



Cambridge-Africa

Annual Report | 2023-2024

Director's Welcome

I am delighted to present this annual report for 2023-24 to showcase the work of the Cambridge-Africa Programme over the year.

A particular highlight of the year was our biennial Cambridge-Africa Day in June which brought together our community and celebrated the partnerships between Cambridge and African Universities and Research Institutes. Many thanks to all contributors and participants, but especially to Corinna for her exceptional efforts to make this a success.

There have been some staff changes within our small (but mighty!) team. Tabitha took on a permanent role as Director of the University of Cambridge- Mastercard Foundation Scholars Programme and Kess moved on after her excellent work on the impact report (see [page 5](#)) – thank you and good luck to them both. Corinna became the permanent Cambridge-Africa Programme Manager and Parinaz will be supporting a new small grants scheme in collaboration with the Mastercard Foundation Programme but staying with us.

We are privileged to draw on the support of many people who are enthusiastic champions for Cambridge-Africa, including students, CASAG members and our ALBORADA Research Fund awardees. We are grateful to the generosity of the ALBORADA Trust for their essential support for our work and all our other donors.

With best wishes to you all for the year ahead and thank you for your support and collaboration.



Caroline Trotter



Left to right: Parinaz Hariri, Caroline Trotter and Corinna Alberg.

About Cambridge-Africa

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 35 African countries, covering topics from archaeology to zoology.

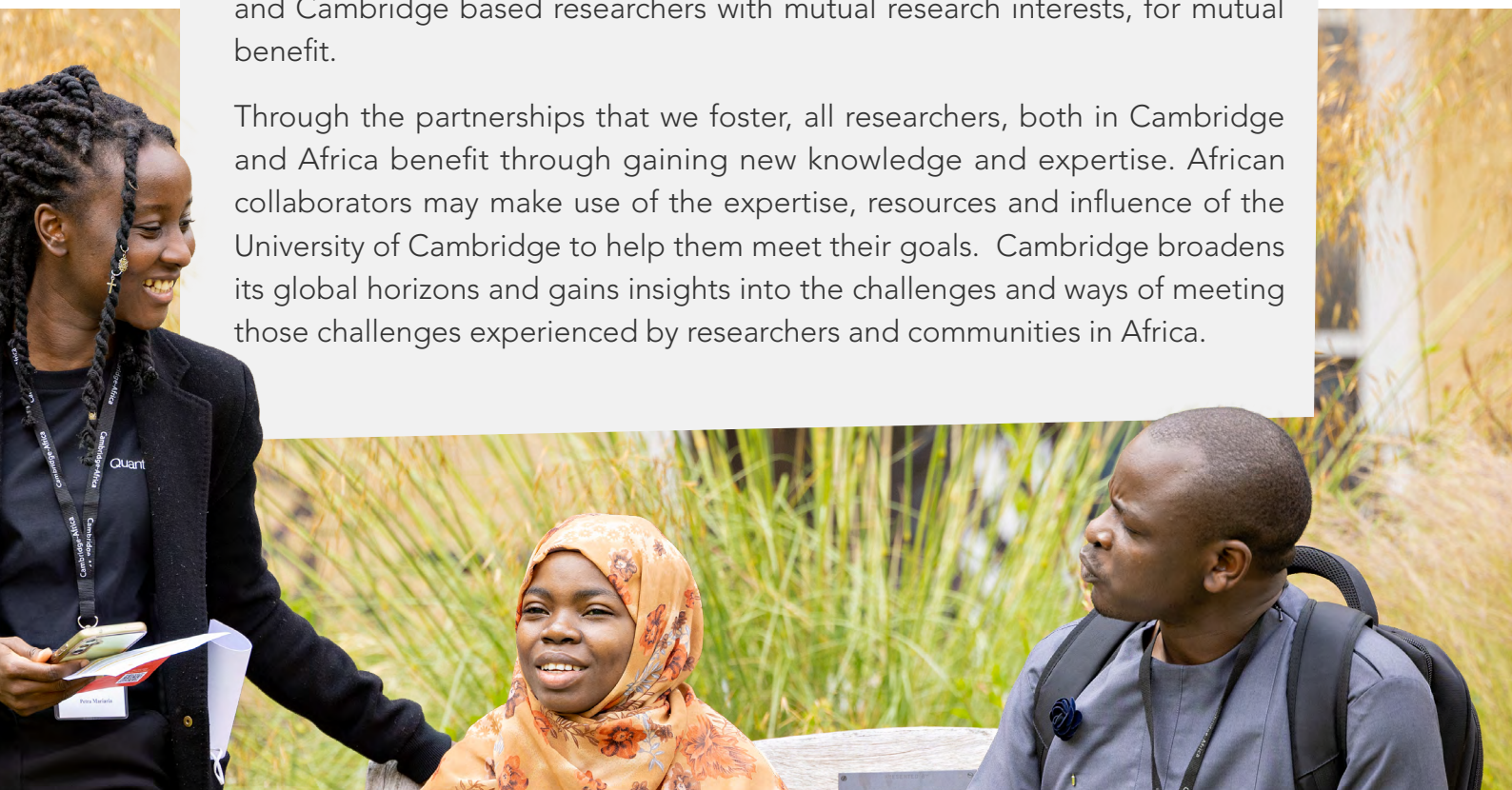
The aims of the Cambridge-Africa programme are:

