



ANNUAL REPORT | 2022-2023

CAMBRIDGE AFRICA



Introduction

Cambridge-Africa is a University of Cambridge programme supporting African researchers and promoting mutually beneficial collaborations and equitable partnerships between Africa and Cambridge. Since its inception in 2008, collaborations have been developed with partners from 33 sub-Saharan African countries, covering topics from archaeology to zoology. This report describes the activities undertaken by the programme between 1st October 2022 – 30th September 2023.

The aims of the Cambridge-Africa programme are:

- Catalysing new, and strengthening existing collaborations, between Cambridge and African researchers and their Institutions
- Encouraging, facilitating and informing networks of researchers dedicated to contributing to outstanding research in sub-Saharan Africa
- Providing an enabling academic environment for African early career researchers
- Supporting training activities for institutional research support teams

The ethos of the programme and its partnerships are based on equity, transparency and trust. Our aim is for activities to be driven by needs identified by African partners to address African research priorities. The Cambridge-Africa team's focus is on relationship building, connecting Africa and Cambridge based researchers with mutual research interests.

The main benefit of collaborations between scientists from the African continent and those at the University of Cambridge is mutual growth of scientific output as teams make use of the expertise, resources and influence of the University of Cambridge as well as that of research institutions and universities on the African continent. Through the partnerships that we foster, both the Cambridge and the Africa based partners benefit through gaining new knowledge and expertise. Cambridge broadens its global horizons and gains insights into the challenges and ways of meeting those challenges experienced by researchers and communities in Africa. Many areas of research being undertaken in Africa are of relevance to research being undertaken in Cambridge and both Cambridge and African researchers have the potential to gain from mutually beneficial collaborations.

The African continent has the most youthful population globally. More than half of global population growth between now and 2050 is expected to take place in Africa. Working with African institutions and researchers will enable Cambridge to engage with the continent now and for years to come, gaining from the dynamism fostered by a youthful citizenship.

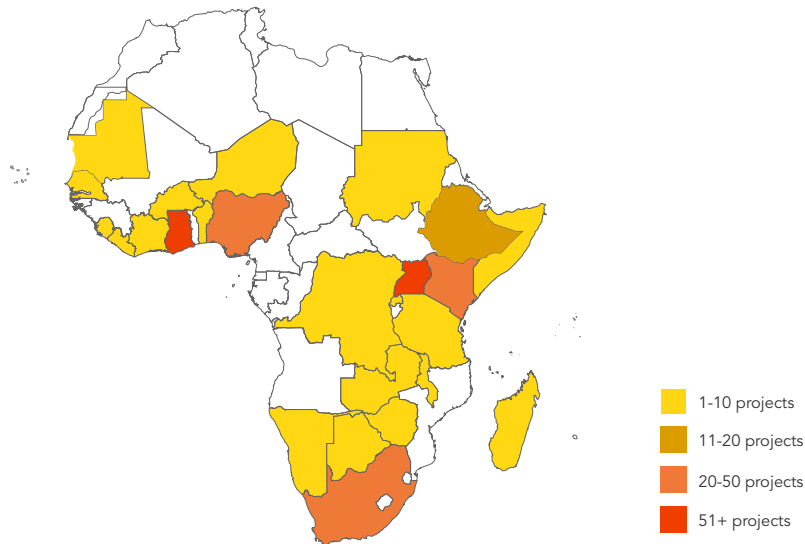
Report on our activities 2022-2023

1. Catalysing new, and strengthening existing collaborations, between Cambridge and African researchers and their Institutions

