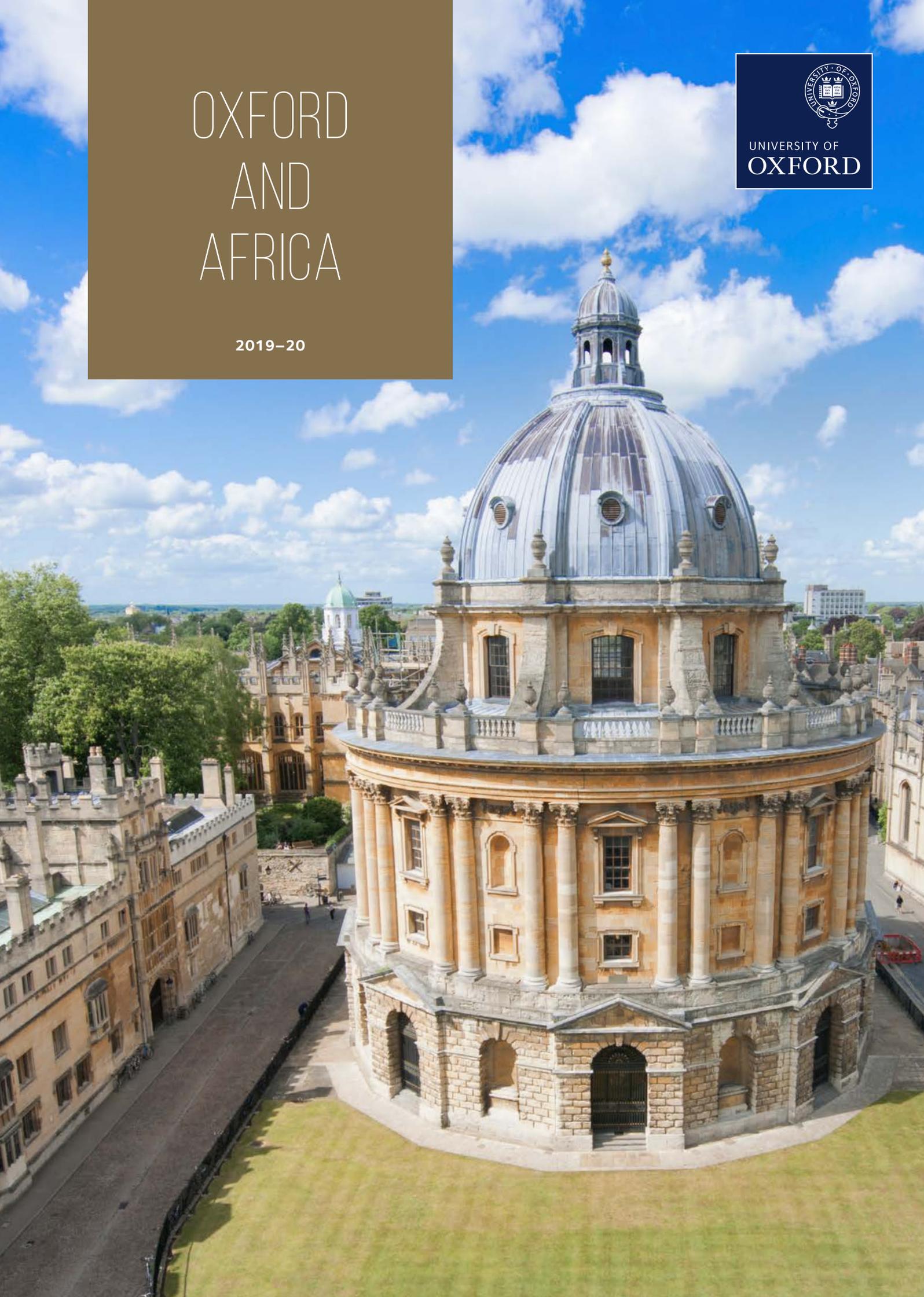


# OXFORD AND AFRICA

2019–20



UNIVERSITY OF  
**OXFORD**





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**Note:**

This brochure does not reflect the changes to the University's activities caused by the COVID-19 pandemic, which in particular has affected teaching arrangements, fieldwork, and access to libraries and museums. Continually updated information on Oxford's pandemic response and COVID-19 research can be found at [www.ox.ac.uk/coronavirus](http://www.ox.ac.uk/coronavirus)

The University of Oxford aims to advance learning by teaching and research for the benefit of society on a global scale.

Drawing strength from its distinctive, college-based structure and interdisciplinary culture, Oxford has consistently developed its capacity to generate and share knowledge. For hundreds of years the University has continued to make significant contributions to global society, culture and economics.

Oxford's expertise encompasses science, health, society and culture. In each of these areas the University has made key contributions to the advancement of knowledge.

Research carried out by Oxford's staff, students and alumni has made an enormous impact on the world over the centuries. Among the most distinctive elements of Oxford's unique profile are the University's success in spinning out companies that convert scientific research into high-tech products and services; its global network of tropical medicine laboratories, which have been at the forefront of the fight against infectious disease for decades; and its close connections with British history, philosophy, religion and literature.

The impact of Oxford's expertise in research and education is further enhanced by Oxford University Press, the world's biggest English-language academic press and English language teaching publisher.

In the coming decade the University will further expand the impact of its research and education to maintain Oxford's position as one of the world's most renowned centres of learning.

**Nobel Prizes**

Current and former Oxford staff and students had won a total of 56 Nobel Prizes by 2020, with multiple Oxford alumni and staff winning prizes in each of the six categories.

