

Researcher capacity building: enabling emerging research leaders in Africa to share good career development practices

Workshop report

7 February 2023 Nairobi, Kenya







The African Academy of Sciences (AAS) is a non-aligned, non-political, not-for-profit Pan-African organisation headquartered in Nairobi, with a hosting agreement with the government of Kenya. The AAS's vision is to see transformed lives on the African continent through science. It is the only continental Academy in Africa enjoying the support and recognition of the African Union, as well as several governments and major international partners. It has a tripartite mandate: to recognize excellence through its highly prestigious fellowship and award schemes; to provide advisory and think tank functions for shaping the continent's Science, Technology and Innovation (STI) strategies and policies; and to implement key STI programmes aimed at addressing Africa's developmental challenges.

The Academy of Medical Sciences

The Academy of Medical Sciences is the independent, expert voice of biomedical and health research in the UK. Our mission is to help create an open and progressive research sector to improve the health of people everywhere. The Academy's elected Fellows are the United Kingdom's leading medical scientists from the NHS, academia, industry, and the public service. We work with them to improve lives, strengthen research, support researchers, work globally, and build our resources.

Researcher capacity building: enabling emerging research leaders in Africa to share good career development practices

Contents

Executive summary	4
Introduction	5
Career development	6
Discussions on career development presentations	8
Breakout group discussions on mentoring	9
Breakout group discussions on strengthening interdisciplinary collaborations in Africa	.11
Conclusions	15
Annexes	16

Executive summary

On 7 February 2023, the UK Academy of Medical Sciences and the African Academy of Sciences (AAS) jointly organised a researcher capacity-building workshop in Nairobi, Kenya. The workshop enabled participants to share and discuss best practice for researchers developing their careers in Africa.

The workshop focused on three main areas of discussion: mentoring and career development; interdisciplinary working; and equitable partnerships.

Participants reflected on their experiences of mentoring, and other career development schemes. Mentoring was agreed as a 'mentee-driven process' that requires an active role and long-term commitment from the mentor. The value of **mentoring** and importance of role models were highlighted particularly for those from underrepresented groups, women, and those aiming to work on interdisciplinary research initiatives. Some challenges included **assessing the success** of career development programmes and **ensuring the sustainability** of mentoring programmes.

Discussions also focused on possible approaches to the development of **interdisciplinary research collaborations** within Africa and the basis for **equitable international research partnerships**. Participants emphasised the need to create opportunities for researchers from different disciplines to meet, establish relationships and begin collaborations. These interdisciplinary research collaborations are needed for innovative solutions to tackle many major health challenges including climate change, emerging infections, antimicrobial resistance obesity, noncommunicable diseases. They can also provide important **career development** opportunities for African researchers if they act as capacity-building platforms by encouraging joint-proposal development, learning new skills, and promoting exchanges with other sectors.

To address the power imbalances between African and high-income countries (partly caused by funding mostly coming from organisations located outside of Africa), recommendations were made by participants on building equitable research partnerships. They require recognition of the contributions of both parties and depend on openness and trust, ensuring that collaborations are based on **fairness and mutual respect**. Both parties should work together to **co-develop ideas** and **recognise** the contributions made by African partners.



Workshop participants

Introduction

Navigating scientific career pathways can be challenging. As well as developing technical skills associated with their academic disciplines, researchers need to understand pathways of career progression and develop additional skills to thrive and progress. In Africa, there are limited career development opportunities for early-career researchers.

The UK Academy of Medical Sciences has been holding a series of joint researcher capacity-building workshops with international partners. The first meeting, jointly organised with the Academy of Science of South Africa (ASSAf), was held in November 2022 in Johannesburg and a summary report **has been published**.

The second capacity-building workshop was held on 7 February 2023 in Nairobi, Kenya, in partnership with the African Academy of Sciences (AAS). This workshop, which included participants from both the UK and from the African continent with experience of researcher capacity-building initiatives, provided an opportunity to share and discuss good practices for researchers developing their careers in Africa.