- 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 Africa
- Providing an enabling academic environment for African early career researchers

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 in order 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, for mutual benefit.

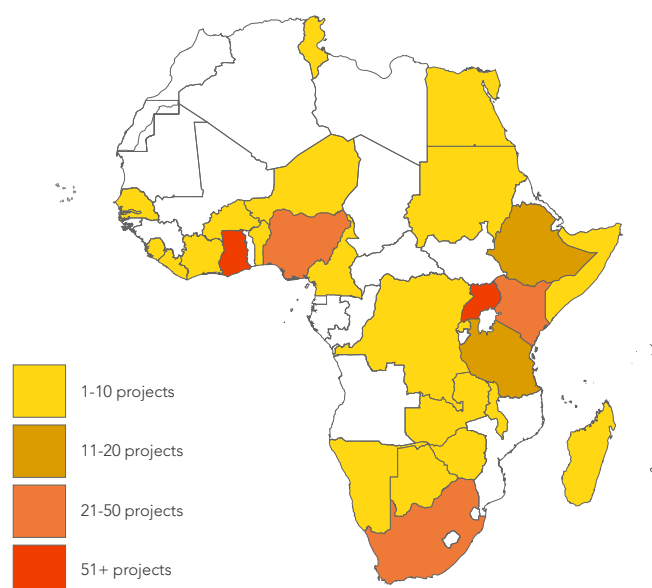
Through the partnerships that we foster, all researchers, both in Cambridge and Africa benefit through gaining new knowledge and expertise. African collaborators may make use of the expertise, resources and influence of the University of Cambridge to help them meet their goals. Cambridge broadens its global horizons and gains insights into the challenges and ways of meeting those challenges experienced by researchers and communities in Africa.



Report on our activities 2023-2024

Cambridge-Africa ALBORADA Research Fund

Since 2012, Cambridge-Africa has supported 332 research collaborations and research related activities including funding workshops, training courses and equipment grants in 35 African countries through the Cambridge-Africa ALBORADA Research Fund. The awards, provided by the Cambridge-Africa ALBORADA Research Fund, impact the entire University enabling collaborations between any department at the University of Cambridge and in Africa. In 2023 the Cambridge-Africa Programme widened its scope to cover all of the African continent rather than restricting initiatives to sub-Saharan Africa.



Map of countries where African Principal Investigator (PI) received a Cambridge-Africa ALBORADA award and number of awards per country 2012-2023. (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).

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.

