



KCCR NEWS

The German Ambassador visits KCCR

His excellency Christoph Retzlaff, Ambassador of the Federal Republic of Germany to Ghana paid a final visit to KCCR on 16th June, 2021. He was accompanied by Moritz Fischer (Political & Protocol section) and Dorothee Dinkelaker (head of development cooperation) at the German Embassy. He commended KCCR for the excellent work done in response to COVID19 pandemic and stressed the support of the German embassy. He interacted with some scientists like Dr Ernest Adankwah (an immunologist), Dr Augustina Sylverken (a virologist), Dr Oumou Maiga Ascofare (a Malaria Scientist) who were trained in Germany and currently lead research at KCCR. The Scientific Director for KCCR, Prof Richard Phillips thanked the Ambassador for support provided to set up a new spacious Biosafety laboratory, a 50C cold room and a Sequencing facility to enhance pandemic preparedness.



KCCR Scientist finds a place among NIH African Postdoctoral Training Initiative (APTI)



Dr. Michael Frimpong, a lecturer at the Department of Molecular Medicine, KNUST and a senior Research Fellow at KCCR has been awarded a training fellowship for the second cohort of the African Postdoctoral Training Initiative (APTI) Fellows along with 9 other colleagues from seven African countries: Gambia, Ghana, Kenya, Nigeria, South Africa, Tanzania and Uganda. He will spend an initial two years at the National Institute of Allergy and Infectious Diseases (NIAID) at the NIH Bethesda, USA. During this period, he will be supported fully by the NIH while he develops a collaborative research project in microbiome and bioinformatics. He will return to KCCR, KNUST in the third year to establish his own research career and extend the collaboration between NIH and KNUST for a further two years, with support from the Bill and Melinda Gates Foundation (BMGF). <https://www.fic.nih.gov/News/Pages/2021-african-postdoctoral-training-initiative-apti-cohort-2.aspx>

Entomology Research in Ghana receives a Boost as KCCR opens Entomology Wing

The KCCR Advisory Board led by Prof J.S.K Ayim officially opened the new entomology wing at KCCR. The project which cost €187,000 received part funding from the ASAAP project (€50,000) that promotes Malaria research and the remaining of the funds from KCCR. State-of-the-art equipment have been installed, so that entomology assays and parasite culture are now possible in this facility. This is a remarkable achievement that will promote research in KNUST and Ghana.



COVID19 vaccination and visit by WHO Country Director, UNICEF & GHS Delegation



KCCR has been a key stakeholder in the COVID19 pandemic response. KCCR provides testing for health facilities, footballers and travellers in the middle belt of Ghana. In the recent COVID19 vaccination exercise KCCR hosted the vaccination teams from the Oforikrom Municipal Health Directorate to ensure success in the vaccination exercise. On 20th May 2021, the WHO Country Director and a high powered delegation visited KCCR to observe the COVID19 vaccination process. They were also provided with updates on ongoing COVID19 activities and visited the KCCR



laboratories to observe the testing process. The visiting team comprised Dr Francis Kasolo (WHO Country Director), Mrunal Shetye (Chief, health and Nutrition UNICEF Country Office), Dr Emmanuel Tinkorang (Ashanti Regional Director of Health Services), Dr Michael Rockson Adjei (Ashanti Regional Deputy Director Public Health), Dr Kwame Amponsah-Aciano (EPI GHS), Dr. Felix Osei Sarpong (WHO Immunization Officer), Mr Fred Osei Sarpong (Immunization Focal person), and other delegates from the Ghana Health Service.

Setting operational research agenda for skin NTDs in Ghana



A 2-day workshop was organised on 13 – 14th July 2021, for representatives from Sekyere East, Ahafo Ano North, Asante Akim, Asutifi (North/South), Asunafo South, Ga South and Ga West Districts. Participants were selected from hotspots for Buruli ulcer, yaws, leprosy and scabies. Stakeholders that attended include representatives from WHO, Ministry of Health, KNUST, Programme managers for Buruli ulcer, Yaws &

Leprosy. Attendees proposed operational research plans that were culturally sensitive and beneficial to the communities of interest. This project was funded by a grant from WHO to Scientists at KCCR and Noguchi Memorial Institute for Medical Research (NMIMR). The outputs for this meeting is a significant milestone in the journey to prioritising and streamlining skin NTD research in Ghana.



