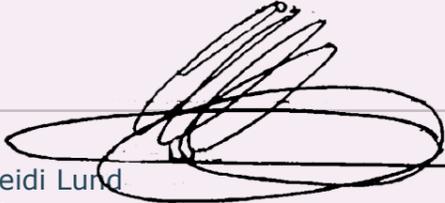
In performing our audit of the financial statements, it is our responsibility to carry out compliance audit and performance audit for relevant items in accordance with the standards for public audits. In our compliance audit, we test the selected items to obtain reasonable assurance as to whether the transactions covered by the financial statement comply with the appropriations, statutes, and other regulations in addition to whether they are in accordance with agreements entered into and common practice. In our performance audit, we perform assessment to obtain reasonable assurance as to whether the tested systems, processes, or transactions support due financial consideration in relation to the management of funds and operations covered by the financial statements.

We must report on any grounds for significant critical comments should we find such in performing our procedures.

We have no significant critical comments to report in this regard.

Copenhagen, 29 April 2022

Rigsrevisionen (National Audit Office of Denmark)  
CVR no. 77 80 61 13

  
Heidi Lund  
Director

  
Janni Bigum  
Senior Advisor

# FINANCIAL RESULTS

The 2021 Financial Statements of ICARS are prepared in accordance with the accounting principles accepted by the Government of Denmark and consist of the following elements:

- Statement of Financial Performance for the period ended 31 December 2021 (Figure 2)
- Statement of Financial Position as at 31 December 2021 (Figure 3)
- Notes to the Financial Statements.

In addition, we present here Statement of Comparison of Budget with the Actual Amounts for the period ended 31 December 2021 (Figure 4) that shows our financial results of our core funding received from the Danish Ministry of Health.

The 2021 Financial statements are prepared based on ICARS being a going concern, based on ICARS grant and budget plans for 2022-25 in the Danish finance law for 2022.

## Highlights of 2021 Financial Results

ICARS' 2021 core budget, based on the funding from the Government of Denmark, amounted to DKK 60.74m, and while ICARS utilized 90% of it, we were able to exceed the budgeted amount for grants by 7.5%. This was possible through the additional funding that ICARS received from the other funders (please see Note 1 below).

In 2021 ICARS committed grants to the total amount of DKK 42.9m as compared to the budgeted amount of DKK 40m. This commitment constitutes 260% increase as compared to the grants issued in 2020.

Our 2021 grants comprise of the following:

- 12 projects were funded in the total amount of DKK 33.5m.
- Additional funding in the amount of DKK 5.4m was issued to projects funded through JPIAMR collaboration (EUR 1m was committed in 2020 by ICARS to this collaboration).
- DKK 3.5m of grants was issued to supporting activities, such as creation of AST Center of Excellence (collaboration with ILRI), partnership with ReAct to test uptake of tools for NAP implementation and development of learning materials (collaboration with BSAC).
- Grants in the amount of DKK 84K were issued to support projects co-development in ICARS' partnering countries.
- In addition, grant funding in the amount of DKK 452K was added to the existing grant commitments of 2020 due to the increase in the foreign exchange rates.

Figure 1 shows the geographical distribution of grant funding committed to ICARS' 2021 demonstration projects and projects funded through JPIAMR collaboration.