In 2023 we surveyed those who received funding from the Cambridge-Africa ALBORADA Research Fund between 2016-2021. We were delighted to see how impactful the funding has been to researchers in Africa and in Cambridge. Of the 282 awardees who were contacted, 101 responded representing 84 (43%) of the 195 projects completed in the period. Half of the respondents received further grants following on from their research activities funded by the Cambridge-Africa ALBORADA Research Fund. Thirty six of the 52 projects that had secured follow on funding provided information on the amount of follow on funding they were awarded, amounting to a total of £32,218,792. This represents a return on investment of between £12 to £31 for every £1 awarded by Cambridge-Africa ALBORADA Research Funding. The lowest return of investment of 12:1 assumes that none of the funded projects who did not respond to the questionnaire received follow on funding while the 31:1 includes the return on investment only of the 36 projects which provided a figure for follow on grants. A middle value of 26:1 return on investment is the figure based on including all those who responded to the survey, whether they gave the value of follow on grants or not.

Other criteria for success were also measured. Forty one percent of respondents had published their research in a peer-reviewed journal and a further 40% were in the process of publication. Nearly all awardees (93%) said that the award had helped them expand their research network. Other important outcomes included dissemination of the results to the public and policy makers, integration of research into national policy, capacity building opportunities at local institutes, and production of physical products (such as enzymes for later use). Additionally, 18 projects included facilitating workshops, such as on research methodology or to engage with specific stakeholders. We are pleased to report that of the 101 respondents, 89 assessed the funding scheme as excellent and a further 10 rated it as good. For further information please read the report '[Evaluating the Impact of the Cambridge-Africa ALBORADA Research Fund](#)'.



Key Findings

The Cambridge-Africa ALBORADA Research Fund has had a significant impact on research across Africa by providing vital funding and support. Since its inception, the fund has successfully catalysed further investment and facilitated numerous high-quality research projects. The following infographic highlights key statistics demonstrating the fund's success and remarkable return on investment for awards made between 2016-21.



9
joint Cambridge-Africa
workshops were held

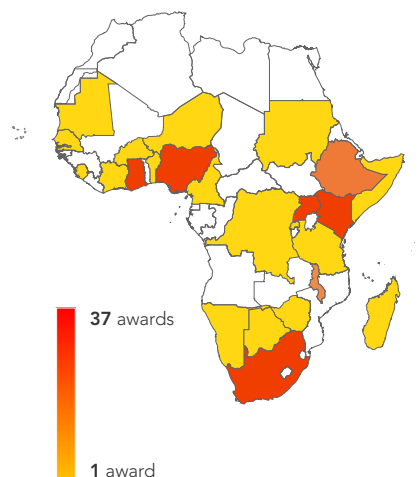


Every **£1 invested** resulted in **£26 of further funding**



ALBORADA awards by country 2016-2021

37	Ghana	2	Namibia
32	Uganda	2	Somalia
27	Kenya	2	Zimbabwe
27	Nigeria	2	Rwanda
20	South Africa	1	Burkina Faso
13	Ethiopia	1	Botswana
6	Malawi	1	Comoros
3	Benin	1	Ivory Coast
3	DRC	1	Madagascar
3	Senegal	1	Mauritania
3	Tanzania	1	Niger
2	Cameroon	1	Sierra Leone
2	Gambia	1	Sudan



