



THE AGA KHAN UNIVERSITY



Annual Early-Career Health Researchers' Symposium

Enhancing Science in the Face of a Pandemic

December 10 & 11, 2020
Virtual Symposium

#AKUResearchDay
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Message from Dean, Medical College



The Medical College East Africa welcomes you to the 4th Annual Early Career Health Researchers' Symposium this year. The symposium takes place under the dark cloud of a pandemic that has disrupted our way of doing things. Indeed, the platform we are using for this year's symposium is telling, given the difficulties and prohibitions against large gatherings in order to reduce the risk of infection. While the COVID-19 pandemic has posed serious challenges to the way we work, it has also caused us to take time to think through innovations, and to imagine a radically different world from the one we had become used to.

This symposium is our opportunity to showcase these ideas and innovations, and

to begin building that different world we are imagining. My hope is that we will share our research and innovations, and build friendships and collaborations that will grow and form the bedrock of the new scientific and health research environment, fit for the brave, new post-pandemic world. The paradox that is COVID-19 has eliminated borders by creating hard boundaries. It has eliminated the fear of social interaction by creating a fear of physical interaction. It has contributed to giving the planet a breather by interfering with our ability to breathe! It must therefore spark new ways of thinking, of doing things, of being.

This symposium will serve to demonstrate that out of adversity, we still have the ability to learn and to grow, and to make the world a healthier and more resilient place for all of us!

Lukoye Atwoli, MBChB, MMed Psych, PhD
*Professor and Dean | The Aga Khan
University Medical College East Africa
Visiting Scientist, Harvard, T. H. Chan
School of Public Health
President-Elect, African College of
Neuropsychopharmacology (AfCNP)
Secretary-General, African Association of
Psychiatrists (AAP)*

Message from Dean, School of Nursing & Midwifery



Welcome to the 4th Annual Early-Career Researchers' Symposium. Despite the pandemic, this is a significant edition of this event for the School of Nursing and Midwifery (SONAM) as we commence our inaugural graduate education program, the Master of Science in Advanced Practice Nursing. This event is a reflection of the resilience of the university as we adopt new ways of doing things and leverage on technology to facilitate knowledge sharing and dissemination virtually.

Nurses and midwives have been crucial in the global response against COVID-19 which is why this year's theme, "Enhancing Science in the Face of a Pandemic" is very important. It provides an opportunity to demonstrate the impact of evidence-based research in understanding and solving real-world problems and emerging issues within our spheres of influence. The symposium will offer our graduate-level students the opportunity to understand the place of research as a fundamental clinical responsibility within the Master's experience. Our undergraduate students will also learn how to utilize the core principles of research in solving problems within various clinical settings. It is my

hope that in the course of this symposium, we will all take home some key lessons that will help us improve the quality of life of those we serve.

Research is the foundation of innovation and education. The School takes its role in improve nursing and midwifery research by empowering nursing graduates to generate and translate knowledge as a means of solving the most pressing health challenges. This joint event between the Medical College and School of Nursing & Midwifery is a reflection of the critical role of an interdisciplinary approach to health care, research and education. I call on all participants to think critically and creatively on how we can jointly, as members of the health care team, deal with a myriad of challenges within the realities of our healthcare system in a bid to make Universal Health Coverage a reality.

SONAM is excited to be part of this conference. Whether you are a participant or presenter, we look forward to engaging with you, networking with you and sharing knowledge together throughout the conference. In this year of the nurse and midwife, I salute all frontline workers who are tirelessly working to provide care and support during the Covid-19 pandemic. Our thoughts are will those who have lost their lives.

Mask. Sanitize. Maintain social distance.
Be safe. Stay safe. Thank you!