Next Destination for Hubert Senanu

Hubert Senanu Ahor successfully completed an Mphil in Molecular medicine on the topic: "Rapid Detection of Mycobacterium ulcerans using Recombinase Polymerase Amplification in the Field" under the BU-RPA project in KCCR. He is currently a doctoral researcher and PhD student (MOI IV Fellow) at Department of General Pediatrics, Neonatology, and Paediatric Cardiology, Heinrich Heine University Düsseldorf, Germany. An MOU is currently in place between KNUST and the University of Duesseldorf that allows exchange of students between the two institutions. Hubert Senanu Ahor is one of such students benefiting from this arrangement. His PhD topic is on 'Monocytes and interleukin 7 function in type 1 Diabetes Mellitus and Tuberculosis'

Profile for Scientist



Dr. Anthony Afum-Adjei Awuah started his career with a degree in Biochemistry from the Department of Biochemistry and Biotechnology, KNUST and joined KCCR to do his PhD in Immunology, investigating the role of immune modulatory molecules in the immunopathogenesis of tuberculosis. After his PhD, he started his postdoc in KCCR where he developed approaches to improving the use of interferon gamma release assay (IGRA) to diagnose TB in children. This work was part of a collaboration between Prof Marc Jacobsen (University of Duesseldorf) and Prof Ellis Owusu Dabo. He continued to do another postdoc training at Centre Muraz in Burkina through the West Africa Health Research Network where he trained in clinical research and worked with hidden populations who are at a higher risk for HIV/AIDS. From there, he won a WHO/TDR fellowship grant to train in vaccinology and vaccine trials at the GSK vaccine centre in Siena, Italy. He worked with a preclinical vaccine group investigating the mechanism of action for novel vaccines and how to improve candidate vaccine immunogenicity. He was part of the 2017 cohort of the Next Generation Scientist program that trained young emerging scientists in clinical research at Novartis Pharma in Basel. He has extensive experience in the design, planning and conduct of clinical research. His research areas include infectious diseases, immunology, vaccinology and clinical research. He is currently involved in running a study on clinical characterization of COVID-19, seroprevalence study on COVID-19 and a clinical trial to test the safety and efficacy of existing therapies for COVID-19 among others.

On-site diagnostic refresher training for malaria microscopy



Microscopy continues to play an important role in malaria diagnosis and research. The National Malaria Control Programme in collaboration with the Clinical Laboratory Unit of the Institutional Care Division of the Ghana Health Service provided refresher training between 2nd and 7th August 2021. The training was conducted for laboratory professionals in health facilities across the sixteen regions of Ghana to build and improve capacity. Mr Geoffrey Foli, a WHO certified Level 1 Malaria Microscopist from KCCR and other Trained supervisors for Regional Malaria microscopy provided on-site hands-on Malaria Diagnostic Training during the period.

Microscopy procedure (In red Geoffrey Foli from KCCR)