The workshop was held immediately after a 'One Health' policy workshop jointly organised by the two academies. Many participants from this meeting joined the capacity-building workshop, alongside career development experts and the UK Academy's **Newton** and **Global Challenges Research Fund Networking Grants** awardees and alumni.



Academy award holders who attended the workshop and staff: Emily Zerling, Dr Caroline Kabaria, Dr Palwende Romuald Boua, Dr Diana Marangu, Prof Jackson Wachira Muthengia, Prof Joshua Arimi, Helen Denyer, Prof David Ndetei, Prof Josiah Ouma Omolo, Prof Nicholas Mariita, Prof Clive Gray, Dr Maureen Nanziri, Dr Marlie Miles, Dr Kerneels Jaars, Dr Terry Kipkorir, and Dr Suzanne Candy

Career development



Dr Suzanne Candy, Director of Biomedical Grants and Policy at the Academy of Medical Sciences, began by summarising the Academy's programme of career development support for early- to midcareer researchers.

The Academy's **mentoring programme** is based on the **'developmental mentoring'** model, which places mentees in the driving seat and aims to empower mentees to act for themselves. Mentees are encouraged to identify what support they need from a mentor, while mentors play the role of sounding board, provide a safe space for honest and open conversations, and encourage mentees to come up with their own solutions to challenges.

Mentees, who include a range of UK-based researchers, are encouraged to select mentors outside their own fields and institutions so that they can obtain independent views and a fresh perspective. The value of a mentor lies in their experience rather than their position in a hierarchy, and ideally both mentee and mentor gain from the relationship.

Other career development programmes include the **SUSTAIN – women in research** scheme, a one-year programme through which cohorts of female researchers receive leadership training and support for skills development, including media training, mentoring, and peer–peer coaching.

The **Future Leaders in Innovation, Enterprise and Research (FLIER)** initiative, a two-year leadership programme open to all UK-based mid-career researchers, aims to strengthen connections between academia, healthcare, industry, and policymaking organisations.

The **Cross-Sector Programme**, launched in 2022, aims to address the lack of connectivity between academia, industry and the NHS, and the limited movement of researchers between these sectors. Regional networks or 'hubs' are being established, the first being in Wales with Life Sciences Hub Wales as partners. As part of this programme, the Academy is developing a funding scheme to support people working across sectors.

In 2020, the Academy launched its **Promoting Innovation, Learning, Leadership And Resilience in the research community (PILLAR)** initiative, a global programme providing virtual training, support, and networking opportunities for current Academy grant holders and programme participants. Continuing career development support is provided to Academy alumni through a dedicated portal and programme, the **Hub of Innovation Vision & Engagement (HIVE)** alumni programme. **Dr Caroline Kabaria,** African Population and Health Research Centre (APHRC), Kenya, described the tranSforming InSTitutions to Advance women leadeRS in science, technology, engineering and mathematics: lessons from Ghana and Kenya (SISTARS) initiative.



Despite making up half the population, women face discrimination in many settings and are typically underrepresented in positions of power and authority. Within academic medicine, for example, female medical students outnumber their male counterparts but become progressively more underrepresented at senior levels. Barriers to progression include overt and unconscious biases, systemic barriers, and individual career choices.

The **SISTARS** initiative aims to address the institutional barriers affecting women's progression in STEM careers. Focused on Ghana and Kenya, the initiative includes representatives from East and West Africa specialising in different areas of science, industry and the third sector. It encompasses both male and female researchers, and individuals with expertise in gender analysis, organisational analysis, transdisciplinary approaches, and STEM mentorship.

The SISTARS initiative undertakes stakeholder mapping exercises, assesses career pathways and develops innovative strategies to address identified barriers. The project will gather gender-disaggregated data on STEM professionals, develop a network for women working in STEM areas, and produce case studies of successful female STEM leaders.



Dr Benard Kulohoma, Director of Organisational Capacity Development at the International AIDS Vaccine Initiative (IAVI), outlined the Accelerate the Development of Vaccines And New technologies to Combat the AIDS Epidemic (ADVANCE) programme's capacity-strengthening initiatives.