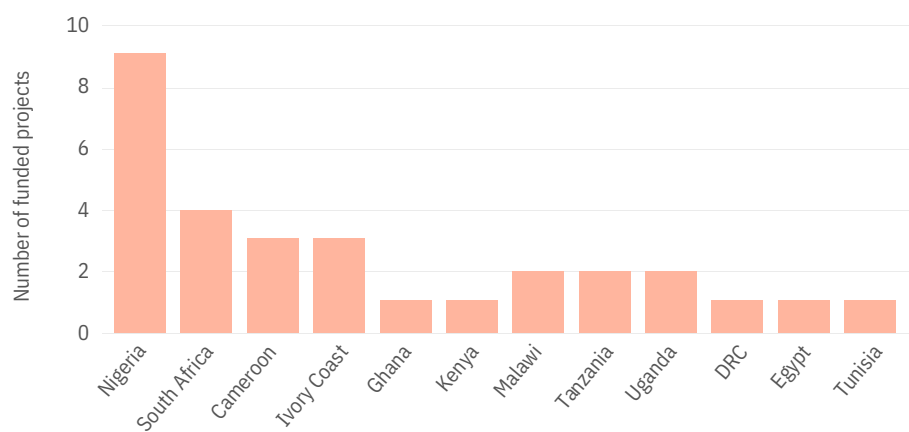
41% of respondents
published research



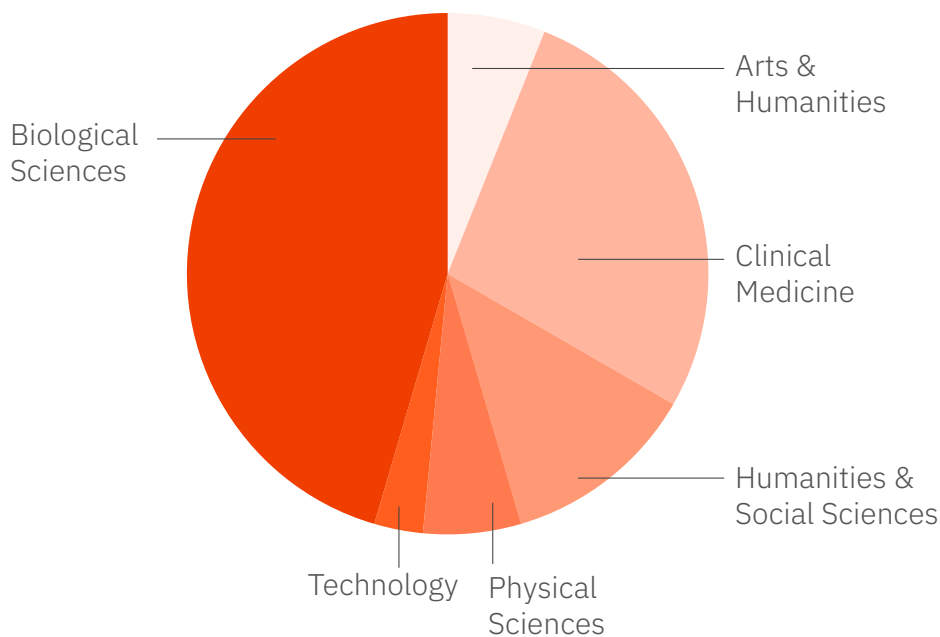
40% of respondents
had publications
currently in review

Cambridge-Africa ALBORADA Research Fund 2023-24

In 2023-2024, 32 projects were funded in 12 countries, including for the first time, research projects in Egypt and Tunisia.



As illustrated in the chart below, the projects involved collaborations across all the 6 Schools of the University of Cambridge. Within the schools, 17 departments as well as the MRC Cognition and Brain Sciences Unit, the MRC Epidemiology Unit, the MacDonald Institute for Archaeological Research, the MRC Institute for Metabolic Science, the Cambridge Institute for Medical Research and the Centre for the Study of Existential Risk received funding for collaborative research.



Examples of Projects funded in 2023-24

Informing fisheries management and conservation using the gut content analysis of freshwater fish in Uganda.

Professor David Aldridge (University of Cambridge) and Dr Alex Saturday (Kabale University, Uganda) have had 2 separate awards in 2022-23 and then in 2023-24, with the latest project arising from the former. The 2022-23 project was an ecological macroinvertebrate assessment of freshwater lakes in Uganda which revealed unusually low biodiversity in some of the lakes. The second research project is investigating why there have been unsuccessful fish introductions to enhance fishery resources for local communities. By looking at fish gut content, they can assess the food available to fish in these lakes and so ascertain whether this is a cause of the poor success of the fisheries.