i. Cambridge-Africa ALBORADA Research Fund

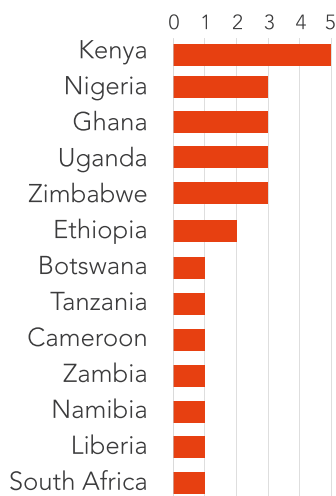
Since 2012 Cambridge-Africa has supported over 300 research collaborations and research related activities including funding workshops, training courses and equipment grants in 33 sub-Saharan African countries through the ALBORADA Research fund. The awards, provided by the Cambridge-Africa ALBORADA Research Fund, impacts the entire University enabling collaborations across Departments at the University of Cambridge and in Africa.

The awards enable new collaborations to be supported and existing ones to be strengthened. They provide 'seed money' for new research collaborations and many of the collaborators are then able to apply for more substantial grants to continue or expand the activities initiated through the ALBORADA Research Fund. The publications that arise from the funding strengthen the research careers of researchers in Africa and in Cambridge and provide evidence of the global reach of the University of Cambridge.

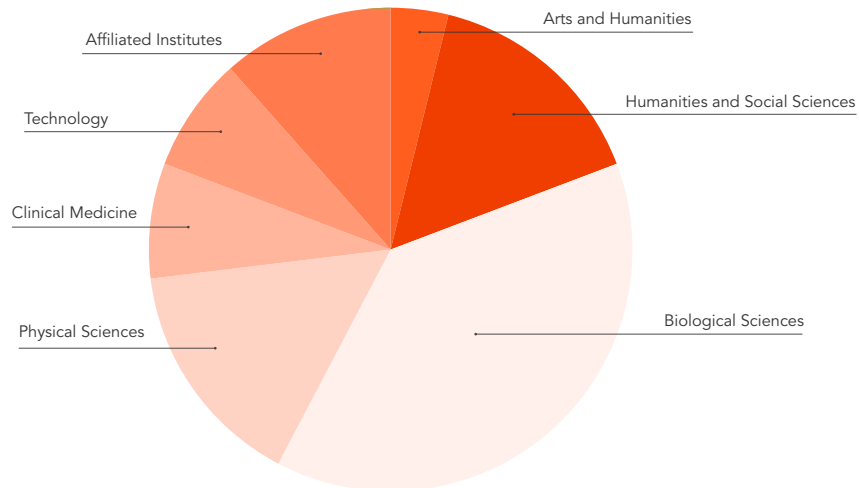


Map of countries where African Principal Investigator (PI) received an ALBORADA award and number of awards per country. (We have supported research collaborations in additional countries such as Angola, Mozambique, Togo, Burundi and Mauritania which are part of multi-country collaborations, but the map only includes the country of the African PI. Each ALBORADA award has 1 Cambridge and 1 Africa based PI).

In 2022-2023 26 projects were funded in 13 countries, including for the first time a research project in Liberia.



As illustrated in the chart below, the projects involved collaborations across all the Schools of the University as well as a number of affiliated institutions including NIAB (National Institute of Agricultural Botany), CRUK CI (Cancer Research UK Cambridge Institute) and the CCI (Cambridge Conservation Initiative).



Examples from among the 26 Projects funded in 2022-23 include: genetic characterisation of helminths in Nigeria to inform mass drug administration programmes; researching the paleoecology of the Namibian sea floor; bat and bird biodiversity in areas under oil palm cultivation in Liberia; examination of care for the elderly in Zimbabwe; 3D printing of medical braces in Ethiopia, and an examination of ecumenical Christianity and political transitions in Zimbabwe. This illustrates the diversity of the research supported by Cambridge-Africa.



Left: Andrew Gweh, a research student from the University of Liberia setting up Audiomoth, a bioacoustic recording device that records vocalising animals. Using specialised software, the activity of bird and bat species can be quantified from the Audiomoth recordings.