The **ADVANCE initiative** is a 10-year co-operative agreement with the US Agency for International Development (USAID), through the US President's Emergency Plan for AIDS Relief (PEPFAR). ADVANCE supports pre-clinical and clinical HIV vaccine research and development, as well as capacity strengthening for HIV prevention research, across a network of Clinical Research Centres (CRCs) in Kenya, Rwanda, South Africa, Uganda, Zambia, and partner institutes in India.

ADVANCE's initiatives focus on individual, institutional, and regional capacity strengthening. The Leadership Development Programme (LDP), a crucial aspect of individual capacity strengthening, now in its second cohort, is targeted at early- and mid-career research scientists within the ADVANCE partner network. The LDP aims to develop a critical mass of leaders equipped to advance next-generation AIDS vaccine development. The LDP provides comprehensive training on technical skills and soft skills, research management, mentorship, and grants writing support to participants, enabling them to effectively manage diverse research portfolios.

Technical and soft skills training that provides a well-rounded introduction to HIV vaccine development are organised by research leaders from both the global North and South, with a strong female representation. In addition, participants are paired with internationally renowned experts for mentoring, and both mentors and mentees attend mentorship training workshops. Meetings are driven by mentees and focus on their career goals and pathways. Quarterly check-ins are carried out on mentor–mentee pairs to assess progress.

Discussions on career development presentations

Following the speakers' career development presentations, participants were able to ask questions. During this session, the discussions focused on:



Performance and success of a mentoring programme

Participants noted that it is challenging to evaluate a mentoring programme. Clear performance criteria need to be developed, and a variety of successful outcomes can be envisaged for a mentoring scheme, including mentees winning a grant, becoming independent, and taking on higher leadership roles. Other benefits can include building of interpersonal communication and other 'soft skills', confidence and resilience, as well as being able to become a mentor. In addition, the nature of monitoring activities is likely to vary across programmes, depending on their specific aims.



Women in STEM

Having role models and encouraging women from a young age to study STEM subjects at school were seen as critical to increase the number of women working in STEM fields. Men also need to be part of the conversation, supporting women to help equalise the field. Mentoring can help to empower women and enable them to become better self-advocates.



Women in leadership positions

Participants argued that more institutional and workplace support for women is needed. The importance of visibility was emphasised – senior role models can help to address 'imposter syndrome' and encourage women to seek leadership positions.

The SISTARS initiative aims to address the institutional barriers affecting women's progression in STEM careers by gathering gender-disaggregated data and by developing new innovative strategies to address these barriers. This project is successful in developing a network for women from East and West Africa working in STEM areas.



Dr Caroline Kabaria, African Population and Health Research Centre (APHRC), Kenya

Breakout group discussions on mentoring

In breakout groups, participants discussed key features of mentoring and how it differs from coaching, challenges and how to ensure effective mentoring, and the value of role models.



Mentee-driven process

Mentoring was felt to be a **mentee-driven process** focused on the **long-term development of individuals**. Mentors provide support to enable mentees to make reflective career decisions.



Long-term commitment from mentors

Effective mentoring takes time and requires a **long-term commitment from mentors**. There were varying opinions about the potential for supervisors to be mentors; some felt that mentoring was part of a supervisor's role, while others felt it key that a mentor should be independent of the supervisory process.



Active roles

Both mentors and mentees have **active roles** in the relationship, and mentors also stand to benefit and learn from their mentoring experience. A mentor does not necessarily work in the same field as a mentee, and a mentee may have more than one mentor, depending on their specific needs.



Coaching

By contrast, **coaching** was thought to be a more short-term relationship focused on a **specific goal or skill**, over a specific time frame. A coach was considered to be more of an **instructor** than a mentor.



Role models

Role models provide inspiration, in terms of their attitudes and behaviours, that have enabled them to reach their achievements, and they can illustrate potential career options. Highlighting the diversity of backgrounds and career trajectories of role models is important as early-career researchers may be inspired by multiple role models.