Picture: Dr Alex Saturday, from the University of Kabale, Uganda on his visit to Cambridge and his Cambridge collaborator Professor David Aldridge in the River Cam near Ely in May 2024 prior to David's return visit to Alex in Uganda.

Exploring uncharted territories in Igboland, Nigeria using archaeological research.

Dr Kingsley Daraojimba from the University of Cambridge and Dr Kenechukwu Daniel from the University of Nigeria, Nsukka, have been researching the archaeology of Igboland.

Igboland is a part of Nigeria encompassing five states with a common language, Igbo. The region holds important archaeological sites of significance to both African and global archaeology. These include one of the earliest iron working sites in the world dating to 2000 BCE in Lejja in Enugu State, part of Igboland and Igbo-Ukwu in Anambra State, the oldest known bronze-producing site in West Africa dating to the 9th-13th century CE. The archaeological findings from these and other sites in the region provide a cultural rallying point for reshaping colonial constructions of archaeology, history and art in West Africa. The region is archaeologically under explored and little has been done to preserve the objects removed from these sites. In addition, there are very few archaeologists working in the region. The Cambridge-Africa ALBORADA Research Funded Project aims to address this and investigate the extent of Igbo-Ukwu material traditions beyond the limited sites already explored. The project has a further aim of institutional research capacity building and community engagement.



Picture: Previous field work conducted in 2021 funded by the Cambridge-Africa ALBORADA Research Fund at Igbo-Ukwu with Principal Investigators, trainees and research students.

Enhancing River Blindness Vaccine Candidates

River blindness is a debilitating neglected tropical disease causing severe skin lesions and blindness, with an estimated 21 million people infected, 99% of whom live in sub-Saharan Africa. The current treatment, Ivermectin, has been successful in Latin America but in Africa drug resistance has emerged and the drug does not kill adult worms that can survive in humans for up to 15 years. Vaccines need to be developed to complement current control programmes. Professor Mark Howarth, University of Cambridge and Dr Robert Adamu Shey, University of Buea, Cameroon, are undertaking research to investigate enhancing the effectiveness of vaccine candidates using virus-like particles vaccine technology. A further aim of the project is to build capacity in this vaccine technology at the University of Buea, Cameroon.

Rebuilding Lives on Lava: The dynamic forces reshaping resettlement in post-eruption Goma, DRC

This research project is studying the pull and push factors leading to people resettling on the recent lava flows in the city of Goma, DRC. In May 2021, volcano Nyiragongo erupted without any warning signs leaving 120,000 people homeless and with evacuation orders affecting over 400,000 people. Goma is at the heart of region experiencing intense conflict and volcano hazard warnings often go unheard. The conflict also drives people away from the rural areas and into the areas at most risk from volcanic activity. People repopulated the areas building houses as shown in the image below while the lava flow was still steaming.



Picture: A satellite image showing the area of the eruption from Nyiragongo taken a year after the 2021 eruption showing the houses that have been rebuilt on the lava flows in Goma, DRC.

The aim of the study being undertaken by Dr Lara Mani, University of Cambridge and Dr Blaise Mafuko Nyandwi, University of Goma, is to understand the factors influencing people to return and live on the recent lava flows and to understand risk perceptions from the volcano in the context of multiple overlapping risks. The research will inform policy makers, community engagement activities and disaster preparedness initiatives aimed at reducing the risks associated with settlement on recent lava flows.

Conservation challenges in the face of gold mining expansion in Côte d'Ivoire

In Côte d'Ivoire (and much of West Africa) there is an increasing spread of gold mining. Professor Rachael Garrett, University of Cambridge and Dr Prince Dégny Valé, Swiss Centre of Scientific Research in Côte d'Ivoire are examining gold mining's ecological impact on biodiversity and ecosystems. The complex interactions between biodiversity and land-use change due to gold mining are being comprehensively assessed. The distribution of gold mines will be mapped along with the deforestation around mines, as well as the distribution of animal species and the overlap of their habitats with the gold mines. In conjunction with species range maps from the International Union for Conservation of Nature, the vulnerability of species due to gold mining will be investigated. The project will also examine the outcomes of strategies used by gold mining industries to protect environments. The results of the research will provide data for improved decision-making by policy makers as they balance ecological sustainability with economic development and will propose appropriate measures to achieve the sustainable development of gold mining.