Above: Course photo at the biodiversity monitoring workshop at the University of Liberia held in February 2023. The workshop on methods of monitoring biodiversity was part of the ALBORADA Research Fund research visit by Cambridge researcher Dr Michael Pashkevich who with Dr Ben Freeman from the University of Liberia, was assessing the biodiversity of birds, bats, ground-dwelling and flying insect and ground-dwelling mammals in areas of palm oil cultivation.

In 2023, the Cambridge-Africa team undertook a series of focused visits to Departments which have not received funding from the ALBORADA Research Fund, to raise awareness and gather feedback. This has been beneficial for the Cambridge-Africa programme also, for example the discussions from these meetings led to an extension of the ALBORADA funding in 2023-24 to North Africa.

2. Encouraging, facilitating and informing networks of researchers dedicated to contributing to outstanding research in sub-Saharan Africa

i. Uganda Cancer Institute-Cambridge Collaboration

Our work with the Uganda Cancer Institute (UCI) is an example for the support the Programme is providing to networks of African Researchers. The collaboration was initiated by Cambridge-Africa in 2018 and has grown to involve researchers across the Cambridge Cancer Centre and CRUK CI in collaborative research projects, educational activities and, supported by Cambridge Global Health Partners (CGHP), clinical exchanges. Cambridge-Africa has convened regular meetings and has funded two Ugandan medical students to come to Cambridge to undertake oncology/haematology medical electives. This was a priority area identified by the Director of the UCI on how Cambridge/Addenbrookes Hospital could inspire Ugandan medical students to consider working in oncology.

The CRUK CI Summer School is an initiative initially funded by Cambridge-Africa and now independently funding by CRUK. Two places are reserved for Ugandan students. Participating in the Summer school has enabled previous Ugandan attendees to secure PhD places. This year, to widen the participation and supported by ALBORADA Research Funding, Cambridge-Africa part funded a Summer School which took place at Makerere University, Uganda. Faculty from CRUK CI travelled to Uganda in September 2023 to give lectures and hands-on training combined with online delivery of lectures. Cambridge-Africa is also supporting a number of cancer research collaborations between Cambridge and Uganda.

ii. Maternal and Neonatal Health

Cambridge-Africa, with CGHP and the Reproduction SRI, organised a meeting in July 2023 on maternal and neonatal collaborations with senior colleagues from Uganda. The focus was to take stock of the range of initiatives that have taken place since 2009 starting with the mentorship of Dr Annettee Nakimuli as part of her PhD on the genetic underpinnings of pre-eclampsia in Uganda, a major contributor to maternal mortality in Africa. Annettee Nakimuli's original visit to Cambridge was as part of MUII, a programme supported by Cambridge-Africa, under which she was mentored in Cambridge by Professor Ashley Moffett in the Department of Pathology. Annettee is now the Dean of the Medical School at Makerere University and President of the East, Central and Southern Africa College of Obstetrics and in a position to drive changes in maternal and newborn health in a country with a very high birth rate and high rates of maternal deaths. The lifetime risk of maternal death is 1 in 32 in Uganda, compared to 1 in 5,000 in the UK. The meeting in 2023 proposed the establishment of the Uganda Centre for Maternal and Neonatal Health, an integrated centre providing training and research capacity.



Above: Stella Nakaye and Yvonne Nakibirango with Oncologist Dr Yang Huiqi.

The initiative will be led by Ugandan colleagues and supported by Cambridge partners including Cambridge-Africa.