Discussions on the breakout group presentations highlighted some important themes.



Making mentoring work

Making mentoring work: participants emphasised the importance of **trust and rapport** between mentor and mentee. **Expectations** should be clear at the outset to both parties, with the nature of the relationship and processes agreed by both parties.

Mentors should be prepared to make a **long-term commitment** to the relationship and ideally should not work in a closely related area to avoid any scientific conflicts of interest. Relationships need to be **flexible**, as mentees' needs may change over time. Mentees may also benefit from having more than one mentor.

Mentees may independently identify potential mentors, but opportunities need to be created for those who are initially less well networked, such as **'speed-dating' events**. Organisers of mentoring schemes also need to arrange regular **check-ins** to ensure that relationships are working. While mentors are typically experienced and senior figures, **peer-to-peer mentoring** can create mutually supportive cohorts.



Challenges

These can include a mentees' lack of proactivity in implementing outputs from mentoring conversations – both mentees and mentors have responsibilities to make a relationship work. **Cultural differences** may make it difficult for mentor and mentee to establish a strong relationship. **Competing priorities** may make it hard for mentors to commit sufficient time to mentoring activities. In the absence of a formal mentoring scheme in an institution, early-career researchers may find it difficult to identify suitable mentors. **Training** may not be available to enable mentors to perform their roles effectively.

Although mentors are not generally paid, **funding** needs to be earmarked to embed mentoring programmes within institutions and for activities such as training of mentors. Programmes also need the **flexibility** to respond to the differing needs of mentees.



Workshop participants

Breakout group discussions on strengthening interdisciplinary collaborations in Africa

Further breakout sessions discussed strengthening of African-led interdisciplinary collaborations (integrated projects spanning several disciplines), equitable partnerships between African countries and high-income countries, and collaborative efforts with people with lived experience.

It was suggested that breaking down silos would help researchers **tackle complex problems**. Major challenges such as climate change, deforestation, and loss of biodiversity, will require inputs from multiple disciplines. It was suggested that regional leaders could agree a set of priority thematic areas, with interdisciplinary collaborations focusing on these areas.

Suggested options for strengthening **African-led interdisciplinary collaborations** included developing a central platform for African scientists to connect, share resources and collaborate on projects. This platform could include online forums, webinars and opportunities for peer-reviewed publications.



Institutions

Could play a significant role, by encouraging cross-disciplinary collaborations in their academic programmes, establishing interdisciplinary research funding programmes, and creating interdisciplinary research centres. Partnerships with **international institutions** would bring in new perspectives and expertise, raise the visibility of African research and open up new funding opportunities. By contributing to interdisciplinary collaborations and connecting to wider networks, African researchers can develop new skills, expand their knowledge, and develop new perspectives on their work.



Existing Africa-wide initiatives

There may also be opportunities to learn lessons from **existing Africa-wide initiatives**. Possible examples include the **AAS**, **Africa One Health University Network** (AFROHUN), the **APHRC**, the **Africa One Health Network (AfOHNet)** and the **African Union (AU)**, which has established a One Health Coordination Group on Zoonotic Diseases. Africa-led sharing of data and resources could also be encouraged.



Partnerships with industry

Would help to ensure that research has practical application and real-world impact.



Capacity-building platforms

Multi-institution interdisciplinary networks can act as **capacity-building platforms**, providing opportunities to embed fellowships and PhD programmes, promote exchange/ secondment, and encourage joint proposal development.



Mentoring and networking

Participants suggested that **mentoring and networking** could help foster interdisciplinary collaborations and promote the exchange of ideas and knowledge. These activities can help African scientists **build their professional reputation** and **increase their visibility** within the scientific community, leading to increased opportunities for collaboration, funding and recognition of their work. **Mentorship programmes** could help African scientists develop new skills, build their professional networks, and increase their exposure to interdisciplinary research. **Networking opportunities**, such as conferences, workshops and online forums, could also provide opportunities to connect with peers from different disciplines. Some **international funding agencies** provide specific funding for networking activities, while **professional societies** may have an interest in partnering on Africa-focused meetings.