FIGURE 1: GEOGRAPHICAL DISTRIBUTION OF FUNDING FOR DEMONSTRATION AND JPIAMR PROJECTS

- Africa
- Asia
- LMICs in Eastern Europe
- Latin America

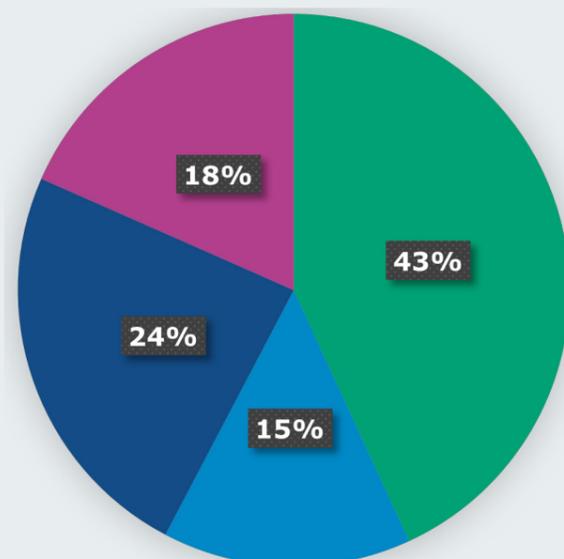


FIGURE 2: STATEMENT OF FINANCIAL PERFORMANCE FOR THE PERIOD ENDED 31 DECEMBER 2021

	Reference	Amount 000 DKK	Amount 000 USD*
<b>Funding Received</b>		<b>57,270.57</b>	<b>8,728.67</b>
Funding: Received from Government of Denmark (core funding)	Note 1	56,808.04	8,658.18
Funding: Received from other funders	Note 1	462.53	70.49
<b>Pillar 1. Develop and test context-specific solutions for AMR mitigation</b>		<b>35,278.21</b>	<b>5,376.79</b>
Grants - Research Projects		31,008.00	4,725.96
Grants – Co-development Activities		83.72	12.76
Employee Salaries and Emoluments		2,003.83	305.41
Technical Advisory Forum		50.76	7.74
Operational Costs		2,131.89	324.92
<b>Pillar 2. Translate existing evidence into action</b>		<b>9,044.21</b>	<b>1,378.44</b>
Grants - Research Projects		7,874.43	1,200.15
Employee Salaries and Emoluments		584.54	89.09
Operational Costs		585.24	89.20
<b>Pillar 3. Advocate for Implementation Research as an important tool to tackle AMR</b>		<b>2,512.37</b>	<b>382.91</b>
Grants - International Cooperation		295.88	45.10
Communication and participation in international events		196.43	29.94
Employee Salaries and Emoluments		1,098.99	167.50
Operational Costs		921.07	140.38
<b>Pillar 4. Capacity and capability building of AMR champions in LMICs</b>		<b>3,938.41</b>	<b>600.26</b>
Grants – Collaborations		3,164.28	482.27
Employee Salaries and Emoluments		502.66	76.61
Operational Costs		271.47	41.38
<b>Pillar 5. Governance and administration</b>		<b>5,285.43</b>	<b>805.56</b>
Employee Salaries and Emoluments		2,856.19	435.32
IT support and IT systems		304.05	46.34
Facilities and equipment, supplies and maintenance (rent)		929.08	141.60
Legal assistance		350.63	53.44
Executive recruitment and HR support		248.56	37.88
Financial services		195.87	29.85
Corporate Insurance		131.42	20.03
Other Operational Costs		269.62	41.09
<b>Change in Prior Years Grant Commitment Value</b>		<b>452.05</b>	<b>68.90</b>
Exchange Gain / Loss on Grant Commitments		452.05	68.90
<b>TOTAL EXPENSES</b>		<b>56,510.68</b>	<b>8,612.86</b>
<b>SURPLUS FOR THE PERIOD</b>	Note 2	<b>759.89</b>	<b>115.82</b>

NB: \*DKK/USD Exchange Rate of 6.5612 was used for the conversion purposes

FIGURE 3: STATEMENT OF FINANCIAL POSITION AS OF 31 DECEMBER 2021

	Reference	Amount 000 DKK	Amount 000 USD*
<b>ASSETS</b>			
<b>Non-Current Assets</b>		<b>308.72</b>	<b>47.05</b>
Non-Current Assets		308.72	47.05
<b>Current Assets</b>		<b>58,747.25</b>	<b>8,953.74</b>
Receivable from MOH (core funding)		6,808.04	1,037.62
Projects Receivable (other funders)	Note 1	2,814.49	428.96
Other Accounts Receivable		49.90	7.61
Pre-Payments		112.35	17.12
Cash and Cash Equivalents		48,962.47	7,462.43
<b>TOTAL ASSETS</b>		<b>59,055.97</b>	<b>9,000.79</b>
<b>LIABILITIES</b>			
<b>Non-Current Liabilities</b>		<b>28,791.28</b>	<b>4,388.11</b>
Non-Current Liabilities on Grant Commitments		28,791.28	4,388.11
<b>Current Liabilities</b>		<b>29,504.81</b>	<b>4,496.86</b>
Current Liabilities on Grant Commitments		23,191.72	3,534.68
Accounts Payable		2,146.58	327.16
Deferred Revenue	Note 1	2,930.02	446.57
Employee Liabilities short-term		970.71	147.95
Other Short - term Liabilities (Accruals)		265.78	40.51
<b>TOTAL LIABILITIES</b>		<b>58,296.09</b>	<b>8,884.97</b>
<b>NET ASSETS / EQUITY</b>			
Surplus for the Period		759.89	115.82
<b>TOTAL NET ASSETS / EQUITY</b>		<b>759.89</b>	<b>115.82</b>
<b>TOTAL LIABILITIES and NET ASSETS / EQUITY</b>		<b>59,055.97</b>	<b>9,000.79</b>