Notable Nobel laureates associated with the University include chemist Dorothy Hodgkin; economists Amartya Sen and Joseph Stiglitz; Howard Florey, a member of the team that discovered penicillin; authors VS Naipaul and TS Eliot; physicist Erwin Schrödinger; and Peace Prize recipient José Ramos-Horta.

Current and former Oxford staff and students have also won a total of 21 Fields Medals, Balzan Prizes, Rolf Schock Prizes and Abel Prizes.



## A CENTRE OF LEARNING FOR MORE THAN 900 YEARS

The University of Oxford is the oldest university in the English-speaking world. The exact date of the University's foundation is not known, but teaching was taking place in Oxford by 1096. The University developed rapidly after 1167, when King Henry II banned English students from attending the University of Paris.

Despite a popular legend that University College was founded by King Alfred the Great in 872, it is now accepted that Oxford's three oldest existing colleges – University, Balliol and Merton – were founded between 1249 and 1264. Colleges continued to be founded in Oxford in the centuries that followed, with the most recent, Reuben College, being founded in May 2019.

By the late medieval period, Oxford had achieved eminence above every other seat of learning, winning the praises of popes, kings and sages. In 1355, Edward III paid tribute not only to the University itself, but also to the services to the country provided by Oxford graduates.

Since that time, the University has been at the heart of Britain's scientific, cultural, religious and political development. Oxford hosted King Charles I's counter-Parliament during the English Civil War, was the scene of famous debates about evolution, and educated almost half of Britain's prime ministers. Over the centuries Oxford's ancient teaching and research departments such as the Faculty of Divinity and Faculty of Classics have continually evolved, and have been joined by new centres for teaching and research such as the Blavatnik School of Government and the interdisciplinary Oxford Martin School. The University will continue to grow its teaching and research capabilities to meet society's ever-evolving needs.

## CONNECTING BRITAIN AND THE WORLD

Emo of Friesland became the first international student at Oxford, when he travelled from Groningen (now in the Netherlands) to Oxford in around 1190. His time at the University marks the start of Oxford's long history of internationalisation: alumnus Thomas Stephens was the first recorded Englishman to visit India in 1579, while the University began collecting Chinese publications in 1604.

Oxford played a leading role in training British civil servants for service abroad from the middle of the nineteenth century. In the 1960s these courses opened up to aspiring diplomatic leaders from around the world, transforming into the Diplomatic Studies Programme, also known as the Foreign Service Programme, which still exists today. The Programme now has more than 1,200 alumni and has contributed staff to more than 140 countries' diplomatic services.



Engraving of University buildings on Broad Street, Oxford, by James Basire, from a drawing by Edward Dayes, c.1800

Oxford University Images/Museum of the History of Science

### World leaders educated at Oxford

Around 60 heads of government or state, including close to half of all British prime ministers and at least 30 leaders of other nations, have either been educated or have taught at Oxford.

Notable world leaders associated with the University include: King Abdullah II of Jordan, former President of the United States Bill Clinton, King Harald V of Norway, former Prime Minister of Australia Bob Hawke, Prime Minister of Pakistan Imran Khan, former President of Ghana John Kufuor, former President of East Timor and Nobel Peace Prize recipient José Ramos-Horta and former Prime Minister of India Dr Manmohan Singh.

## A PERSONAL APPROACH TO EDUCATION

Oxford's approach to undergraduate teaching is based around the intensive Oxford tutorial: the heart of an undergraduate education at the University. The Oxford tutorial is a conversation, normally between two or three students and their tutor, who is an expert on the topic. Teaching in this way offers a level of personalised attention from academic experts that is rare even at other world-leading universities.

Tutorials are provided at Oxford's colleges. Every student is a member of a college as well as the University. The colleges are academic communities, comprehensive in their provision of education yet focused in terms of scale. They also provide libraries, study spaces and lodgings for many students, and are the hub for social life.

At their tutorials students are encouraged to go beyond the facts they have learned, developing their own theories to challenge the assumptions of their classmates and even their tutor. The tutorial makes an undergraduate education at Oxford intensive and challenging; its spirit of free inquiry and discourse is an essential expression of Oxford's culture and values. Tutorials are combined with learning through lectures, seminars and laboratory work.



Oxford University Images/John Cairns

## WORLD-CLASS RESOURCES

Roughly half of Oxford's students are postgraduates. Postgraduate students are also members of a college (with the exception of those on non-matriculated courses). Although their teaching and research activities take place in their department, they also benefit from their college's resources and are able to draw upon the expertise of its interdisciplinary community, as well as the subject specialists in their department.

Education is bolstered by lectures from leading academics, some of the world's largest libraries and best-equipped laboratories, and a rich term-time schedule of public lectures, debates and screenings. Oxford students are also able to draw on the collections of the University's four museums, including the Ashmolean, the world's first university museum and one of the most-visited sites in Britain.

Oxford's postgraduate students are part of a world-renowned research community. The University's research output was rated first out of all UK universities in the Research Excellence Framework 2014, and its medical and health teaching and research has been rated best in the world for eight years running by *Times Higher Education*.

Around half of Oxford's postgraduate research students receive full or partial funding. Scholarships available to Oxford postgraduate applicants include the prestigious Clarendon Scholarships, awarded to the most promising research students, and the world-famous Rhodes Scholarships.



Above: The Weston Library

Left: Student in tutorial



**Oxford admits 1st international student**

Today almost 50% of students are from outside the UK



**Oxford alumnus Thomas Stephens visits India**

The University now employs 170 Indian faculty



**Oxford welcomes its first Chinese visitor**

Chinese student numbers have increased more than tenfold in the last 20 years

1096

1190

1249

1579

1636

1684



**Study begins at Oxford**

The oldest university in the English-speaking world



**Oxford's earliest existing college is founded**

The University now has 44 colleges and halls



**The first Laudian Professor of Arabic is appointed**

More than 70 faculty now study the Middle East

**UNIVERSITY OF OXFORD TIMELINE**

Oxford has been a centre of learning, research and innovation for more than 900 years.