Interdisciplinary collaborations

Participants also noted that, by investing in interdisciplinary research, African governments, organisations and other stakeholders could support the development of innovative solutions to major health challenges including climate change, emerging infections, antimicrobial resistance obesity, noncommunicable diseases, and promote scientific progress in the region. Specific grants for interdisciplinary research **projects** could support co-ordinated activities around a common challenge. Support for **interdisciplinary teams** could incorporate training opportunities and team-building exercises. **Interdisciplinary research centres** could act as hubs to promote the creation of new partnerships and provide a platform for the dissemination of research findings and the development of new interdisciplinary research methods.

The need to foster **diversity and inclusivity** was also recognised, to ensure that African-led interdisciplinary collaborations reflect African scientists' diverse perspectives and experiences. This can lead to a more comprehensive understanding of complex issues and the development of innovative solutions that reflect the needs and perspectives of African communities.

To foster diversity and inclusivity, African governments, organisations and scientific institutions could implement initiatives such as diversity training, recruitment programmes, and mentorship programmes for underrepresented groups. They could also promote policies and initiatives that encourage the inclusion of women and marginalised groups in research. In addition, African-led interdisciplinary collaborations could engage with community members and other stakeholders, conduct research in culturally sensitive ways, and ensure that research findings are accessible and relevant to the communities they serve.

Participants also suggested that **celebrating the success** of African-led interdisciplinary collaborations and **communicating results** to wider audiences, including policymakers and the public, could help to build support for interdisciplinary research and increase impact. Collaborations could provide training and resources to African scientists to help them communicate their research findings, through communication channels such as social media, podcasts and blogs. Moreover, involving policymakers and other stakeholders, such as patients or community groups, in the research process from the outset can help to ensure that research focuses on key evidence gaps and is more likely to impact policy and practice.

International Partnerships

In terms of ensuring that **international partnerships are equitable**, participants recognised the need for relationships between countries, organisations, or individuals to be based on **fairness** and **mutual respect**. In an equitable partnership, all parties involved have an equal voice in decision-making and can benefit from the partnership in a balanced way. The focus is on creating a sustainable partnership that helps all parties involved.

All parties should approach the partnership with an **open mind** and **respect for each other's perspectives, cultures and needs**. By showing respect and understanding for each other's perspectives, all sides can work together to create a sustainable partnership that is tailored to African countries' specific needs.

Mutual respect and understanding also help to **build trust between partners**, which is essential for a successful partnership. When partners trust each other, they are more likely to be transparent and honest with each other and to work together effectively towards common goals. Both African and high-income countries should be transparent in their intentions and clearly communicate their goals and expectations for the partnership. National academies have a potential role to play in supporting African institutions' negotiations of partnership with high-income countries.

Participants suggested that collaborations should be based on a **spirit of co-operation and mutual benefit**. Collaboration allows both sides to pool their resources and expertise to achieve a more significant impact than they could alone. Collaborations should include a focus on capacity building such as building project management, financial management, and leadership skills. **Institutional capacity** also needs to be strengthened in areas such as grants management and financial governance, to support equitable funding disbursement.

Equitable partnerships will include the **co-development of ideas** and **full recognition** of the contributions made by African partners. In addition, both sides should **hold each other accountable** for delivering on their commitments, by regularly monitoring progress and ensuring that both sides take the necessary steps to achieve the partnership's goals.

Collaboration could also help to address **power imbalances** between African and high-income countries. Equitable partnerships require a focus on empowerment of African countries, giving them the opportunity to shape the partnership and take the lead in decision-making processes.

Research funding mostly comes from organisations located outside of Africa, which further contributes to this power imbalance. Therefore, **funders** need to be committed to the support of equitable international partnerships, and involving representatives from Africa in the design of calls for proposals. **Various documents** exist that outline good practice with regard to equitable international research partnerships.

Working together to create an **enabling environment for African businesses** to grow is another important way to empower African countries. This could involve facilitating access of companies to markets, creating access to finance, and supporting entrepreneurship and innovation.