Left: Professor Caroline Trotter (chair of the Kampala Cambridge Maternal and Neonatal Meeting) with panellists Dr Emmanuel Byaruhanga, Dr Tom Bashford, Dr Musa Sekikubo, Dr Josephat Byamugisha, Dr Charlotte Patient and Professor Ashley Moffett.

iii. PATS MECOR

In 2022 Cambridge-Africa was invited to partner with PATS MECOR, an educational initiative under the umbrella of the Pan African Thoracic Society (PATS) focusing on training to build capacity for clinical and epidemiological research on lung health in Africa. Each year an intensive week-long course is held in Africa to support African clinicians and researchers from across the continent to undertake research on different aspects of lung health. The course is supported by facilitators and takes place at three levels, held concurrently, with each level building upon the skills acquired at the preceding level. During the course researchers are assisted in developing research projects and learn research skills such as research design, methodology and analysis as applied to their individual research proposals which they will undertake in their home country over the following year. They also attend skills-based workshops for example on air quality monitoring and spirometry that they may wish to incorporate in their research projects. In 2023 Caroline Trotter and Corinna Alberg participated in PATS MECOR meetings and attended the PATS MECOR 2023 course in June which was held in Mombasa, Kenya. Cambridge-Africa will continue to support future courses.



Above: Members of small group working on occupational research projects (with a focus on mining and lung health) at PATSMECOR, Mombasa, June 2023.



Above: PATS MECOR course attendees

iv. Supporting other training for networks of African Early career researchers

A number of workshops were supported in 2022-23 by Cambridge-Africa ALBORADA Research Fund grants. Training on the use of the free R software for statistical analysis was developed by researchers from four institutes in Kenya: Pwani University, JKUAT, University of Nairobi and KEMRI. Training materials were prepared by the team of researchers and a pilot 'R' training undertaken for three weeks in April, training 20 master's and PhD scholars from the participating universities. The trainings are aimed at demystifying the use of the statistical software 'R' which although freely available, has a steep learning curve. The materials and style of running online workshops were reviewed and revised and a call made for students to apply for a 3-week 'R' course in October 2022. Over 800 applications were submitted from across Sub-Saharan Africa and 125 post-graduate students selected to participate on the course. With this training now available online for institutes in Africa to use on request, it is hoped that more researchers on the continent will be able to make better use of this free software. Other training initiatives included [a workshop in dendrochronology](#) in Zambia with participants from 6 sub-Saharan African countries. Cambridge-Africa funded the shipping of microscopes that were used on the course and will remain at the University of the Copperbelt in Zambia to support climate change research using dendrochronology. A biostatistics workshop for postgraduate students and faculty at The Catholic School of Health and Allied Sciences, Tanzania and a workshop for the development of a quality Toolkit Intervention for Health in conflict affected settings of Cameroon and Nigeria were also funded in 2022-23.



Left: Using an increment borer, a non-destructive means to acquire tree-ring information as part of the dendrochronology Field School at the Copperbelt University, Zambia.

v. Promoting the work of African Centres of Excellence and African Scientists

A number of videos were commissioned to highlight the work of centres of excellence in Africa, namely [African Centre of Excellence for Genomics of Infectious Diseases \(ACEGID\)](#), [Centre for Epidemiological Modelling and Analysis \(CEMA\)](#) and the [West Africa Centre for Crop Improvement \(CRIG\)](#). These videos can be viewed on the Cambridge-Africa website.

The Cambridge-Africa website features [blogs](#) from researchers and on projects based in Africa linked to the Cambridge-Africa Programme. An example is a [recent blog](#) featuring Cambridge-Africa PhD Alumnus Dr Ebenezer Antwi Gyamera and his work at CRIG.

3. Providing an enabling environment for Early Career African Researchers in Cambridge

i. Support to the Cambridge Mastercard Foundation Programme

In 2022 the first cohort of African scholars in the Mastercard Foundation Scholarship programme started master's courses at the University of Cambridge. Cambridge-Africa has been active in the Task and Finish groups which were set up in 2023 to guide the development of and make recommendations for the Foundation's programme. Professor Caroline Trotter, the Director of Cambridge-Africa, was a co-chair of the Research Task and Finish Group and Corinna Alberg, co-Programme Manager was a member of the Admissions Task and Finish Group. Dr Tabitha Mwangi, our co-Programme Manager, has been seconded (80%) to the Programme, taking the role of interim academic lead.