**Abraham Lincoln is sworn into office on an Oxford University Press bible\***

1,700 American students now study at Oxford

\*Barack Obama used the same bible



**Kofoworola Moore becomes the first African woman to graduate from Oxford**

The University now has over 400 students from Africa



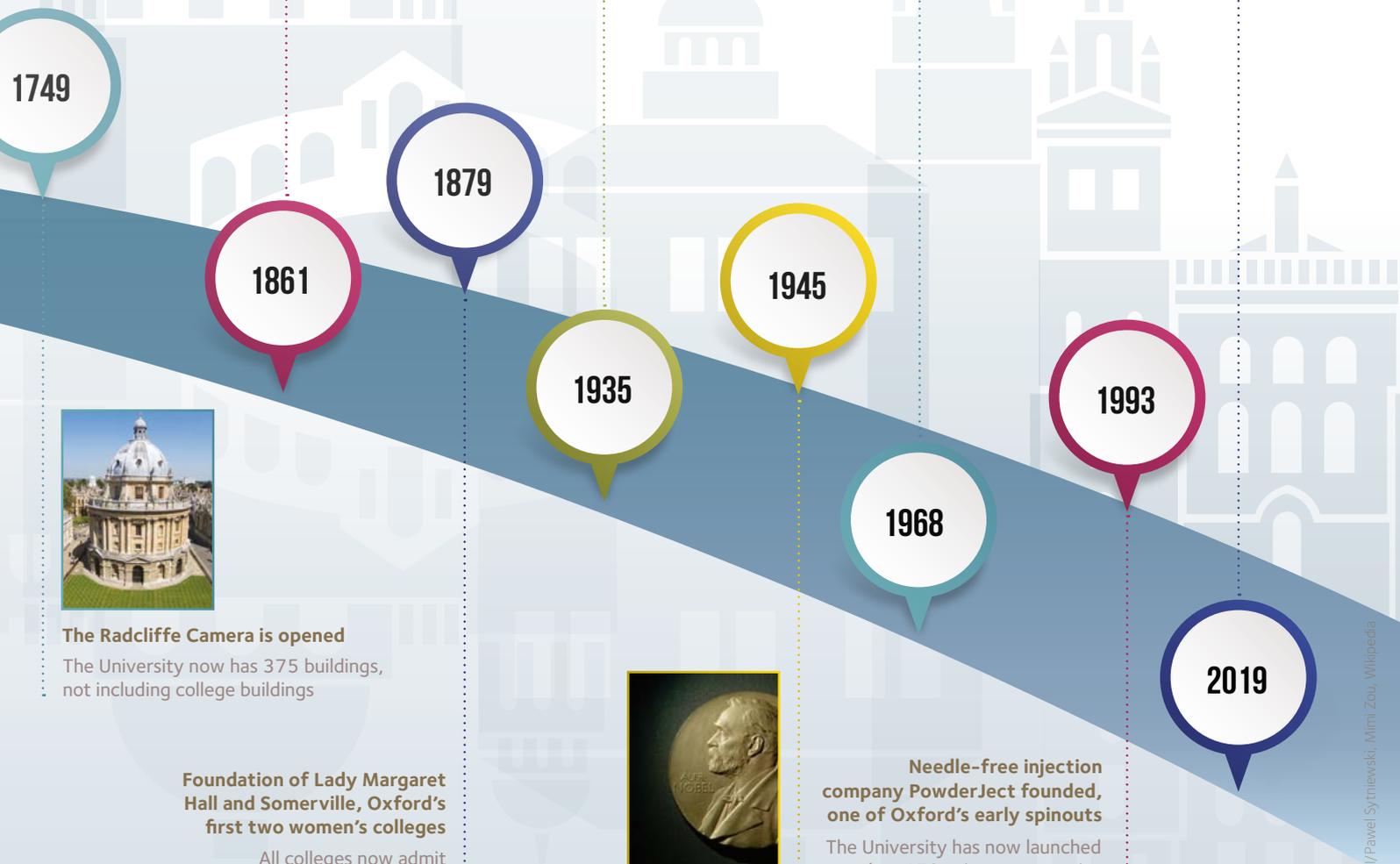
**Bill Clinton is admitted to Oxford**

Almost 60 heads of state or government have been educated at the University



**Oxford is ranked the best university in the world by the Times Higher Education World University Rankings**

The University has been ranked top every year since in 2017



1749



**The Radcliffe Camera is opened**

The University now has 375 buildings, not including college buildings

**Foundation of Lady Margaret Hall and Somerville, Oxford's first two women's colleges**

All colleges now admit both men and women



1879

1861

1935



**Howard Florey awarded Nobel Prize for the discovery of penicillin**

In total, Oxford staff and students have received 56 Nobel Prizes

1945

1968

**Needle-free injection company PowderJect founded, one of Oxford's early spinouts**

The University has now launched more than 150 spinout companies



1993

2019

## COLLABORATION: PAST, PRESENT AND FUTURE

Across politics, history, the natural environment, medical sciences, culture, economics, business and society, Oxford academics work in collaboration with colleagues based in African institutions to define and progress some of the key research areas of the 21st century. New initiatives are being launched every year, with recent highlights including the launch of the Africa Oxford Initiative, the hosting of the Africa Business Forum at the University's Saïd Business School, major new work to support the most vulnerable adolescents across the continent, the 30th anniversary of the establishment of a tropical medicine partnership in Kenya, Uganda and the Eastern Africa region; and the 60th anniversary of the Oxford University Africa Society.

