

The Petri Dish

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We are always looking for stories from Fellows and opportunities to share knowledge. If you have a story or articles you'd like featured in a future newsletter, please email us!



FlemingFellowshipScheme@mottmac.com



FlemingFund.org

Welcome to our latest issue of the Petri Dish presenting a selection of Fellows' activities that have taken place over the past month.

In March, some countries saw a relaxation of COVID-19 restrictions, along with a growing excitement for travel opportunities on the horizon. At the same time, we are seeing COVID-19 cases rise again in the UK as well as in other parts of the world, continuing the uncertainty around planning which has been a constant struggle for the past two years.

We are all still adapting and, as we plan for another phase of the Fleming Fund, these uncertainties are being taken into account in the decisions for the future of the programme.

That said, there is a great deal to celebrate this month as you will see in this newsletter.

I had the immense pleasure of meeting with Fellows from Kenya, Zimbabwe and Ghana, in addition to some of their mentors, while they were visiting the London School of Hygiene & Tropical Medicine during a particularly cold and windy spell of weather. The enthusiasm these Fellows showed and the amazing stories shared about their work goes beyond what the quarterly reports capture.

Later in the month we visited Policy and Cohort II Fellows from Uganda and Kenya Policy Fellows, together with Cohort I Fellows from Malawi, at the Roslin Institute of the University of Edinburgh. It was fabulous to see the progress they made on their activities and very moving to hear about their experiences.

Finally, I am really pleased to be able to introduce the six Cohort I Fellows from Eswatini. It is great to welcome them to the programme and wish them well for their orientation workshop in April.

Very best wishes,



Eileen Chappell

Upcoming Events

April Fellows Webinar – Wednesday 6th April, 08:30 BST -

The April webinar will feature a ceremony to celebrate Fellows from Tanzania and Zambia who have completed their Fellowship activities.

Invitations to the April webinar have been included with this issue of the Petri Dish. Please contact FlemingFellowshipScheme@mottmac.com with any questions on connecting to this event.

Quarterly Reporting Deadline – Monday 11th April 2022 -

The reporting deadline for the January - March 2022 quarter is 11th April.

Host Institutions please submit monitoring forms, financial reporting forms and supporting documents for relevant cohorts, as well as updated asset inventories by this date.

Guidance for Host Institutions on filling out the Fellows' reporting forms were discussed at the webinar in October 2021. This included:

- When to reschedule activities
- When an activity has been completed
- Reporting COVID-related challenges
- Tips on highlighting Fellows' work on Form B

If you would like a copy of this guidance, please contact your regional Fellowship Scheme Officer or email

FlemingFellowshipScheme@mottmac.com

ARE YOU ON THE FLEMING FUND MAILING LIST?

The Fleming Fund sends out regular newsletters with more information on external events and achievements from across the programme, including Country and Regional Grants.

If you are not receiving these emails, you can sign up using [THIS FORM](#).

March Webinar Recap

At the March webinar we welcomed Patricia Teixeira dos Santos from the EQAsia project, a Fleming Fund Regional Grant. Patricia spoke about the aims of EQAsia: to improve the quality of bacteriology diagnostics for AMR in the Asia region. This was carried out in two phases. The first phase mapped the coverage, availability and uptake of EQA programmes across One Health sectors. The second phase looked to strengthen the external quality assurance for AMR in Asia through a 'one-shop' EQA programme.

Following the presentation on the EQAsia project, Patricia answered questions from the webinar audience.

Hi Patricia, the difference in the MIC is really interesting, I would be keen to learn more about this.

It can be found in the [EQAsia Website](#) our EQA1 Summary Report where the explanation is given.

But briefly, for a given reference strain, the AST results should fall within a certain interval (acceptance interval). We use the intervals suggested on CLSI. So, as an example, the expected range for cefepime is 0.016 to 0.12, and most of the laboratories reported an MIC ≤ 1 . This is most probably due to the fact that these laboratories use a premade plate, like a Sensititre, with a concentration range for cefepime that starts at 1.

This means that the laboratories are not able to test for lower concentrations for the reference strain. These plates are customized to include the breakpoint for the antimicrobial and then 3-4 dilution steps below and above the breakpoint. So they work just fine for the test strains.