ii. Support to African PhD Students in Cambridge

Cambridge-Africa has engaged with the Cambridge-Africa PhD scholars through regular meetings to offer support to scholars as they complete their PhDs. In addition, a mobility grant has been offered to support their engagement with institutions in their home country on concluding their PhDs. A number of blogs have been published on the Cambridge-Africa website profiling the research African PhD students and alumni have been undertaking. For example, Chilombo Musa completed her PhD in 2023 and a [blog](#) was published on her research into improving housing conditions for low-income residents in urban areas of Zambia. The activities of other African PhD students have also been featured such as the work by Ademola Aiyenuro on [immune control of HPV-mediated cervical cancer](#).



Left: Cambridge-Africa PhD Scholar Chilombo Musa in Zambia undertaking research on housing for low income residents in urban areas.



Above: The African postgraduate research symposium held in June 2023, offered a good opportunity for African scholars to catch up in the breaks between the main sessions.



Left: Inioluwa Afolabi being awarded the Amit Bhasin Prize 2023 at the African Postgraduate Research Symposium.

iii. African Postgraduate Research Symposium

Cambridge-Africa holds a high-profile Cambridge-Africa Day every two years, last held in July 2022. On intervening years, in recognition of the importance of promoting the work of Cambridge based African researchers, an [African Postgraduate Research Symposium](#) was convened. This event, held in June 2023, highlighted the excellent research being undertaken by African postgraduate students studying in Cambridge. The research showcase was a great success, featuring the research of a wide range of students focusing on the thematic areas of science, technology, engineering, and mathematics, politics and social justice and education. In addition, there were presentations on social ventures set up by the students and videos recorded by alumni working in Africa.

At the Symposium, the Dr Amit Bhasin Prize winner 2023 was announced, with Amit's wife and mother joining in the audience. The prize winner was MPhil student Inioluwa Afolabi who received support through

a Mastercard Foundation scholarship. She offered to use her prize money to contribute to the mentorship scheme run by the African Society of Cambridge University (ASCU), increasing support for fellow African applicants to study at the University of Cambridge. This was a very generous and heart-warming offer.

4. Other Initiatives

i. Report on the Activities and impact of the CAPREx programme

In 2023, a report on the CAPREx programme was produced highlighting activities and impact of the programme. The programme, which was a partnership between Makerere University, Uganda, The University of Ghana and the University of Cambridge, strengthened capacity for sustainable research excellence in the African institutes through close collaborative work with the region's most talented individuals. A total of 67 Fellowships were awarded. The impacts included a rise in the numbers of publications per fellow, an increase in the numbers of abstracts accepted for conferences and career progression for almost half of the fellows. A total of 52 new grants were awarded to the fellows during the time period of the evaluation.



ii. Cambridge-Africa Newsletters

Further information on the activities of the Cambridge-Africa Team are featured in the [newsletters](#) produced in January, April and July 2023. Other information on the programme can be found on the [Cambridge-Africa website](#).

For further information on Cambridge-Africa please contact the Programme Director, Professor Caroline Trotter clt56@cam.ac.uk or the Co Programme Manager Corinna Alberg ca392@cam.ac.uk. For Information on the Cambridge-Africa ALBORADA Research Fund please contact Parinaz Hariri: alboradafund@cambridge-africa.cam.ac.uk

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Cambridge-Africa ALBORADA Research Fund Co-ordinator

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We thank the members of the Cambridge-Africa Strategic Advisory Group (CASAG) for their support and input over the year.

CASAG Membership 2022-3

Professor James Wood (chair)

Corinna Alberg

Dr Lara Allen

Professor Stephen Bentley (Sanger Institute)

Priscilla Sena Bretuo

Professor Mark Carrington

Chonzo Chiyumba

Dr Devon Curtis

Professor Melinda Duer

Professor David Dunne

Professor Ian Goodfellow

Linda Hindmarsh (CUDAR)

Dr Oumie Kuyateh (Sanger Institute)

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