Researchers, academics, students and institutions across the African continent have worked in partnership with Oxford for many decades. In 1876 Christian Frederick Cole became the first black African to achieve a degree from Oxford. Since then, the University has continued to strengthen its work in collaboration with – and across – Africa, including through its African Studies Centre, its active and strong student societies, and its network of Oxford University Press offices across several African countries. Oxford is proud to host many researchers and students from Africa every year, with a growing number of scholarships and fellowships available to support them. Most recently, in 2016, the University has seen the establishment of the Africa Oxford Initiative, a cross-University platform for academic and research collaborations that facilitates the development of equitable and extensive collaborations between Oxford and African institutions.

Featured over the next pages are just some of the research and education activities that Oxford undertakes with a focus on Africa, or in collaboration with African partners. Across its academic divisions, the University will continue to work in partnership with collaborators in Africa to address the 21st century's key challenges and opportunities for many years to come.

Opposite: Focus on Research Africa (FORA) event 2019

## ALL THINGS AFRICA IN OXFORD

The **Africa Oxford Initiative** (AfOx) is a cross-University network established to bring the University of Oxford's long-standing, multi-disciplinary engagement with Africa under one platform. The overarching goal of AfOx is to ensure Africa remains a strategic priority for the University. AfOx supports research and academic excellence by facilitating sustainable and equitable research partnerships between researchers based in African institutions and the University. AfOx is working with colleagues across Oxford to develop a University-wide strategy to increase the number of African students studying at Oxford and increase the University's engagement with research institutions and universities based in Africa.

AfOx uses its considerable expertise of the dynamic African academic landscape to mobilise resources for Africa-focused research, working with departments and colleges across the University and with universities, research institutions, governments and NGOs across African countries. Such collaborations have facilitated new breakthroughs in the fields of medical sciences, big data engineering and astrophysics, conserving environments and ecosystems, archaeology, and preservation of ancient languages amongst other research areas. To enable effective partnerships that are genuinely co-developed, they offer two researcher mobility schemes – the AfOx Visiting Fellowship Program and the AfOx Travel Grant.

In support of students, and in partnership with the Oxford University Africa Society, AfOx runs academic support programs to enhance the graduate experience at Oxford, promote a sense of belonging and enhance the academic success of emerging African leaders in Oxford. These targeted programs include essay writing workshops and tips on pursuing DPhils at Oxford. AfOx also hosts an annual online admissions open day for prospective African graduate applicants.

**Evolution of galaxies in the universe:** The AfOx Visiting Fellows Program enabled Bradley Frank, radio astronomer at the South African Radio Astronomical Observatory, to visit Oxford and collaborate with Matt Jarvis, Professor of Astrophysics at the Department of Physics. They used their time in Oxford to process raw data from the South African MeerKAT telescope and transform it to create images of physical phenomena in galaxies. MeerKAT is one of the most powerful radio telescopes in the world, and this analysis will have a transformative effect on the South African scientific community and the way the international scientific community understands the evolution of galaxies and stars.



There are currently 424 (mainly postgraduate) students from African countries studying at Oxford, with a particularly large community from South Africa, followed by Nigeria and Ghana. The University employs 89 academic staff from Africa, with the largest cohorts from South Africa, Egypt and Kenya. Over 3,400 Oxford alumni live in countries all across Africa.



Ian Walman

Sacred Scripts of Ethiopian & Eritrean Activity Day, Bodleian Libraries, 2019

## A FOCUS OF STUDY AND RESEARCH IN OXFORD

There are several centres and programmes at the University with a focus on the African continent. The **African Studies Centre** is one of the world's leading centres of African Studies and is the focal point for graduate work and faculty research on Africa in Oxford. With about ten faculty members working across the Social Sciences and the Humanities, the Centre's research plays a leading role in academic debates as well as public policy. The Centre offers an MSc in African Studies, a combined MSc and MBA programme with the Saïd Business School, and a vibrant doctoral programme in Area Studies.

The Centre's faculty members are involved in a range of major research projects, such as comparing the Copperbelt: Political Culture and Knowledge Production in Central Africa, which is led by Professor Miles Larmer. This project, funded by the ERC under the European Union's Horizon 2020 programme, provides the first comparative historical analysis – local, national and transnational – of the Central African copperbelt, a globally strategic mineral region central to the history of two nation-states (Zambia and the Democratic Republic of Congo (the DRC)) and wider debates about the

role of mineral wealth in development. Another is a research project led by Professor David Pratten and Professor Wale Adebani on Nigeria as part of the Governing African Transitions research team funded by the Oxford Martin School. The project will offer a more in-depth analysis of the nature of the Nigerian state in this period of uncertainty and transition. Apart from scholarly research and teaching, the Centre also provides a forum for African leaders to address critical issues affecting the continent that have transnational or global implications. The Centre has hosted presidents, former presidents and vice presidents from Botswana, Gabon, Ghana, Mauritius, Nigeria, Seychelles and Zimbabwe.