Again, as an example, our informatics module scores the cefepime results for the reference strain as '0' (incorrect) because either the exact MIC can be within (0.016-0.12) or outside (0.25-1) the expected range.

We do not necessarily consider this issue as a performance issue but rather a method limitation.

The Q&A continues on p. 3

March Webinar Recap (Continued)

As this is a large diverse region, have you encountered any governance challenges around data sharing and ownership? Could this be an issue for sustainability?

So far, and as far as I know, it has not been an issue. The laboratories are identified by codes and each code is known only by the corresponding laboratory and the EQAsia Consortium.

Besides, the laboratories were already participating in EQA programs but, in some cases, had to participate in more than one to have their needs covered. The EQAsia project aimed to fill in these gaps.

How much have you done in AMR surveillance, especially in the animal health sector? Is this being done only at the laboratory level or is this including the field as well?

At the moment, our main goal is to strengthen the laboratories' capacity for AMR. It is noticeable among the animal health sector that some resources are still lacking and that there are performance issues.

With our training and follow-up visits, such as workshops, webinars and consultation meetings, we hope that these laboratories will produce reliable data that can be used for AMR surveillance.

Thank you Patricia for sharing an overview of the EQAsia project and answering questions from the webinar audience.

To see slides from the March webinar, please email FlemingFellowshipScheme@mottmac.com

Field Notes

LSHTM Fleming Fund Fellows London Workshop

In late February, 15 Fleming Fund Fellows from Kenya, Zimbabwe, and Ghana attended a training workshop organised by their Host Institution, The London School of Hygiene and Tropical Medicine (LSHTM).

This event was held at the Senate House Library in London and included group discussions, training sessions and virtual meetings, while learning from each other's experiences across countries.



Fellows from Kenya, Zimbabwe, and Ghana together with the LSHTM-Fleming Fund Fellowship secretariat (Clare Chandler, Richard Stabler, Andrew Gomez and Chris Pinto) and Jessica Wallace from the Department of Health and Social Care (photos from Chris Pinto).

The Fellows were able to meet and collaborate with their mentors at the LSHTM and The Royal Veterinary College (RVC). They were also joined by leading professionals working in the AMR surveillance field from the UK Health Security Agency (UKHSA), the FAO AMR Reference Centre,

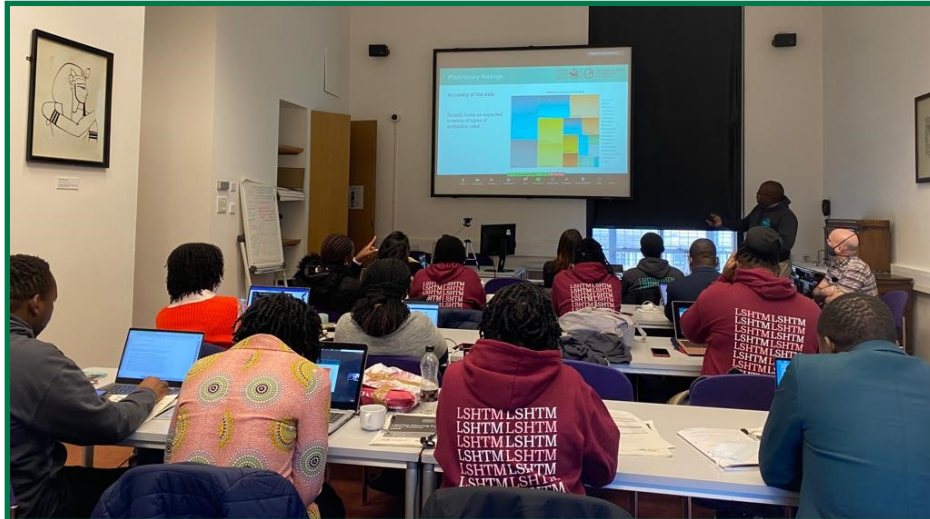
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the Animal and Plant Health Agency (APHA), the Veterinary Medicines Directorate (VMD) and the Centre for Environment, Fisheries and Aquaculture Science (CEFAS).

During the workshop, the fellows received training in science communication, presentation skills, and data visualisation. They worked collaboratively and received support from their LSHTM and RVC mentors, who also led thematic discussions on antimicrobial resistance, antimicrobial use and antimicrobial consumption surveillance. From these discussions, Fellows learned about surveillance activities across African countries, identified gaps, and planned collaborations.