NB: \*DKK/USD Exchange Rate of 6.5612 was used for the conversion purposes

## Notes to Financial Statements

### NOTE 1

In 2021, the majority of ICARS' operations and projects were funded by the Government of Denmark, representing core funding of ICARS.

As mentioned above, ICARS 2021 budget amounted to DKK 60.74m and ICARS received bank transfers from the Government of Denmark in the amount of DKK 56,808,040 (equivalent to USD 8.7m) related to 2021 funding.

In addition to its core funding, ICARS secured funding from other donors, representing the ear-marked funding for specific projects and contributions in-kind that ICARS' partners made available for the implementation of the projects and other activities as part of collaboration with ICARS.

Direct funding, ear-marked for specific projects, that ICARS received from the other funders are shown in the table 1.1 below. This funding which was secured in 2021 was partially received in 2021 with the amount of DKK 2,814,495 (USD 428,960) receivable in 2022 on the basis of the agreements made in 2021.

TABLE 1.1

Donor	Amount DKK	Amount USD	Amount receivable in 2022 DKK	Amount receivable in 2022 USD	Purpose of Contribution
Contribution from MFA of Denmark**	650,000.00	99,067.00*	300,000.00	45,723.00*	Funding for Gender and AMR project
Contribution from Wellcome Trust UK**	2,280,017.00	347,500.00w	2,280,017.00	347,500.00	Funding for Responsive Dialogue project in Zambia
Contribution from Government of UK - DHSC	462,526.12	71,474.00	234,477.60	35,737.00	Funding AMR project in Colombia in pig farming
<b>Total</b>	<b>3,392,543.12</b>	<b>518,974.00</b>	<b>2,814,494.60</b>	<b>428,960.00</b>	

\* DKK/USD Exchange Rate of 6.5612 was used for the conversion purposes

\*\*Contributions from MFA of Denmark and Wellcome Trust UK were recognised as deferred income/revenue in ICARS' Statement of Financial Position

In addition to the funds received for specific projects (Table 1.1), ICARS also received contributions in-kind from the partners involved in the implementation of projects and other activities of ICARS.

These contributions amount to USD 1,424,429 and EUR 74,566 with the total in-kind contribution in DKK amounting to DKK 9.9m, bringing total external funding of 2021 to DKK 13.3m.

### NOTE 2

At the end of 2021 ICARS had a significant cash reserve in the amount of about DKK 49m (Figure 3), which is due to the fact that while we recognised the grant commitments in 2021, disbursement of funds will take place in the future periods. According to agreement with the Danish Ministry of Health, the grant commitments are created and recognised as an expense in the Statement of Financial Performance when ICARS enters into the binding agreements to provide the funding for specific projects even if the actual activities and payments take place in the future periods. This allows ICARS to work with a multiple year perspective when developing projects. The cash reserve available at the end of 2021 will be disbursed within next 1-3 years on ICARS' grant commitments of 2020 and 2021.

The Statement of Comparison of Budget with the Actual Amounts for the period ended 31 December 2021 (Figure 4) shows expenditure and grant commitments related to the funding of Ministry of Health of Denmark (ICARS core funding).

In addition, it should be noted that the Statement of the Comparison of Budget with the Actual Amounts was prepared based on the same principles as the other elements of the financial statements, with the exemption of the assets, which were recognised on a cash basis. Thus, full cost of the assets was deducted in the year when the acquisition took place, the depreciation was excluded from the actual amounts in the statement and will be excluded from the future Budget Statements.

ICARS will be returning to the Ministry of Health of Denmark the residual balance from the 2021 core funding in the amount of DKK 2,245,547 to as per the 2021 funding agreement.