The **Middle East Studies Programme, Middle East Centre** at St Antony's College, and **Faculty of Oriental Studies** all include focused work on Northern Africa. In October 2018 the Middle East Studies Programme – a joint initiative of the Oxford School of Global and Area Studies (OSGA) that undertakes work on historical, political, economic, cultural and social themes – welcomed its first intake of students onto the newly introduced MSc in Modern Middle Eastern Studies. The Faculty of Oriental

Studies is one of the world's leading centres for research and teaching on the languages, history and cultures of Asia and the Middle East, and teaches twenty-five modern and classical languages, including Arabic, Coptic, and Egyptian. It offers undergraduate and postgraduate courses across these disciplines and languages. In Africa, the faculty focuses its research and teaching on ancient Egypt and Islamic North Africa, complementing its particular focus on the Islamic world more broadly. It also includes the Griffith Institute, which has been the University's centre for research in Egyptology since the 1930s. The Middle East Centre brings together researchers with expertise in Morocco and the Maghreb, popular culture in Egypt and contemporary Islamic studies, and co-sponsors the Sudanese Programme with the African Studies Centre.

Within the University's Social Sciences Division, the interdisciplinary **Centre for the Study of African Economies (CSAE)**, established in 1986, focuses its research on economic and social development in Africa. It convenes an annual conference on Economic Development in Africa and its five research areas are Firms, Farms and Labour; Macroeconomics and Growth; Politics and Institutions; Welfare and Behaviour, and The Oxford Martin Programme on African Governance. A large team of development economists research not only countries in Africa, but also in other developing areas of the world. Making available comprehensive data to others, the Centre also supports research at other institutions into developing economies.

Several researchers within the **Faculty of Medieval and Modern Languages** focus their work on French and Portuguese from an African perspective. For instance, Professor Jane Hiddleston has undertaken extensive research on literature in French from North Africa, focusing on writers from Algeria, Morocco and Tunisia, including a book on *Assia Djebar: Out of Algeria*. Professor Phillip Rothwell, an authority on the Mozambican writer Mia Couto and the Angolan author Pepetela, specialises in the literatures and cultures of Lusophone Africa and Portugal. His current research focuses on disavowal as a structuring discourse in Portuguese colonialism. Dr Dorothée Boulanger works on African literature in Portuguese. Undergraduate students at the Faculty can spend their year abroad as language assistants in overseas France, including Réunion. Students have also travelled to Madagascar for French, and Mozambique for Portuguese language training.

In 2019, members of the Ethiopian and Eritrean communities worked with **Bodleian Libraries** staff to curate a display of some of the precious manuscripts and icons from Ethiopia and Eritrea in the Bodleian's collections. A free activity day was held to celebrate the opening of the display and to explore Ethiopian and Eritrean heritage and the Ge'ez language.



## STUDENT PROFILE

**Karima Chiuri**  
Kenya

**Course:**  
DPhil Population Health, University College

**The Oxford experience:**

From meeting and interacting with world-renowned experts, studying with students passionate about their work and their countries, to rowing and rain, Oxford offers the opportunity to explore it all. It's been an exciting two years and I have come to truly enjoy this quaint little town.

**Aspiration:**

I'm passionate about health research in women's health, which is where my work is centered. I hope to impart skills towards bridging the health research gap in Kenya, build evidence to influence policy and contribute to a healthier population.

## SCHOLARSHIP, FELLOWSHIP, TRAVEL OPPORTUNITIES AND SOCIETIES

Students from Africa who are starting new graduate courses at Oxford can receive funding from a wide range of **scholarships**. These include scholarships open to applicants from all countries (such as the Clarendon Fund, which makes over 130 new awards each year), and scholarships for specific courses and regions (such as the Oxford-Weidenfeld and Hoffmann Scholarships and Leadership Programme, which include many African countries). Oxford also offers scholarships focused on particular countries in Africa. For example the renowned Rhodes Scholarship has six African constituencies (covering students from 33 African countries), while the Standard Bank Africa Chairman's Scholarship focuses on Masters' students from South Africa. The University also jointly supports African students with well-known scholarships such as the Commonwealth Scholarship and Fellowship Programme, and the Foreign & Commonwealth Office's Chevening Scholarships.

The Oxford Research Centre in the Humanities (TORCH) hosts three visiting programmes available to African researchers. The first one is the **TORCH Global South Professorships and Fellowships** scheme, which seeks applications specifically from institutions in the Global South, including African countries. These schemes were launched in June 2018 and are funded by the Andrew W. Mellon Foundation. Recent visitors to Oxford have included academics and artists from Ghana, South Africa and South Sudan. The second scheme, the **AfOx-TORCH Visiting Fellowships**, is a collaboration with AfOx and

aims to allow African scholars in the Humanities to spend time at the University of Oxford over the summer period. Launched in 2019, this scheme has allowed three academics from Kenya and Nigeria to undertake research in Oxford. Finally, the **TORCH International Fellowships scheme** is open to international researchers without geographic limitations. So far, academics from Tunisia, South Africa and Mozambique have been awarded an International Fellowship at TORCH.

**AfOx Travel Grants** are open to all disciplines and support the establishment of new collaborations between researchers based in African countries and at the University of Oxford. The Travel Grant is a flexible fund which covers research and travel costs in either direction, both from Oxford to an institution in an African country and vice versa. Since 2016, AfOx has awarded over 160 travel grants that have facilitated new collaborations between 46 departments in the University of Oxford and 90 African institutions across 30 countries.

The **AfOx Visiting Fellowships Program** enhances academic mobility and network building by supporting leading African scholars and researchers to spend four to eight weeks in Oxford. The AfOx Visiting Fellows are hosted by partner colleges within the University, utilise the University's facilities, and undertake collaborative research with Oxford based colleagues.