People with lived experiences

Participants recognised the importance of meaningful **engagement with people with lived experience** at early stages, including the development of proposals in response to calls. Furthermore, long-term relationships should be established to build trust and mutual understanding. Examples of good practice and successful grants could be collated to inspire and inform others.

Community engagement/outreach programmes are important for building relationships and for establishing foundations for gaining input into research. Every community is different, so engagement needs to be **tailored to local context**. The degree of involvement of communities falls along a **spectrum** from informing to co-creating. **Greater involvement is more empowering** for communities and will help to build trust. **Social scientists** can provide valuable guidance on approaches for engaging meaningfully and productively with communities.

The Academy's mentoring programme places mentees in the driving seat and aims to empower mentees to act for themselves. The value of a mentor lies in their experience rather than their position in a hierarchy, and ideally both mentee and mentor gain from the relationship.



Dr Suzanne Candy, The Academy of Medical Sciences, UK



One of the ADVANCE Programme's initiatives, the Leadership Development Programme (LDP) aims to develop a critical mass of leaders equipped to advance next-generation AIDS vaccine development.

The programme includes a mentoring component where participants are paired with internationally renowned experts. This process is mentee-led which enables them to focus on their careers goals and pathways.



Dr Benard Kulohoma, IAVI

Conclusions

This workshop provided an opportunity for researchers across Africa, from different career stages and disciplines, to get together and discuss the opportunities and challenges they face when building their careers in Africa.

The discussions focused on three main areas: mentoring and career development; interdisciplinary working; and equitable partnerships.

Participants discussed the benefits on career development that could be offered by **mentorship programmes**, as well as the importance of role models. Recommendations to make mentoring successful focused on agreeing from the start on the nature of the relationship, with clarity on roles and expectations for both mentors and mentees. Mentoring should be a mentee-driven process and flexible enough to adapt to the mentee's background and needs, which may change over time. Mentors should be prepared to make a long-term commitment and ideally do not work in the same field as mentees to avoid scientific conflict of interest. Role models can provide examples for early-career researchers and offer inspiration for potential career options. These reflections from attendees echoed those of participants in the capacity-building workshop held previously in Johannesburg, South Africa, and provide important guidance for institutions or organisations considering whether to develop mentorship schemes in the region.

Furthermore, this workshop highlighted specific issues surrounding the development of African-led **interdisciplinary research collaborations**, and implications for individual career development. Several proposals were made on ways to promote strengthening of African-led interdisciplinary collaborations. These included establishing a central platform for African scientists to connect, share resources and collaborate on projects. Specific grants for interdisciplinary research projects could be developed to support co-ordinated activities around a common challenge. Support for interdisciplinary research centres could act as hubs, helping to seed new partnerships and providing a platform for the dissemination of research findings and the development of new interdisciplinary research methods. Capacity building should also become an integral part of these interdisciplinary research collaborations.

Finally, **similarly to what was discussed in Johannesburg, equitable research partnerships** were felt to require recognition of the contributions of both parties and depend on openness and trust. This can ensure that collaborations are based on fairness, mutual respect, and the mutual nature of benefits (South–North as well as North–South). Recommendations to address the power imbalances between African and high-income countries included a commitment from funders to support equitable partnerships and involve representatives from Africa in the design of calls for proposal. Both parties should work together to create an enabling environment for African businesses to grow, and Africa-led sharing of data and resources should be encouraged. Another aspect of equitable partnerships is the engagement with people with lived experience and local communities. Most can be gained by involving people and communities early in research, gaining trust and empowering people, which leads to better outcomes for all.

Annexes

Appendix 1: Workshop steering committee

Both the early scoping work and development of the workshop was informed by a wide range of experts from different countries and sectors.