Dr Eunice Ndirangu,
*Associate Professor and Dean, School of
Nursing and Midwifery, East Africa*

Welcome to the 4th Annual Early-Career Health Researchers' Symposium



I am delighted to welcome you to the 4th Annual Early Career Researchers' Symposium. The theme has been carefully selected to capture the mood of an extremely challenging time the world is going through. The Covid-19 pandemic has indeed thoroughly stretched the ability of every institution to put coping measures in place to avoid total collapse of systems. Universities with medical training programs and responsibility for delivery of clinical services, commonly referred to as "Academic Medical Centers", have found themselves right at the apex of leadership in management of this new disease without enough evidence to use in the role. This has forced the global academic health community to rapidly carry out Covid-19 research as a priority and share findings across the globe with single focus on saving human lives. Most of the initial research findings were descriptive in form of case reports and case series. As expected, most emanated from China but other parts of the world quickly picked up and expanded complexity of research designs in search of higher level of evidence. Even low and medium income countries, this time round, were not left behind. It has been really gratifying to see great team-work among researchers, funders and clinical services providers in all corners of the world. Our theme this year, "Enhancing

research in the face of a pandemic", is meant to show-case how young researchers in our academic and research institutions have made their contributions to the general pool of new knowledge despite the tough circumstances.

Universities and research institutions experienced major disruption of research activities at the beginning of the year. Resumption had to await development of standard operating procedures to mitigate risk of exposing investigators, study staff and subjects to Covid-19. There was also great hesitancy in organizing scientific conferences given we are used to face-face meetings and "old habits die hard". We have, this time round, made a deliberate decision to combine a small face-face and broad virtual audience sessions that will jointly deliver a unique type of symposium. Unlike in previous meetings, we expect to have participation from an even wider audience of young research colleagues - within and outside Kenya, thanks to technology. Yet another opportunity to demonstrate their ability to rise to the occasion.

This conference would not succeed without the commitment of members of the organizing Committee and financial support from Aga Khan University through the office of Dean of the Medical College. My appreciation goes to both and you, the participants, without whom all effort would have been in vain.

I hope the short two-day sessions will meet your expectations and once again wish you a highly interactive (orally and via the Chat/Q&A facility) and informative symposium.

Dr William M Macharia

*Professor and Associate Dean Research, Faculty of Health Sciences-EA, Aga Khan University
Ambassador, Association of Academic Health Centers International – East Africa
Chair, Annual Organizing Committee*

PROGRAMME

Thursday, December 10, 2020

Opening Ceremony

5:00 – 5:05 PM	Conference Welcome Prof. William Macharia, Chair, Organizing Committee, Associate Dean, Medical College & School of Nursing & Midwifery, Aga Khan University, East Africa
5:05 – 5:15 PM	Introductory Remarks Prof. Lukoye Atwoli, Dean, Medical College, East Africa, Aga Khan University Dr Eunice Ndirangu, Dean, School of Nursing and Midwifery, East Africa, Aga Khan University
5:15 – 5:45 PM	Session 2: COVID-19 Each presentation will be 10 minutes. Session Chair: Prof Rodney Adam Mental Health Disorders in Healthcare Workers at Aga Khan University During the Coronavirus Disease 2019 (COVID-19) Pandemic in Kenya Jasmit Shah, Aga Khan University Multi-month dispensing as a component of differentiated care model adaptations In HIV Service Delivery for key populations during COVID-19 Pandemic: A boost on retention Sharon Omenda, International Centre for Reproductive Health In Kenya Evaluation of antigen, antibody lateral flow assays and extraction free RT-PCR for SARS-CoV-2 detection Matheka Cyrus, Aga Khan University Hospital, Nairobi
5:45 – 6:00 PM	Question & Answer Session
6:00 – 6:15 PM	Keynote Address Dr Angela Koech MBChB, MSc, Mmed (OB-GYN) <i>Centre of Excellence in Women and Child Health and an instructor in the Department of Obstetrics and Gynaecology at Aga Khan University.</i>