FIGURE 4: STATEMENT OF COMPARISON OF BUDGET WITH THE ACTUAL AMOUNTS FOR THE PERIOD ENDED 31 DECEMBER 2021

Budget / Actual Spending	2021 Budget Allocation after Dec 2021 Revision	Salary	Operations	Grants	Total Spending	2021 Budget Allocation after Dec 2021 Revision				Total Spending*	% of Budget Spending
	000 DKK					000 DKK	000 DKK	000 DKK	000 USD		
<b>Pillar 1. Develop and test context-specific solutions for AMR mitigation</b>	<b>35,212</b>	<b>2,054.60</b>	<b>2,131.89</b>	<b>29,217.68</b>	<b>33,404.16</b>	<b>5,366.68</b>	<b>313.14</b>	<b>324.92</b>	<b>4,453.10</b>	<b>5,091.17</b>	<b>95%</b>
ICARS research projects	28,100	-	-	29,133.96	29,133.96	4,282.75	-	-	4,440.34	4,440.34	
Co-development processes	1,800	-	343.42	83.72	427.14	274.34	-	52.34	12.76	65.10	
Develop scientific strategy, scientific coordination, project management	5,212	2,003.83	1,788.47	-	3,792.30	794.35	305.41	272.58	-	577.99	
Technical advisory forum	100	50.76	-	-	50.76	15.24	7.74	-	-	7.74	
<b>Pillar 2. Translate existing evidence into action</b>	<b>9,067.23</b>	<b>584.54</b>	<b>585.24</b>	<b>7,411.91</b>	<b>8,581.69</b>	<b>1,381.95</b>	<b>89.09</b>	<b>89.20</b>	<b>1,129.66</b>	<b>1,307.94</b>	<b>95%</b>
ICARS research project	1,300	-	-	2,025.34	2,025.34	198.13	-	-	308.68	308.68	
Additional Funds to JPIAMR Projects	5,150	-	-	5,386.57	5,386.57	784.92	-	-	820.97	820.97	
Co-development processes	450	-	-	-	-	68.59	-	-	-	-	
Mapping existing evidence and establish repository	2,167	584.54	585.24	-	1,169.78	330.31	89.09	89.20	-	178.29	
<b>Pillar 3. Advocate for Implementation Research as an important tool to tackle AMR</b>	<b>3,789</b>	<b>1,098.99</b>	<b>1,266.19</b>	<b>295.88</b>	<b>2,661.06</b>	<b>577.45</b>	<b>167.50</b>	<b>192.98</b>	<b>45.10</b>	<b>405.58</b>	<b>70%</b>
Strategic communications, including development of new webpage	600	-	292.77	-	292.77	91.45	-	44.62	-	44.62	w
Communicate knowledge and evidence	2,839	1,098.99	921.07	-	2,020.06	432.66	167.50	140.38	-	307.88	
ICARS participation in international AMR events, including Call to Action	350	-	52.35	295.88	348.23	53.34	-	7.98	45.10	53.07	
<b>Pillar 4. Capacity and capability building of AMR champions in LMICs</b>	<b>5,162</b>	<b>502.66</b>	<b>271.47</b>	<b>3,164.28</b>	<b>3,938.41</b>	<b>786.74</b>	<b>76.61</b>	<b>41.38</b>	<b>482.27</b>	<b>600.26</b>	<b>76%</b>
Capacity and capability building of AMR champions	1,199	502.66	271.47	-	774.13	182.74	76.61	41.38	-	117.99	
<b>Cross-cutting pillar. Governance and administration</b>	<b>7,416</b>	<b>2,856.19</b>	<b>2,551.77</b>	<b>-</b>	<b>5,407.96</b>	<b>1,130.23</b>	<b>435.32</b>	<b>388.92</b>	<b>-</b>	<b>824.23</b>	<b>73%</b>
IT support and IT systems	750	-	426.59	-	426.59	114.31	-	65.02	-	65.02	
Facilities and equipment, supplies and maintenance (rent)	940	-	929.08	-	929.08	143.21	-	141.60	-	141.60	
Legal assistance	240	-	350.63	-	350.63	36.58	-	53.44	-	53.44	
Executive recruitment and HR support	696	-	248.56	-	248.56	106.08	-	37.88	-	37.88	
Financial services	355	-	195.87	-	195.87	54.11	-	29.85	-	29.85	
Board of trustees	671	-	-	-	-	102.19	-	-	-	-	
Additional Cost of Establishment of Independent Organisation	300	-	131.42	-	131.42	45.72	-	20.03	-	20.03	