Must Read COVID19 articles

1. Morgan OW, Aguilera X, Ammon A, Amuasi J, Fall IS, Frieden T, Heymann D, Ihekweazu C, Jeong EK, Leung GM, Mahon B, Nkengasong J, Qamar FN, Schuchat A, Wieler LH, Dowell SF. Disease surveillance for the COVID-19 era: time for bold changes. *Lancet*. 2021 Jun 19;397(10292):2317-2319.
2. Emmerich P, Murawski C, Ehmen C, von Possel R, Pekarek N, Oestereich L, Duraffour S, Pahlmann M, Struck N, Eibach D, Krumkamp R, Amuasi J, Maiga-Ascofaré O, Rakotozandrindrainy R, Asogun D, Ighodalo Y, Kann S, May J, Tannich E, Deschermeier C. Limited specificity of commercially available SARS-CoV-2 IgG ELISAs in serum samples of African origin. *Trop Med Int Health*. 2021 Jun;26(6):621-631.
3. Frimpong M, Amoako YA, Anim KB, Ahor HS, Yeboah R, Arthur J, Dakorah JS, Gborgblovor D, Akrofi S, Sekyi-Djan P, Owusu M, Sylverken AA, Binger T, Phillips RO. Diagnostics for COVID-19: A case for field-deployable, rapid molecular tests or community surveillance. *Ghana Med J*. 2020 Dec;54(4 Suppl):71-76.
4. Ayisi-Boateng NK, Owusu M, Tawiah P, Ampah BA, Sylverken AA, Wusu-Ansah OK, Sarfo FS, Phillips RO. Profile and outcomes of hospitalized patients with COVID-19 at a tertiary institution hospital in Ghana. *Ghana Med J*. 2020 Dec;54(4 Suppl):39-45.
5. Lamptey J, Oyelami FO, Owusu M, Nkrumah B, Idowu PO, Adu-Gyamfi EA, Czika A, El-Duah P, Yeboah R, Sylverken A, Olasunkanmi OI, Owusu-Dabo E, Drosten C, Adu-Sarkodie Y. Genomic and epidemiological characteristics of SARS-CoV-2 in Africa. *PLoS Negl Trop Dis*. 2021 Apr 26;15(4):e0009335.
6. Owusu M, Sylverken AA, El-Duah P, Ayisi-Boateng NK, Yeboah R, Adu E, Asamoah J, Frimpong M, Senyo J, Acheampong G, Mutocheluh M, Amuasi J, Owusu-Dabo E, Adu-Sarkodie Y, Phillips RO. Low risk of SARS-CoV-2 in blood transfusion. *PLoS One*. 2021 Apr 13;16(4):e0249069.
7. Sylverken AA, El-Duah P, Owusu M, Schneider J, Yeboah R, Ayisi-Boateng NK, Gorman R, Adu E, Kwarteng A, Frimpong M, Binger T, Aryeetey S, Asamoah JA, Amoako YA, Amuasi JH, Beheim-Schwarzbach J, Owusu-Dabo E, Adu-Sarkodie Y, Obiri-Danso K, Corman VM, Drosten C, Phillips R. Transmission of SARS-CoV-2 in northern Ghana: insights from whole-genome sequencing. *Arch Virol*. 2021 May;166(5):1385-1393.
8. Badu K, Oyebola K, Zahouli JZB, Fagbamigbe AF, de Souza DK, Dukhi N, Amankwaa EF, Tolba MF, Sylverken AA, Mosi L, Mante PK, Matoke-Muhia D, Goonoo N. SARS-CoV-2 Viral Shedding and Transmission Dynamics: Implications of WHO COVID-19 Discharge Guidelines. *Front Med (Lausanne)*. 2021 Jun 17;8:648660.
9. Owusu M, Sylverken AA, El-Duah P, Acheampong G, Mutocheluh M, Adu-Sarkodie Y. Sero-epidemiology of human coronaviruses in three rural communities in Ghana. *Pan Afr Med J*. 2021 Mar 8;38:244.
10. Kwarteng A, Asiedu E, Sylverken AA, Larbi A, Sakyi SA, Asiedu SO. Molecular characterization of interactions between the D614G variant of SARS-CoV-2 S-protein and neutralizing antibodies: A computational approach. *Infect Genet Evol*. 2021 Jul;91:104815.
11. Burimuah V, Sylverken A, Owusu M, El-Duah P, Yeboah R, Lamptey J, Frimpong YO, Agbenyega O, Folitse R, Emikpe B, Tasiame W, Owiredu EW, Oppong S, Antwi C, Adu-Sarkodie Y, Drosten C. Molecular-based cross-species evaluation of bovine coronavirus infection in cattle, sheep and goats in Ghana. *BMC Vet Res*. 2020 Oct 27;16(1):405.