The Dean of Oxford's **Saïd Business School**, Professor





Guest speakers at the Oxford Africa Business Forum 2018

Peter Tufano, made a commitment in 2014 to raise the proportion of the School's full-time MBA students from Africa from 2% to 10%. Since 2016, more than 11% of each MBA cohort has hailed from the continent. The School's African students provide direct insight into a range of exciting emerging economies that will become increasingly influential in the global marketplace. The School is committed to providing scholarships for talented students from Africa, ensuring that the very brightest students can attend, regardless of circumstance, and thereby supporting the next generation of African business leaders with additional skills, knowledge and networks to accelerate their success. Beyond recruitment, the School has embedded Africa-focused activities into the curriculum and co-curriculum, including case studies, Africa business electives and hosting African thought leaders to share their insights with students and alumni at the annual Oxford Africa Business Forum.

The impact of Oxford's expertise in research and education is enhanced by **Oxford University Press** (OUP), the world's biggest English language academic press and English Language Teaching (ELT) and schools publisher. In 2015, OUP celebrated working in Africa for over 100 years. Today it has branches in South Africa and Kenya, and offices across the continent. OUP Southern Africa (OUPSA) and the OUP regional businesses in Africa publish original titles in over 20 languages for local schools, higher education institutions, and individual consumers. The Press is the largest education publisher, with the biggest dictionary sales, in both South Africa and Kenya. The Press also has a strong ELT presence in Africa, as well as increasingly supplying international schools in the region with both its international and UK schools lists.

OUPSA has been owned in conjunction with the Mandela Rhodes Foundation for over a decade, seeing more than a quarter of OUPSA's surplus fund the Mandela Rhodes Scholarships since 2008. These scholarships have supported over 200 exceptional young leaders from across Africa to pursue further education opportunities. In 2018, OUP helped deliver the Kenyan government's programme to improve the country's educational outcomes with a new skills-based curriculum, alongside an initiative to provide every secondary school child with books of their own. In July 2019 OUP marked distributing 9 million books to over 22,300 schools in Kenya in a record two months.

The **Oxford African and Caribbean Society** has a diverse body of members, including undergraduate and postgraduate students from a wide range of disciplines and from nations all over Africa, the Caribbean and beyond. The Society is committed to exploring, promoting and celebrating African and Caribbean culture within the University. It organises a range of events, school visits and mentoring programmes and is actively committed to helping the next generation of African and Caribbean students make informed choices about their careers and educational opportunities.

The **Oxford University Africa Society** (AfriSoc) is a student society established in 1958; a community of change agents passionate about Africa. It seeks to set the agenda for the future of the African continent by providing a platform for students hailing from or interested in Africa to engage critically. Its annual core programme includes the Oxford Africa Conference, the Scholarship and Access Portfolio, and a series of other events.

## WORKING TO SUPPORT SOCIETAL, POLITICAL, AND DEVELOPMENT PRIORITIES ACROSS AFRICA



Teen Advisory Group (Sierra Leone)

The UKRI GCRF **Accelerating Achievement for Africa's Adolescents (Accelerate) Hub** began in February 2019. This five-year, multi-partner research collaboration with the University of Cape Town, led by Professor Lucie Cluver of the Department of Social Policy and Intervention at Oxford, received nearly £20 million from the UK Research and Innovation Global Challenges Research Fund.

Accelerate's goal is to improve outcomes for 20 million adolescents and their children in 34 countries across Africa. Adolescents (aged 10-19) are the world's fastest

growing population, rising to half a billion by 2050. Despite their incredible creativity and potential, many of these young people will be trapped in a cycle of poverty, violence, low education and poor health. Policymakers across Africa have asked for evidence to help them develop the best, most cost-effective policies for adolescents to reach the UN Sustainable Development Goals, and the Accelerate Hub will work with them, as well as NGOs and adolescents themselves, to discover what combination of services have the greatest impact. By testing different combinations of initiatives such as malaria prevention, business skills and violence prevention, the Hub will identify 'accelerator' packages to boost nutrition, health, schooling, employment, gender equality and safety for teenagers across Africa.

The Accelerate Hub is comprised of national governments in Central, East, Southern and West Africa, multilaterals including the AUDA-NEPAD, UNDP, UNICEF, WHO, UNFPA, UNAIDS, and UN Women, regional NGOs providing direct services, 11 African and four UK universities, and adolescents across the continent who are core partners in choosing and designing the services that the Hub will test. It also has a special focus on capacity building for early career African academics.



**RISE: Renewable, Innovative and Scalable Electrification** is a project led by Dr Aoife Brophy Haney at the Smith School of Enterprise and the Environment (SSEE) and funded by the Global Challenges Research Fund (GCRF) from 2018 to 2020. This interdisciplinary research project aims to design integrated, actionable and transferable development strategies for the local renewable energy sector in sub-Saharan Africa. Two contrasting national case studies, Uganda and Zambia, form the basis of the project, which is deeply committed to delivering impact beyond academia. Specifically, the project aims to understand how three broad factors that have prevented sustainable electrification to date are interrelated. These are: difficulties in designing suitable business models; inconsistent and often opaque regulatory and institutional frameworks; and limited involvement of local communities. The project is a collaboration with a team from the Energy Research Centre at the University of Cape Town, led by Dr Amos Madhlopa.



Handpump in Kwale County, Kenya

## SMART HANDPUMPS – INNOVATION FOR RURAL WATER SERVICES

As part of the wider SSEE Water Programme at Oxford, led by Professor Rob Hope, **Smart Handpump** research combines advances in engineering, policy, development and entrepreneurship, to provide robust rural water services throughout Africa in support of achieving the UN Sustainable Development Goal of safe water for all by 2030. Handpumps are a low-cost way by which 200 million people in rural Africa access groundwater – usually safer to drink than water from shallow wells, rivers and lakes. Maintenance of Africa’s one million handpumps has proved challenging, with one in four handpumps out of action at any one time.