FIGURE 4: CONTINUED

<b>Foreign Exchange Gain / Loss on Prior Year Grant Commitments</b>	-	-	-	<b>452.05</b>	<b>452.05</b>	-	-	-	<b>68.90</b>	<b>68.90</b>	
Exchange Gain / Loss on Grant Commitments				452.05	452.05	-	-	-	68.90	68.90	
<b>2021 Transactions booked in 2022</b>	-	<b>117.16</b>	-	-	<b>117.16</b>	-	<b>17.86</b>	-	-	<b>17.86</b>	
Employees' salary		117.16			117.16	-	17.86	-	-	17.86	
<b>Grand Total</b>	<b>60,646</b>	<b>7,214.13</b>	<b>6,806.57</b>	<b>40,541.79</b>	<b>54,562.49</b>	<b>9,243.06</b>	<b>1,099.51</b>	<b>1,037.40</b>	<b>6,179.02</b>	<b>8,315.93</b>	<b>90%</b>
<b>% of Total</b>		<b>13%</b>	<b>12%</b>	<b>74%</b>	<b>100%</b>		<b>13%</b>	<b>12%</b>	<b>74%</b>	<b>100%</b>	

**Additional Notes**

At the end of 2021 ICARS had outstanding grant commitment in the total amount of DKK 51.98m, that included open commitments of both 2020 and 2021. In the first 2 months of 2022 ICARS disbursed DKK 3.39m of these commitments.

The grant commitment for the Pilot project in Georgia "Strengthening laboratory capacity in Georgia using a MALDI-TOF MS platform" will be increased in 2022 due to the additional costs involved. The net increase is USD 39.5K and will be recognised as 2022 cost.

# OUR TEAM

\* Seconded to WHO from February 2021

\*\* Maternity cover from November 2021

\*\*\* On Maternity leave from October 2021



**Helle Krarup**  
Director of Operations



**Robert Skov**  
Scientific Director



**Ghada Zoubiane**  
Head of Partnerships



**Mirfin Mpundu**  
Partnerships Lead,  
Africa



**Philip Mathew**  
AMR Advisor



**Jyoti Joshi**  
AMR Advisor



**Lisa Haagensen**  
Project Manager



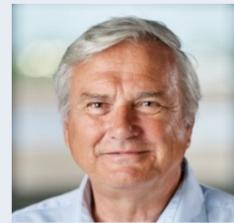
**Hannah Aanonsen**  
Student Assistant



**Sabiha Essack**  
Senior Implementation  
Research Advisor



**Anders Dalsgaard**  
Scientific Consultant



**Per Henriksen**  
Senior Consultant



**Tine Jørgensen\***  
Senior Scientific  
Advisor



**Britta Ankersen**  
Executive Assistant



**Katharina Bieberstein**  
Programme Manager



**Mads Martinus**  
Project Manager



**Sephy Valuks**  
Communications  
Officer



**Erica Westwood**  
Implementation  
Research Advisor



**Nandini Sreenivasan**  
Implementation  
Research Advisor



**Gloria Cordoba**  
AMR Advisor



**Annick Lenglet**  
AMR Advisor



**Karina Aglamazova**  
Finance and Grant  
Manager



**Vibeke Falkenberg**  
Programme  
Manager\*\*



**Lisa Bugge Nør Larsen**  
Programme Manager\*\*\*

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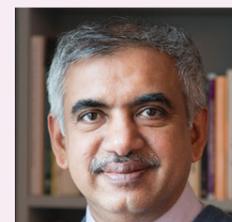
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**Clare Chandler**

Director of the Antimicrobial Resistance Centre, London School of Hygiene & Tropical Medicine, UK



**Sujith J Chandy**

Director of ReAct Asia Pacific and Professor of Clinical Pharmacology at Christian Medical College, Vellore



**Ulrika Enemark**

Associate Professor, Department of Public Health, Aarhus University, Denmark



**Eric Fèvre**

Chair of Veterinary Infectious Disease at the University of Liverpool and joint appointment at ILRI



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