Two key virtual meetings were held during the week in human and animal health AMR surveillance with UKHSA, APHA, VMD and CEFAS. Fellows introduced themselves and their projects. Leading professionals at the institutions joining the meetings delivered short talks. They also shared their research and experiences from working in AMR research and surveillance. This allowed Fellows to learn about the UK AMR field and establish connections for future collaborations.

To close the event, Fellows presented the preliminary results of their individual projects, and shared videos produced through their One Health collaborative projects, to an audience of mentors and representatives from the LSHTM-AMR Centre, the Fleming Fund Fellowship Scheme from Mott MacDonald and the UK Department of Health and Social Care.



Clockwise: Samuel Swiswa (Zimbabwe Fellow) presents preliminary results from his individual project; Discussions on AMU/C surveillance between Fellows and mentors Clare Chandler and Justin Dixon; Kenya Fellows work on their collaborative project (photos from Chris Pinto).

Field Notes

Fleming Fellows visit Edinburgh

The University of Edinburgh is the Host Institution for Fleming Fund Fellows from Uganda, Kenya and Malawi. Like many other institutions in this programme, we have struggled to meet Fellows in-person over the past two years. However, with the gradual easing of travel restrictions, we were finally able to invite all 13 of our current Fellows – six Cohort I Fellows in Malawi, three Cohort II and two Policy Fellows in Uganda, and two Policy Fellows in Kenya – to visit us this March.

Over the three weeks in Edinburgh the Fellows took part in a very full programme of meetings, training and site visits. This included specialist technical sessions on bioinformatics, statistics, whole genome sequencing and advanced microbiology, alongside training in communications and qualitative analysis.



(Left) Fellows from Uganda, Malawi and Kenya together at the University of Edinburgh; (right) Fellows, mentors and Mott MacDonald staff at the symposium event (photos from Romana Gorjanc).



The human health Fellows met with the AMR stewardship team at the Western General Hospital, and with the director of the Molecular Diagnostics Laboratory at the Royal Infirmary of Edinburgh. The animal health Fellows visited the University of Edinburgh farm at Langhill to observe animal care practices and procedures for antibiotic residue testing in milk. The Fellows were also able to tour the small and large animal hospitals at the University's vet school and observe some of the clinical pathology laboratories. There were opportunities for the Policy Fellows to meet with senior AMR policy makers in the Scottish Government and to attend a high-level workshop on the impact of COVID-19 in Scotland.

A high point of the visit was the Fellowship Symposium where all Fellows presented different perspectives of their work on AMR; sharing their insights, experiences and hopes for the future. We were delighted that the Fellowship Scheme Coordinator Eileen Chappell, and Assistant Project Manager Adrienne Bernstein, were able to join us for the day.

It wasn't all work though. The Fellows made trips to the top of Arthur's Seat, North Berwick and out to sights in Midlothian before heading back home. Truly, a visit not to be forgotten!

Reflections from the University of Edinburgh Fellows will be shared in upcoming issues of the Petri Dish.



Welcome New Fleming Fund Fellows

This month, we are welcoming Cohort I Fellows from eSwatini. These Fellows have all taken part in the initial workshop with their Host Institution and are currently working with mentors on developing workplans.

You can learn more about their professional backgrounds and motivation to join the Fellowship Scheme from the biographies below.

Join us in welcoming Ronnie, Andiswa, Sihle, Mcolisi, Bavukile and Zizwe.

Ronnie Sizwe Mokoko – AMR Surveillance, Human Health



My name is Ronnie Sizwe Mokoko and I am a nurse-midwife by profession. I work in the eSwatini Ministry of Health and seconded to the Epidemiology and Disease Control Unit. I am also a mentor through the Sexual Reproductive Health (SRH) Unit working with all health facilities.

Currently, I am coordinating a maternal and infant healthcare improvement project where I conduct the assessment, implementation and supervision of SRH activities to improve maternal, new-born and child health.

Having worked for over 13 years in both clinical and hospital settings, I noted a concerning number of patients developing drug resistance to tuberculosis and HIV. This motivated me to take up this Fellowship in order to be equipped with strategies for AMR prevention, monitoring and containment, using a One Health approach.