The Smart Handpump technology, developed by Patrick Thomson (SSEE), enables pump usage to be monitored remotely, facilitating fast repair. In Kenya, research spin-off FundiFix Ltd is reducing handpump repair time from over a month to less than three days, serving 60,000 people in 2019. Research on institutional risk and culture, led by Dr Johanna Koehler (SSEE), and the success of the FundiFix model in Kenya, have led to the establishment of Water Services Maintenance Trust Funds through which funders can provide transparent performance-based payments for effective maintenance. Further work supervised

by Professor David Clifton in Oxford’s Department of Engineering Science shows the potential of smart handpumps for remote monitoring of groundwater aquifer levels and predictive monitoring for early warning of pump failure.

The **Oxford Martin Programme on African Governance** brings together an interdisciplinary team of researchers from across the University to investigate in depth issues surrounding job creation, economic transformation, and the delivery of quality social services and infrastructure across a range of African countries. Looking at Ethiopia’s industrialisation, Ghana and Kenya’s changing political economy of infrastructure and service delivery, and Angola and Nigeria’s responses to the post-2014 reality for resource-rich economies, the Programme aims to understand how better economic, social and political governance could contribute to progress in these areas.



## ACHIEVING ADVANCES IN HEALTH AND CROSS-DISCIPLINARY RESEARCH

Oxford's **Centre for Tropical Medicine and Global Health** manages a network of research units and numerous collaborations across Africa. These include the KEMRI-Wellcome Trust Research Programme (KWTRP), based in Kilifi on the Kenyan coast and with regional units in Nairobi and Eastern Uganda. KWTRP is one of the foremost medical research centres in Africa, delivering internationally competitive research and capacity building. Around 90% of malaria deaths occur in African children and the Programme works to understand epidemiology and immune system response, improve treatments, and test vaccines. It also works on other locally relevant conditions such as childhood malnutrition and survival, respiratory diseases, diarrhoea and HIV. Researchers collaborate with local partners, train health academic leaders and inform local and international health policy.

Also part of the Centre is the Epidemic diseases Research Group Oxford (ERGO), which aims to reduce the impact of epidemic infections through patient-centred research and methodological approaches suited to epidemic settings. ERGO coordinate the African coalItion for Epidemic Research, Response and Training (ALERTT), which has 21 partner organisations from 13 countries committed to delivering an agile research response to epidemics across sub-Saharan Africa. The Infectious Diseases Data Observatory (IDDO) and WorldWide Antimalarial Resistance Network (WWARN) collaborate with over 150 health and research institutions

including ministries of health, universities and NGOs across Africa to aggregate and analyse data on poverty-related infections and malaria to produce new evidence for better treatment and prevention. IDDO's West African regional hub is hosted by the University Cheikh Anta Diop in Dakar, and its Southern Africa hub by the University of Cape Town. IDDO's governance structure includes a number of representatives from ministries of health, national public health institutes and national ethics committees across Africa.

A member of Oxford's Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, Professor Chris Lavy leads **SURG-Africa**, a surgical systems research project funded by the European Commission. SURG-Africa is improving training and mentoring for surgical teams at 31 district-level hospitals in Tanzania, Malawi and Zambia. This is improving access to safe and timely surgery for rural populations and reducing unnecessary referrals to higher-level hospitals. It is estimated that 5 billion people worldwide do not have access to safe surgery. Professor Lavy has also helped establish Women in Surgery Africa and leads health partnerships that have developed standardised and accredited training resources for health workers to treat clubfoot in Africa (now used in 26 countries). The partnerships have enabled UK doctors to support the College of Surgeons of East, Central and Southern Africa by engaging in multi-level trauma and orthopaedic training of frontline health workers in 14 countries in Africa.

Several projects based in Oxford's Department of Paediatrics focus on **infant and child health in Africa**. For instance, Dr Sarah Atkinson is using genetic and epidemiological methods to investigate the impact of malaria on iron deficiency, which affects more than 40% of children in Kilifi, Kenya. Both micronutrient deficiencies and infectious diseases are common among children living in sub-Saharan Africa, but little is known about the effect they have on each other. Dr Atkinson's team's latest work, using data from 18,000 children, shows that a genetic mutation prevalent in populations of African ancestry may protect from anaemia, though not malaria.

Through the Typhoid Vaccine Acceleration Consortium, the Oxford Vaccine Group (OVG), led by Professor Andrew Pollard, launched a large-scale typhoid vaccine trial in Malawi. The group also monitors the burden of multi-drug resistant typhoid fever, as its international spread is of great concern. OVG played a key role in the development of vaccines against Ebola, having given the 'first in human' dose for four of the five vaccines tested in West Africa during the outbreak. Subsequent studies, led by Professor Matthew Snape, showed that the immune response generated by the vaccines – including one already deployed in the DRC – persists for over two years.

In South Africa, Professor Philip Goulder investigates how the immune response to HIV differs between sexes, and between adults and children. He works with HIV-infected infants focusing on the HIV cure/remission potential, hoping to eradicate the disease altogether.

At the **Institute of Social and Cultural Anthropology**, Dr Alexandra Alvergne is undertaking a project funded by the Wellcome Trust Seed Grant in Science, looking at overcoming contraceptive discontinuation by overcoming side effects. This project will be the first to test the hypothesis that side effects are caused by unnecessarily high dosages of external hormones in hormonal contraceptives compared with women's internal hormones. In collaboration with Dr Eshetu Gurmu and Dr Tamrat Abebe from the University of Addis Ababa, the research will focus on the use of injectables in Ethiopia – where unmet needs for contraception reach the highest levels in Africa – with the aim of accumulating primary evidence for the optimisation of contraception for communities and individuals.