Co-chairs

- Prof Sarah Cleaveland FMedSci FRS, Professor of Comparative Epidemiology, University of Glasgow, UK
- **Prof Mohamed Iqbal Parker,** Emeritus Professor and Senior Research Scholar in Medical Biochemistry and Structural Biology, University of Cape Town (UCT), South Africa

Members

- **Prof Lisa Boden,** Chair of Population Medicine and Veterinary Public Health Policy, University of Edinburgh, UK
- **Prof Eric Fevre,** Chair of Veterinary Infectious Disease, University of Liverpool and International Livestock Research Institute, Kenya
- Dr Sarah Hill, Research Fellow in Genomic Epidemiology (Infectious diseases), Royal Veterinary College, UK
- **Prof Quarraisha Abdool Karim,** co-founder and Associate Scientific Director, Centre for the AIDS Programme of Research in South Africa (CAPRISA), South Africa
- **Prof Andre Pascal Kengne**, Director of the Non-Communicable Diseases Research Unit, South African Medical Research Council, South Africa
- Prof Francine Ntoumi, Senior Lecturer in Immunology, University Marien Ngouabi, Republic of Congo
- Dr Emelda Okiro, Population Health Lead, KEMRI-Wellcome Trust Research Programme, Kenya
- **Prof Tom Solomon CBE FMedSci,** Vice-President, International, The Academy of Medical Sciences, UK, and Director, The Pandemic Institute, Liverpool, UK

Annex 2: Participant list

Participants Dr Victor Akelo, CDC Kenya, Kenya Dr Yewande Alimi, African Union, Nigeria Dr Fatma Abdelaziz, Amer Zagazig University, Tunisia Dr John Amuasi, University of Science and Technology, Ghana Prof Joshua Arimi, Meru University of science and technology, Kenya Dr Baffour Awuah, Ministry of Health, Ghana William Bazeyo, AFROHUN, Uganda Prof James Berkley FMedSci, KEMRI/Wellcome Trust Research Programme Dr Bernard Bett, International Livestock Research Institute, Kenya Winnie Bikaako, AFROHUN, Uganda Ayodotun Bobadoye, GET Consortium, Nigeria Dr Palwende Romuald Boua, Institut de Recherche en Sciences de la Santé, Burkina Faso Prof Bassirou Bonfoh, Afrique One-ASPIRE, Côte d'Ivoire Prof Habiba Bouhamed, Tunis University, Tunisia Prof Chris Dye FMedSci FRS, University of Oxford, UK Prof Ibrahim Eldaghayes, University of Tripoli, Libya Dr Mohamed Elhadidy, Zewail City for Science and Technology, Egypt Prof Clive Gray, Stellenbosch University, South Africa Mr Yusuf Hared, Amoud University, Somalia Prof Alison Holmes OBE FRCP FMedSci FRCPI, Imperial College London, UK Gloria Igihozo, University of Global Health Equity, Kenya Ms Shariffatou Iliassu, World Health Organisation, Cameroon Dr Kerneels Jaars, North-West University, South Africa Dr Caroline Kabaria, African Population and Health Research Center, Kenya Dr Marc Yambayamba Kapenga, AFROHUN, Democratic Republic of Congo Margaret Karembu, ISAAA AfriCenter, Kenya Samuel M. Kariuki, Kenya Medical Research Institute, Kenya Samson Kinyanjui, KEMRI-Wellcome Trust Research Programme, Kenya Dr Terry Kipkorir, University College London, UK Fidèle Kuete, Association Épidémiologie et de Santé Publique Vétérinaire, Cameroon Benard Kulohoma, IAVI, Kenya Dr Felix Lankester, Global Animal Health Tanzania, Tanzania Dr Virgil Lokossou, West African Health Organization, Burkina Faso Dr Julius Julian Lutwama, Uganda Virus Research Institute, Uganda Dr Almahamoudou Mahamar, University of Science Techniques and Technologies of Bamako, Mali Dr Diana Marangu, University of Nairobi, Kenya Dr Nicholas Mariita, Dedan Kimathi University of Technology, Kenya Kenneth Mogane, SIN NAIROBI, Kenya Dr Maureen Nanziri Mayanja, Makerere University, Uganda Dr Caroline Mburu, University of St Andrews, UK