6:20 – 6:50 PM	Session 3: Health Services Each presentation will be 10 minutes. Session Chair: Prof Stanley Luchters Assessment of palliative care needs in a Kenyan Intensive Care Unit using a trigger-based model Linda Barasa, Aga Khan University Hospital, Nairobi Assessment of activity levels and perceived barriers or facilitators to physical activity in pregnancy at Aga Khan University Hospital, Nairobi, Kenya Zoya Lalani, Aga Khan University Seroprevalence and risk factors for Hepatitis B Virus Infection in adolescent blood donors within selected Counties of Western Kenya Hilary O. Awili, University of Nairobi
	Question & Answer Session
	Closing Remarks

Friday, December 11, 2020

5:00 – 5:05 PM	Opening Remarks Prof. William Macharia, Chair, Organizing Committee Associate Dean, Medical College & School of Nursing & Midwifery Aga Khan University, East Africa
	Session 4: Non-communicable Diseases Each presentation will be 10 minutes. Session Chair: Dr Nancy Kunyiha Overweight and obesity, and perceptions of body image among female sex workers in Mombasa, Kenya Caroline Gichuki, Aga Khan University Risk factors of type 2 diabetes in Nairobi, Kenya: A comparative cross-sectional study Anthony Muchai Manyara, University of Glasgow
5:25 – 5:35 PM	Question & Answer Session
5:35 – 5:50 PM	Keynote Address Dr Omu Anzala MBChB, PhD <i>Department of Medical Microbiology, University of Nairobi, Kenya, and Director of KAVI – Institute of Clinical Research (KAVI - ICR).</i>

5:50 – 6:10 PM	Session 5: Diagnostics Each presentation will be 10 minutes. Session Chair: Dr. Khalid Makhdomi Discordance between Breast Imaging and Histopathology findings after Ultrasound Guided Core Needle Biopsy Dr Margaret Mwanja, Aga Khan University Diagnostic evaluation of combining Strain Elastography with Conventional Ultrasound in the Evaluation of Thyroid Nodules Faraaz Shariff, Aga Khan University Hospital, Nairobi
6:10 - 6:20 PM	Question & Answer Session
6:25 – 7:00 PM	SESSION 6: Panel Discussion <i>What informs young graduates' choice to consider a career in health research?</i> Panelists Dr Wangira Musana Dr Benjamin Wachira Dr Rose Ndumia Moderator Prof Marleen Temmerman
7:00 – 7:20 PM	Voting for the Robert <i>Bob</i> Armstrong Award (online) Presentation of awards
7:20 – 7:30PM	Vote of thanks and Closing remarks Isabel Kambo <i>Academic Head, School of Nursing and Midwifery, Kenya</i>

BIOGRAPHIES

KEYNOTE SPEAKERS



Dr Omu Anzala
MBChB, PhD

Omu Anzala is a Professor of Virology and Immunology in the Department of Medical Microbiology; Senior Research Scientist at KAVI – Institute of Clinical Research (KAVI - ICR), University of Nairobi, Kenya. He holds a degree in MB;ChB from the University of Nairobi, Kenya; a Diploma in Epidemiology - Tufts University in USA; a PhD in virology and immunology - University of Manitoba, Canada and Postdoctoral Fellow from Institute of Molecular Medicine (IMM), Oxford University, UK.

Prof. Anzala is the leading HIV vaccine investigator in Kenya and was one of the founders of KAVI in the year 1999 as the HIV Vaccine research Unit in Kenya and moving it to its current status as an Institute of Clinical Research in 2013. He was co-PI of the first HIV vaccine trial in Kenya, the second in Africa, using a DNA plasmid. He has subsequently been PI or co-PI for 11 IAVI-funded HIV vaccine trials in adults and the first paediatric HIV vaccine trial in Kenya. Additionally, Prof.

Anzala has been the Principal Investigator for the just completed Phase I & Phase II Candidate Ebola Vaccine Trials, which were funded by Janssen & Janssen.