A number of workshops held in Africa were supported in 2023-24 by Cambridge-Africa ALBORADA Research Fund awards. These included:

- A workshop to build capacity in modelling for the surveillance of infectious diseases in Cameroon using serological data. The workshop was held between Prof Henrik Salje from the University of Cambridge's Department of Genetics and Dr Ngu Njei Abanda from the Centre Pasteur du Cameroon.
- Executive Function Workshops for Child Development Researchers and Practitioners in South Africa between Dr Stephen Bayley from the University of Cambridge's Faculty of Education and Prof Catherine Draper of the South African Medical Research Council Developmental Pathways for Health Research Unit, University of the Witwatersrand. The workshops were held in Johannesburg and Cape Town in May 2024 and in each location comprise two workshops, one for government researchers, civil society organisations and partners working on child development and a practitioner workshop for early childhood caregivers, educators and other professionals.
- The PATS 'MECOR' Workshop 2024 (see Lung Health section on P.14)
- A course on Oxford Nanopore Technology for graduate students and postdoctoral researchers from West Africa. This training is taking place at the West African Virus Epidemiological Center of Excellence hub in Abidjan, Côte d'Ivoire, on the Université Félix Houphoët Boigny campus and will concentrate on viruses circulating in cassava, yam and sweet potato crops. It is co run by Dr Alex Murphy of the University of Cambridge's Department of Plant Sciences and Dr Cyrielle Ndougou of WAVE.

- A workshop to develop a clinical academic training programme in Malawi at the Kamuzu University of Health Sciences. This is the first stage of an initiative to set up an academic research training scheme for doctors in Malawi to enable them to integrate research with their clinical practice. The workshop is being led by Prof Alastair Coles, University of Cambridge and Dr Wakisa Mulwafu, Kamuzu University of Health Sciences, Malawi.
- A workshop on freshwater biodiversity of Côte d'Ivoire, was organized by Dr Nigel Taylor of the University of Cambridge's Department of Zoology and Dr Tanoh Marius Kamelan of Université Félix Houphoët Boigny Côte d'Ivoire. This included researchers and students of phytoplankton, zooplankton, macroinvertebrates, fish, socioeconomics of fishing, aquatic pollution, students from the doctoral school and members of the NGO SOS-Forêts (a national NGO which works for the conservation of biodiversity). See the photo below.



Picture: The workshop on freshwater biodiversity of Côte d'Ivoire.

These research projects and workshops illustrate the diversity of the research related activities supported by the Cambridge-Africa Programme. The projects funded in 2023-24 are underway and we will have reports on these, once they are completed. The following photos and captions illustrate some of the projects funded in 2022-23.



Picture Left: Laboratory at Kabale University receives an optical microscope as part of the Cambridge-Africa ALBORADA Research Project examining macroinvertebrates in freshwater lakes in Uganda. The camera/microscope system is the first such system at the University. It will enable a wide range of biological research to be undertaken and be an integral part of undergraduate teaching at Kabale University, the only State University in the region of Uganda.



Picture Right: Fieldwork in 2023 in Namibia, an area of global importance to palaeontology and sedimentology, to investigate fossils which has led to the discovery of important and very rare fossils which are currently being further investigated.



Picture Left: Project to apply Natural Language Processing for machine learning to African languages, which have largely been neglected in the fast growing field of machine learning /artificial intelligence. This project was in collaboration with Jomo Kenyatta University of Agriculture and Technology, Kenya.



Picture Right: Workshop funded by 2022-23 Cambridge-Africa ALBORADA Research Fund to produce a co-created Quality toolkit for the delivery of health care in conflict affected settings of Cameroon and Nigeria.