Oxford's strong interest in **epilepsy research** has expanded with recent grants addressing epilepsy in Africa. A scoping exercise in Zimbabwe, funded by AfOx, led to collaborations with the Epilepsy Support Foundation and the Department of Neurology at Parirenyatwa Hospital in Harare. This pilot project, led at Oxford by Dr Arjune Sen, a neurologist, and Dr Sloan Mahone, a historian of medicine in Africa, looked at stigma and the impact of epilepsy on marriage and relationships. The project has recently expanded with funding from the World Federation of Neurology. In 2019, a much larger team which includes neurologists from Kenya, Tanzania and Ghana, received a £4.8 million grant from the National Institute for Health Research (NIHR) to fund a four-year project Epilepsy Pathway Innovation in Africa that includes research into infectious disease and epilepsy, new technologies in the treatment of epilepsy, and an oral history project about stigma and the lived experience of epilepsy in Africa.



## STAFF PROFILE

### Dr Miles Tendi

Dr Tendi is a Zimbabwean writer and academic, and Associate Professor in African Politics at the African Studies Centre and the Department of Politics and International Relations. His writings include pieces about civil-military relations, gender and politics, Southern African politics and the existence and use of 'evil' in politics. As well as numerous journal articles, Dr Tendi wrote the book *Making History in Mugabe's Zimbabwe: Politics, Intellectuals and the Media* and was awarded the Miles Morland Foundation Writing Fellowship in 2017. His latest book, *The Army and Politics in Zimbabwe: Mujuru, the Liberation Fighter and Kingmaker*, was published by Cambridge University Press in December 2019.



Rebecca Jackrel

Ethiopian wolf

## UNDERSTANDING COUNTRY-SPECIFIC CHALLENGES

Based in Oxford's Wildlife Conservation Research Unit (WildCRU), which is part of the University's Department of Zoology, the **Ethiopian Wolf Conservation Programme (EWCP)** is the culmination of decades of intensive research, field trials and awareness work into the plight to save Ethiopian wolves from extinction. EWCP is implementing the first oral vaccination campaign to pre-empt outbreaks of rabies among Ethiopian wolves, the world's rarest canid, in the Bale Mountains of southern Ethiopia. Fewer than 500 Ethiopian wolves remain, all in the wild and exposed to infectious diseases transmitted by domestic dogs. In partnership with the Ethiopian Wildlife Conservation Authority, regular oral vaccination campaigns have expanded to all six extant wolf populations to enhance their chances of survival. Led by director and founder, Professor Claudio Sillero, EWCP has launched a vaccination strategy guided by strong empirical information and predictive modelling, which forms a key component of the national action plan for the conservation of this endangered and specialised carnivore. WildCRU's mission is to achieve practical solutions to conservation problems through original scientific research. WildCRU trains leaders in conservation, creating a global community of highly skilled and collaborative conservationists.

Oxford is participating in a four-year GCRF-funded project partnership led by the International Institute for Environment and Development. **Social and Environmental Trade-offs in African Agriculture (SENTINEL)** aims to address systemic development challenges in African

agriculture and food systems. It is focusing on three African countries – Ethiopia, Ghana and Zambia – and aiming to improve our understanding of the different ways of developing agriculture without impacting negatively on the natural environment and depriving people of the goods and services it has historically provided. The project has brought together researchers with government, development agencies and private firms to help inform policymakers and the civil groups that lobby them. Partners include the University of Ghana, Copperbelt University in Zambia, the Ethiopian Development Research Institute and UCL. The University of Oxford component is being led by Professor Nathalie Seddon (Department of Zoology) and Dr Monika Zurek (Environmental Change Institute).

**A Diet for all Seasons** is a research project in the School of Archaeology, led by Professor Julia Lee Thorp and Dr Scott Blumenthal, with the collaboration of Dr Fredrick Manthi (National Museums of Kenya). Dietary change is a major driver of evolution amongst mammals, including hominins (early members of the human lineage), but until now we have not been able to understand how they coped with seasonal dietary variability. This study addresses the problem by obtaining sequential dietary isotopic information from fossil hominin tooth enamel fragments in East Africa 4 to 1 million years ago. As savanna-dwelling baboons are often used as ecological models for early hominins, in order to ground understanding about how the isotopic tooth sequences reflect seasonal dietary shifts, the team is also comparing isotopic data against observations of feeding behaviour in modern baboons from Laikipia, Kenya.

## DEVELOPING MATHEMATICS IN EAST AFRICA

Professor of Pure Mathematics, Balázs Szendrői, participates in various initiatives to strengthen the teaching of mathematics in East Africa. Beginning in 2010 as a mentor in one of the London Mathematical Society's Mentoring African Research in Mathematics projects, Professor Szendrői has worked primarily with colleagues based at universities in Kenya since. The mentoring projects help link African academics with their UK and European counterparts via professional

mentoring partnerships. Professor Szendrői – a member of the African Institute for Mathematical Sciences South Africa – has been involved in workshops, summer schools and other projects to improve both the teaching and application of mathematics. Like many African nations, Kenya has experienced a rapid growth in higher education, but demand for specialised teachers in all fields, particularly mathematics, continues to outstrip supply.



Pottery vase in the shape of a woman, from the XVIIIth Dynasty (c.1540-1292) in Egypt, found in Abydos



**The International Engagement Office**

University of Oxford  
Wellington Square  
Oxford OX1 2JD

Email: [international.engagement@admin.ox.ac.uk](mailto:international.engagement@admin.ox.ac.uk)

Tel: +44 (0)1865 280 417