Prof. Anzala has a diverse background in HIV prevention research and his research has focused on the immunological and genetic correlates of long-term survival and immunologic non-progression among HIV-infected sex workers in Kenya. Related experience includes a RCT of azithromycin prophylaxis for STI and HIV, an intermittent PrEP RCT as well as multiple epidemiology studies in at-risk populations including acute HIV infection, mucosal immunology and broadly neutralizing antibody identification in HIV-infected subjects. In addition to HIV research Prof Anzala has pioneered research in One health, looking at infectious elements at the human-animal interface and bringing together collaborators from Europe, India, and other African Countries.

Prof. Anzala has trained in vaccinology with WHO and serves as a member of the Ministry of Health, Vaccination Experts Committee; National Polio Expert Committee, National Vaccine Safety Advisory Committee (all in Kenya) and African Vaccine Manufacturing Initiative (South Africa), Member of National COVID -19 TASK force and a team leader of National COVID-19 Case management, Research and modelling consortium.

He has authored and co-authored over 130 peer-reviewed publications (<https://pubmed.ncbi.nlm.nih.gov/?term=anzala>), supervised and mentored over 25 Masters and 9 PhD students to successful completion of their studies and continues to do the same for many more.



Dr. Angela Koech Etyang
Obstetrician Scientist, MBChB, MSc, MMed.

Angela is a research physician scientist (Obstetrician) at the Aga Khan University's Centre of Excellence in Women and Child Health, East Africa and an Assistant Professor at the Department of Obstetrics and Gynaecology. She holds

an MBChB degree (UoN), an MSc in Epidemiology (LSHTM) and a Masters in Obstetrics and Gynaecology (AKU).

Angela has over 7 years' experience in clinical research in maternal and newborn health. She is currently the Kenya co-Principal Investigator of the Pregnancy Care Integrating Translational Science, Everywhere (PRECISE) study - a large multicentre study looking into placental disorders in Sub-Saharan Africa.

She is also the principal investigator of a study evaluating the role of point of care tests in antenatal care settings in rural Kenya.

Her research interests include preeclampsia and its risk factors; aetiology of preterm birth/low birth weight, anaemia in pregnancy and the role of diagnostics in routine antenatal care in low resource settings.

JUDGES



Dr Constance Sibongile Shumba
PhD

Dr Shumba is a Faculty Member at the Department of Population Health at the Aga Khan University, Nairobi, Kenya since May 2020. She has the following qualifications:

- PhD in Global Health (Human Resources for Health), Queen Margaret University, Institute for Global Health and Development, Edinburgh, Scotland;
- Doctor of Literature and Philosophy, Health Studies (Gender Based Violence), University of South Africa;
- MSc, International Health (Health Systems, Health Policy and Management), Queen Margaret University, Institute for Global Health and Development, Edinburgh, Scotland;
- BSc, Health Education and Health

Promotion, University of Zimbabwe

- She is a Fellow of the Higher Education Academy (FHEA), UK
- She is also a Fellow of the Royal Society for Public Health (FRSPH), UK

She was previously Global Advisor, Health and Nutrition for the Aga Khan Foundation, where she was responsible for promoting and implementing AKF's health and nutrition strategy, and providing technical assistance to country teams. She has worked with several global health agencies in Africa and Asia for the last 16 years, leading the design and delivery of complex health and nutrition programs in Africa and Asia. Her broad base of programmatic experience spans several areas: Maternal and Child Health and Nutrition; Capacity building and curriculum development; Strengthening Health systems for HIV, Malaria and TB; Gender Equality; Sexual and Reproductive Health and Rights; Adolescent Health, Integrated Community Case Management; Early Childhood Development, Quality improvement and Implementation research. Dr Shumba also has 10 years' experience in public health higher education and is an Honorary Faculty Member with the University of Liverpool, and previously worked with the University of Roehampton-London. She strongly believes in upholding the health-related rights of women, girls and children, through contextually sensitive approaches that address drivers at the individual, community and system levels.



Dr Grace Edwards

Grace commenced her nursing training in 1974 and qualified as a midwife in 1978 working as a hospital midwife and a community midwife for 12 years during which she completed her Advanced Diploma of Midwifery and the Certificate in Education. Grace then took up post as a midwife teacher in 1988 and completed a Masters in Education.