As well as the generous support from the ALBORADA Trust, we wish to acknowledge that in 2023-24 Cambridge-Africa received funding for the salary of the ALBORADA Research Fund coordinator post for the period November 2023 - end of March 2024 from The International Science Partnerships Fund (ISPF) Institutional Support Grant (ODA) 2023 to 2024 funding awarded to the University of Cambridge.

Lung health

Cambridge-Africa is supporting a variety of initiatives around lung health in Africa.

1. PATS MECOR

Cambridge-Africa is collaborating with PATS MECOR (Methods in Epidemiologic, Clinical and Operations Research), an educational initiative under the umbrella of the Pan African Thoracic Society (PATS) focusing on building capacity for 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 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.



Picture: Spirometry skills workshop held in Kenya as part of PATSMECOR 2023.

In 2023-2024, Caroline Trotter and Corinna Alberg participated in PATS MECOR meetings to plan the workshop and in September 2024 Corinna attended the PATSMECOR course being held in Kenya with 48 participants from across Africa. Through the Cambridge-Africa ALBORADA Research Funding and a donation from the Aldama Foundation, Cambridge-Africa has also financially supported the course. In 2023-24 a number of successful Cambridge-Africa ALBORADA Research Fund applications were made on lung health research in Africa, ranging from establishing a national multi-disciplinary team

to assess the burden of interstitial lung disease in Kenya, a qualitative component to a large study on vaping in South Africa and a deep dive into understanding the mortality among clinically diagnosed TB patients in Kilifi County, Kenya.

2. Research on outdoor air pollution in Africa

Cambridge-Africa made an award to Dr Gabriel Okello, Prince of Wales Research Fellow, at the Cambridge Institute for Sustainability Leadership and Dr Lambed Tatah, Research Associate, the MRC Epidemiology Unit, Cambridge to undertake research on the impact of electrification of boda bodas (petrol motorbike taxis which contribute greatly to air pollution in many African cities). They are modelling the impact of different extents of electrification of boda bodas on reducing air pollution in Kampala, Uganda, one of the most polluted cities in Africa. The research, which will also include focus groups with policy stakeholders, will produce an academic paper and also a policy brief for policy makers at the end of 2024. This research was supported by a donation to the Cambridge-Africa Programme from the Derrill Allatt Foundation.



Picture: Dr Wanjiku Kagima (Cambridge-Africa ALBORADA Research Fund awardee working on interstitial lung disease and PATS MECOR faculty member), Prof Refiloe Masekela (Co-Director of PATS MECOR) and Dr Gabriel Okello (lung health researcher and PATS MECOR participant) at the Cambridge-Africa day 2024.

Uganda Cancer Institute-Cambridge Collaboration

The Uganda Cancer Institute (UCI)-Cambridge collaboration, initiated by the Cambridge-Africa Programme in 2018, has grown to involve researchers across the Cambridge Cancer Centre and Cancer Research UK Cambridge Institute. The collaboration also includes educational activities and clinical exchanges, the latter supported by Cambridge Global Health Partners. Cambridge-Africa convenes regular meetings and in 2024, with

a generous donation from the Derrill Allatt Foundation, continued to fund two Ugandan medical students to undertake oncology/haematology medical electives in Cambridge, a priority area identified by the Director of the UCI.



Picture: Daisy Adiru and Philine Taaka, medical students from Makerere University, Uganda, in July 2024 with Dr Martin Besser and Dr Will Thomas, consultant haematologists at Addenbrookes Hospital, supporting the haematology/oncology elective in Cambridge.

The CRUK CI Summer School is an initiative initially funded by the Cambridge-Africa Programme and now independently funded by CRUK. Two places are reserved for Ugandan students. Participating in the Summer school has enabled previous Ugandan participants to secure PhD places. To widen participation and supported by the Cambridge-Africa ALBORADA Research Fund, Cambridge-Africa funded a Summer School which took place at Makerere University, Uganda. Cambridge-Africa is also supporting a number of cancer research collaborations between Cambridge and Uganda.