I am a team player and hard worker. With this Fellowship I will be in a position to facilitate discussions between local experts to analyse the AMR and AMU situation in eSwatini. I also plan to identify knowledge gaps and formulate locally relevant policies for AMU and AMR.

Andiswa Tenkhosi Dlamini – AMR Laboratory, Human Health



I am Andiswa Tenkhosi Dlamini, and go by Andiswa. I work for the eSwatini Government in the Ministry of Health as a medical laboratory technologist.

Currently, I am stationed at Mbabane Government Hospital Laboratory and am responsible for managing the microbiology department. This includes the daily testing of microbiology specimens and performing microscopy, culture and sensitivity testing. In addition, I am responsible for the maintenance, troubleshooting and repair of equipment.

As the quality officer, I am responsible for establishing, implementing and maintaining the quality management system.

I was motivated to apply for this Fellowship to acquire knowledge to perform accurate laboratory diagnostic testing and resulting data analysis. As part of this Fellowship, I would like to advance my academic skills.

Sihle Bafana Fakudze – AMU/C Surveillance, Human Health



Sihle Bafana Fakudze is the senior pharmacist at the Ministry of Health's Department of Pharmaceutical Services. Here, he is responsible for managing the hospital drug supply, and the dispensing and compounding activities.

Sihle monitors and trains healthcare workers involved in handling and dispensing of medicines, and ensures rational drug use of medicines and medical supplies in the hospitals. Sihle identified the need to formulate real-time pharmaceutical surveillance mechanisms, and not rely on retrospective consumption data.

Welcome New Fellows (Continued)

This motivated Sihle to apply for the Fellowship Scheme and gain experiential learning and mentorship from experts in the AMR field, and develop a proactive approach to tackling the issue of AMR.

He also seeks to develop a broader understanding of the common drivers of AMU and how these factors can be addressed at the facility level using available resources. In addition, Sihle looks to set up surveillance systems in the pharmaceutical sector which can generate robust data on AMU.

Bavukile Siphosethu Kunene – AMR Surveillance, Animal Health



Bavukile Kunene is a veterinary surgeon working in the Department of Veterinary Field Services within the Government of eSwatini. Here, Bavukile is responsible over the training and monitoring for animal health programmes, and enforcing legislation on animal welfare and food safety and security.

Bavukile is also the national focal person for rabies under the Ministry of Agriculture, and coordinates rabies activities across sectors.

He strongly believes in a One Health approach to develop sustainable solutions to health threats. The One Health element of the Fleming Fellowship Scheme was what appealed most to Bavukile and motivated him to apply for this Fellowship. Through his Fellowship, Bavukile aims to gain more knowledge and experience in surveillance systems, and contribute to AMR and AMU/C surveillance in the eSwatini animal health sector.

Bavukile is also a pastor at a church established under his leadership, where he draws his motivation for changing and impacting lives.

Mcolisi Buyisizwe Fakudze – AMR Laboratory, Animal Health



My name is Mcolisi. I hold a bachelor's degree in medical laboratory sciences from the eSwatini Christian Medical University. I have worked and volunteered in organisations and hospitals, including ICAP eSwatini and the Mbabane Government Hospital.

Currently, I am a laboratory technologist at the Eswatini Central Veterinary Laboratory. My role involves carrying out diagnostic tests in various veterinary fields including parasitology, bacteriology, haematology, and virology using general and advanced laboratory techniques.

I joined the Fleming Fellowship Scheme to acquire knowledge and skills in microbiology, as well as additional laboratory techniques. This will help me play a vital role in disease control, both in the animal and health sectors.

Zizwe Muzi Cindzi – AMU/C Surveillance, Animal Health



I am a veterinarian in the public service and responsible for the administration and management of veterinary field services at the regional level. This includes the early detection and intervention for animal and zoonotic diseases, as well as regulating animal (and animal product) imports and exports.

Since 2015, I have been the national focal point for veterinary medicinal products. This comes with the added responsibility of regulating the import and distribution of veterinary medical products and collecting AMU data for reporting to the OIE. I am also

Chair of the national AMRCC and lead the coordination of AMR activities.

I am interested in playing a pivotal role in the fight against AMR, and improving and strengthening this country's AMR and AMU/C activities. I hope this Fellowship will enable me to develop an efficient and robust surveillance system for antimicrobial agents intended for use in animals. I also envision the development of a technology supported system to ease data collection.