In 1993 Grace was appointed Regional Co-ordinator for CESDI (the Confidential Enquiry into Stillbirths and Deaths in Infancy), a post she held until 2002. During this time, she completed a PhD on Peoples Perceptions of Healthy Pregnancy. In 2002 she was employed as

one of the first Consultant Midwives in the UK, specialising in Public Health in Liverpool UK working around all aspects of deprivation and inequalities that affect pregnant women and their families and accepted a joint appointment as Principal Lecturer in midwifery research at the University of Central Lancashire (UCLan) UK.

In 2005 she was appointed as national midwifery assessor for the Confidential Enquiry into Maternal and Child Health for maternal mortality. She was recruited to work in the UAE in 2008, firstly as the Midwifery Research and Development Specialist at Al Wasl Hospital (now Latifa Hospital) in Dubai and in January 2011 as Assistant Director of Nursing and Midwifery with responsibility for leading the first 18-month midwifery education programme and coordinating research trials at the Corniche hospital in Abu Dhabi.

In 2016, Grace was appointed to her present post as the Aga Khan University Foundation Professor of Midwifery to lead on midwifery education and practice for AKU in East Africa and in 2017, she was awarded an Honorary post as Professor of Midwifery at Salford University UK. Grace was also inducted as a Fellow of the Royal College of Midwives and a Senior Fellow of Advance HE, the Higher Education Academy in the UK.



**Dr. Robert Armstrong, BSc MD MSc PhD
FRCPC**

Robert Armstrong is Emeritus Professor in the Department of Paediatrics at the University of British Columbia where he was previously Chair of the department prior to joining Aga Khan University in Nairobi as Foundation Dean of the Medical College, East Africa from 2010 to 2020.

Dr. Armstrong's clinical and research interests are in the area of health services related to children and youth with particular focus on child development and disability and application of population-based strategies for prevention of developmental disorders. Prof. Armstrong is past President of the American Academy of Cerebral Palsy and Developmental Medicine and a founding member and Secretary of the International Alliance of Academies of Child Disability (IAACD). He is a Fellow of the Canadian Academy of Health Sciences.

While having returned to Vancouver he continues collaborations with colleagues at AKU, remains a Board member of Aga Khan Health Services, Kenya and is committed to building linkages between Canadian universities and AKU in East Africa.

SYMPOSIUM ORGANIZING COMMITTEE

1. Prof. William Macharia; Steering Committee Chair
2. Dr. Shahin Sayed; Steering Committee Vice Chair
3. Ms. Mary Mutua; Steering Committee Secretary
4. Ms. Kamanda Ciru; Logistics Sub-Committee Lead
5. Ms. Jacqueline Ndegwa, Steering Committee Member
6. Dr. Anthony Ngugi; Scientific Sub-Committee Lead
7. Dr. Ra'ana Hussain, Steering Committee Member
8. Dr. Abubakar Abdillah; Steering Committee Member
9. Prof. Stanley Luchters; Steering Committee Member
10. Prof. Marleen Temmerman; Steering Committee Member
11. Dr. Adelaide Lusambili; Steering Committee Member
12. Ms. Gladys Mbuthia; Steering Committee Member
13. Ms. Rachel Kimani, Steering Committee Member
14. Dr. Quek Mei Chi; Steering Committee Member
15. Dr. Athul Kooliyath; Steering Committee Member
16. Ms. Maureen Akolo; Steering Committee Member
17. Mr. Stephen Musyoka ; Communications Sub-Committee Lead
18. Ms. Carol Oyola; Steering Committee Member
19. Mr. Patrick Gumo; Steering Committee Member
20. Mr. Kennedy Njenga; Steering Committee Member
21. Mr. Daniel Musyoka; Steering Committee Member
22. Dr. Fazal Yakub; Steering Committee Member
23. Dr. Aura Nzinga; Steering Committee Member
24. Dr. Zoya Lalani; Steering Committee Member

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