Dr Marlie Miles, University of Cape Town, South Africa Prof Blandina Mmbaga, Kilimanjaro Clinical Research Institute- Kilimanjaro Christian Medical Centre, Tanzania Dr Boyson Moyo, Lilongwe University of Agriculture and Natural Resources, Malawi Charles Muchunguzi, Mbarara University of Science & Technology, Uganda Dr Lawrence Mugisha, Makerere University, Uganda Dr Dishon Muloi, International Livestock Research Institute, Kenya Prof Noni Mumba, KEMRI-Wellcome Trust Research Programme, Kenya Dr David Musoke, Makerere University, Uganda Prof Jackson Wachira Muthengia, University of Embu, Kenya **Dr Adrian Muwonge,** University of Edinburgh, UK Germano Mwabu, University of Nairobi, Kenya Dr Irene Naigaga, AFROHUN, Uganda Dr Mark Nanyingi, Food and Agriculture Organisation, Kenya Dr David Ndetei, African Mental Health Foundation, Kenya Dr Serge Nzietchueng, Food and Agriculture Organisation, Kenya Daniel Ochiel, IAVI, Kenya Dr Sarah Olson, Wildlife Conservation Society, Congo Brazzaville Dr Adijah Olubandwa, Egerton University, Kenya Prof Josiah Ouma Omolo, Egerton University, Kenya Professor Orish Ebere Orisakwe, University of Port Harcourt, Nigeria Dr Ndekya Maria Oriyo, National Institute for Medical Research, Tanzania Dr Niaina Rakotosamimanana, Institut Pasteur de Madagascar, Madagascar Dr Kessendri Reddy, Stellenbosch University, South Africa Dr Anselme Shyaka, University of Global Health Equity, Rwanda Maelle Vandierendonck, United Nations Environment Programme, Kenya Dr Lilian Waiboci, University of Nairobi, Kenya Dr Chadia Wannous, World Organisations for Animal Health (OIE), France Timothy E.O. Wesonga, GOPA Worldwides Consultant, Tanzania Caradee Yael Wright, South African Medical Research Council, South Africa Prof Malek Zrelli, Tunisia Veterinay School, Tunisia

Staff

Fern Brookes, The Academy of Medical Sciences, UK Dr Suzanne Candy, The Academy of Medical Sciences, UK Helen Denyer, The Academy of Medical Sciences, UK Alex Hulme, The Academy of Medical Sciences, UK Mary Majani, African Academy of Sciences, Kenya Aisha Mazhar, The Academy of Medical Sciences, UK Dr Peggy Oti-Boateng, African Academy of Sciences, Kenya Emily Zerling, The Academy of Medical Sciences, UK

Annex 3: Glossary

AAS African Academy of Sciences **ADVANCE** Accelerate the Development of Vaccines And New technologies to Combat the AIDS Epidemic AU African Union AfOHNet Africa One Health Network **AFROHUN** Africa One Health University Network **APHRC** African Population and Health Research Center ASSAf Academy of Science of South Africa **CRC** Clinical Research Centre FLIER Future Leaders in Innovation, Enterprise and Research (FLIER) HIVE Hub of Innovation Vision & Engagement IAVI International AIDS Vaccine Initiative LDP Leadership Development Programme PEPFAR President's Emergency Plan for AIDS Relief PILLAR Promoting Innovation, Learning, Leadership And Resilience in the research community SISTARS transforming InSTitutions to Advance women leadeRS in science, technology, engineering and mathematics: lessons from Ghana and Kenya **STEM** Science, technology, engineering, and mathematics **STI** Science, Technology and Innovation **USAID** US Agency for International Development



Academy of Medical Sciences 41 Portland Place London W1B 1QH

🖉 @acmedsci

+44 (0)20 3141 3200 info@acmedsci.ac.uk www.acmedsci.ac.uk

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African Academy of Scienc 8 Miotoni Lane Karen P.O. Box 24916-00502 Nairobi Kenya

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+254 20 240 5150 +254 20 806 0674 www.aasciences.ac.ke