Picture: 2023 Summer School at Makerere University in Kampala, Uganda, on cancer immunology and bioinformatics, supported by the Cambridge-Africa ALBORADA Research Fund.

Cambridge-Africa Day

A highlight of 2023-24 for the Programme was the Cambridge-Africa Day. The Cambridge-Africa Day is held every two years and took place on 18th June 2024 at Downing College, Cambridge. The event showcases a wide range of research taking place reflecting the diverse collaborations between Cambridge and African researchers. The event comprised 4 sessions focusing on respiratory health, social sciences, conservation and sustainability and education. We were delighted to feature two outstanding keynote speakers, Professor Refiloe Masekela from the University of KwaZulu Natal, whose talk was entitled 'Lung Health in Africa' and Professor Eric Danquah from the University of Ghana, who spoke on 'Empowering Innovation: Developing Talent for Crop Resilience, Nutrition and Productivity in Africa.'





Picture: Keynote speaker Professor Eric Danquah, Director of the West Africa Centre for Crop Improvement, University of Ghana presenting at the Cambridge-Africa Day.

There were also excellent presentations from a number of African postgraduate scholars from a range of faculties at the University of Cambridge, most of whom are Cambridge-Africa PhD Scholars. A Mastercard Foundation postgraduate scholar who runs an NGO on conservation in Liberia gave a presentation on leveraging partnerships to advance conservation outcomes.



Picture: PhD Scholars Dr Yaw Ofusu Ansong Snr and Mujar Minette Shalo present their PhD research.

The Vice Chancellor, Professor Deborah Prentice summed up the day and presented the Dr Amit Bhasin prize to an outstanding postgraduate African scholar studying in Cambridge. This year's Prize was awarded to Dr Stephen Ajadi. Stephen's doctoral research was on the reduction of vulnerability to conflict and violence in Africa through social and physical interventions in parts of Nigeria impacted by conflict.

Picture left: Dr Stephen Ajadi, Dr Amit Bhasin Prize winner 2024.



Picture right: Dr Eva Namusoke and Dr Gertrude A. M. Eyifa Dzidzienyo who led an absorbing panel discussion on African Collections and Textiles in Western Museums.

The sessions at the Cambridge-Africa Day provoked lively discussion with a very engaged audience. Feedback from the Day was very positive and the event provided many networking opportunities. Photographs and videos of the sessions can be found on the [Resources section of the Cambridge-Africa website](#).

In addition, to support further collaborations, meetings were arranged before and after the Day between the Keynote speakers and colleagues in Cambridge. We would like to express our gratitude to the BBSRC International Institutional Award for their funding of the Cambridge-Africa Day.

Further Information on the Cambridge-Africa Programme

Further information on the Cambridge-Africa Programme can be found on the programme's website www.cambridge-africa.cam.ac.uk and in the newsletters circulated termly. Newsletters and reports can be found in the resources section of the Cambridge-Africa website and we feature blogs on our work and related projects on our home page and blog page. To subscribe to receive newsletters click on the link at the top right of the home page.

Members of the Cambridge-Africa Team

Professor Caroline Trotter

Cambridge-Africa Director

Corinna Alberg

Cambridge-Africa Programme Manager

Parinaz Hariri

Cambridge-Africa Research Fund Coordinator

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

CASAG Membership 2023-4

Professor James Wood (chair)

Corinna Alberg (secretary)

Professor Stephen Bentley
(Wellcome Sanger Institute)

Professor Mark Carrington

Chonzo Chiyumba

Dr Devon Curtis

Professor David Dunne

Dr Oumie Kuyateh
(Wellcome Sanger Institute)

Professor Adrian Liston

Professor Anil Madhavapeddy

Dr Tabitha Mwangi

Professor Tolullah Oni

Dr Rosalind Parkes-Ratanshi

Dr Sura Qadri

Professor Julian Rayner

Professor Pauline Rose

Renata Schaeffer
(Strategic Partnerships Office)

Professor Suzanne Turner

Professor Caroline Trotter

Dr Maja Wallberg