Sod cutting towards establishing Clinical Trial Facility at St Francis Xavier Hospital in Assin Fosu



A sod cutting ceremony was held at St Francis Xavier Hospital in Assin Fosu on 3rd August 2021 towards development of a Clinical Trial Facility. This will provide the infrastructure to allow participation in the conduct of FDA approved, internationally accepted clinical trials to eventually improve health care in Ghana. This is a collaborative work between the St Francis Xavier

Hospital, the infectious diseases epidemiology group at KCCR and the Bernard Nocht Institute for Tropical Medicine (BNITM). Funding is provided by the BNITM Germany. KCCR already set up a model laboratory at the hospital for surveillance of Antimicrobial Resistance (AMR).

Time out with the COVID19 testing team

The COVID19 testing team at KCCR led by Dr. Augustina Sylverken (right) took time out of the laboratory on the 8th August, 2021 to review its processes and reflect on its practices as it braces itself for further COVID19 testing due to the third wave.



Mrs Regina Bauerochse, GIZ Country Director visits KCCR

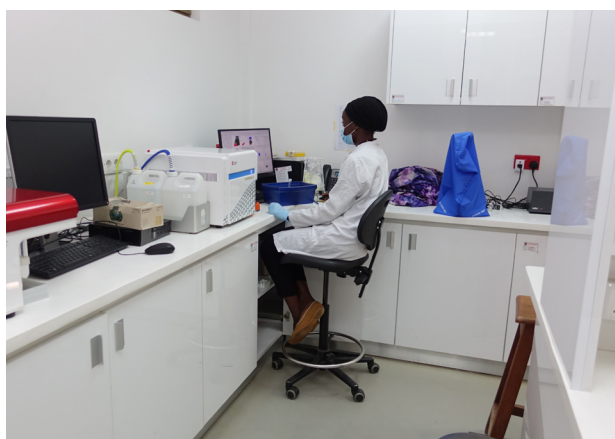


KCCR has been at the forefront of the COVID19 pandemic response and already provided testing for several facilities in Ashanti Region and the middle belt of Ghana. The Country Director of GIZ Mrs. Regina Bauerochse Barbosa paid a visit to KCCR on 12 & 13th November 2020 to obtain first-hand information on KCCR activities. She was given a tour of the KCCR

facilities. KCCR already collaborated with GIZ and the customs division of the GRA to provide on-site testing to the Obuasi Municipality using the customs laboratory van. GIZ contributed consumables, equipment and test reagents. She lauded the centre and indicated the willingness of GIZ to collaborate with KCCR in the COVID19 pandemic response.

New look for KCCR labs

KCCR laboratories have undergone refurbishment with replacement of tables, surfaces, cabinets and doors that were installed 20 years. For this reason, immunology, bacteriology, molecular biology, and parasitology labs have a new look.



KCCR Collaborate with Newmont Ghana Limited to Establish 2 New Covid19 Laboratories

The KCCR COVID19 testing team is collaborating with Newmont Ghana Limited by providing technical support for the set-up of two laboratories at New Abirim Hospital in the Eastern Region and Kenyase Health Centre in the Ahafo Region. Newmont Ghana purchased the needed equipment and supplies. These laboratories will be handed over to the Ghana health Service to serve the health needs of the communities. Equipment purchased by Newmont Ghana are multiuser and should be of value in investigating other outbreak diseases such as influenza and meningitis alongside the COVID19 pandemic. The KCCR team that helped in the set up include Morrah Oppong, Henry Kyeremateng Acheampong, Henrietta Dede Tetteh, Rachel Naa Yemotikor Yemofio, Dr Augustina Sylverken and Dr Michael Owusu. In all, four (4) lab technicians were trained in New Abirim and ten (10) in Ahafo. These technicians have acquired skills to allow them to work independently.



Point-of-Need Diagnostic tests for COVID19

Dr Michael Frimpong and international partners are working in a multi-country to evaluate the suitcase labs for rapid detection of SARS-COV-2 (MULTI-COV) funded by the EDCTP. Systems being assessed for use in low resource settings include isothermal amplification, peakPCR and rapid antigen tests

<https://www.vetmed.uni-leipzig.de/en/institut-fuer-tierhygiene-und-oeffentliches-veterinaerwesen/forschung/arbeitsgruppe-tierhygiene-und-tierseuchenbekaeufung/africa-suitcaselab/>