

# RESEARCH REPORT 2019/2020





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**Prof. Ebenezer Oduro Owusu**  
**VICE-CHANCELLOR**

**“** *The University is determined to strategically create an enabling environment that would enhance its chances of producing relevant research to contribute to national and global development.* **”**



# FOREWORD

In the year 2014, the University of Ghana resolved to become a world class research-intensive university by 2024. The University is determined to strategically create an enabling environment that would enhance its chances of producing relevant research to contribute to national and global development. To attain this vision, the University of Ghana is carrying out innovative and pioneering research as well as delivering high quality teaching and learning. Our pillars of integrity, commitment, respect and loyalty have ensured that research activities aimed at projecting the voice of West Africa, indeed Africa, in the global economic landscape are carried out with due diligence.

In this regard, the University of Ghana has joined the collaborative research efforts exhibited by other universities in Africa through membership of the Association of African Universities (AAU), African Research Universities Alliance (ARUA), and globally, as a member of the Worldwide Universities Network (WUN). WUN is dedicated to collaboratively resolving the world's most urgent challenges such as climate change, understanding cultures, higher education and research, public health and non-communicable diseases. The University of Ghana is creating pathways to development strategies and building capacity of faculty to meet the demands of research, required to contribute to its goals.

Funded research activities at the University of Ghana have increased significantly over the past few years and this has been made possible through the hard work and discipline of our resilient faculty who engage in interdisciplinary and transdisciplinary research activities focused at contributing to global knowledge.

Funding from the World Bank has enabled the establishment of three African Centres of Excellence (ACE).

These Centres are:

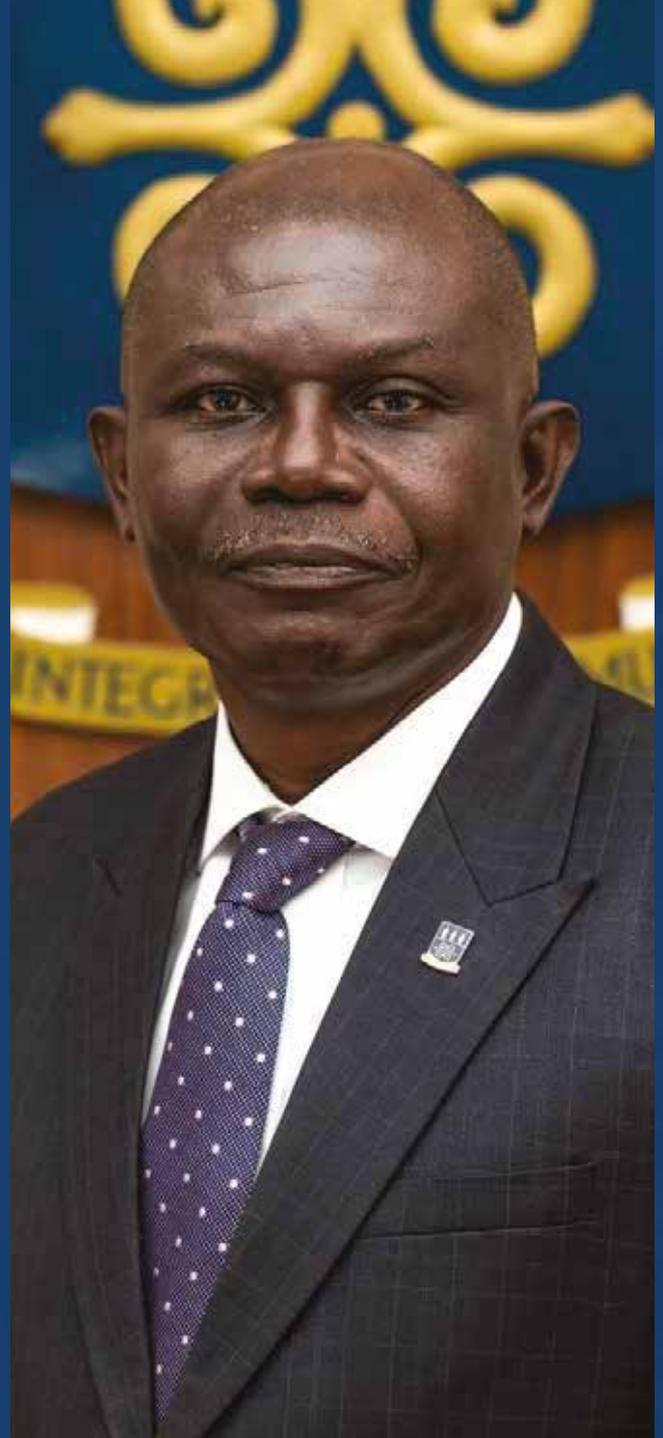
- West African Genetic Medicine Centre (WAGMC)
- West African Centre for Cell Biology of Infectious Pathogens (WACCBIP)
- West African Centre for Crop Improvement (WACCI)

These Centres have built and continue to build the capacity of graduate students across the sub-Saharan African region, through innovative academic programmes. Our Centres are poised to create a tremendous impact on food security and health for Africa in the decade ahead and beyond.

Faculty across all Colleges, continue to explore thematic research areas aimed at poverty alleviation, building sustainable cities and communities, and climate change among others in a bid to meet the growing developmental needs of the country and region.

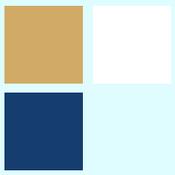
In partnership with our funders and collaborators who have been ardent in their support of UG's research drive, we look forward to becoming the preeminent research institution in Africa.

*Prof. E. Oduro Owusu*



**Prof. Felix Ankomah Asante**  
**PRO VICE-CHANCELLOR**  
RESEARCH, INNOVATION AND DEVELOPMENT

“The Office of Research, Innovation and Development drives UG’s research agenda, facilitating multidisciplinary partnerships and enabling creative scholarship; we remain committed to the tenets of all stakeholders.”



# RESEARCH @ UG

The University of Ghana (UG) is half-way through its strategic plan of 2014- 2024, the principal goal being to intensify research and contribute to innovative growth and development.

Since a body of eminent scholars recommended a path towards intensifying research, the collective efforts and commitment of all stakeholders has driven the successes achieved to date. The scholarship of UG scientists across all spheres of academic discipline remains the pinnacle of our journey thus far.

As the myriad of global challenges persists, practical scientific applications towards mitigation have become central to research at UG with researchers leading efforts in a wide spectrum of enquiry.

The intensity of illegal mining activities and environmentally damaging practices has resulted in the formation of multi-disciplinary research groups, tasked to provide and lead sustainable mitigation measures to alleviate the toll of climate change on communities across the nation.

Developments in Agriculture and Crop Science portend well for reversing scarcity in the food sector. New crop species with high yield potential are being cultivated in multiple varieties.

The untapped potential in alternative remedies derived from local plants have scientist investigating their efficacy for treating ailments. A boost in funding for capacity building in the Humanities continues to produce able cohorts of post-doctoral candidates whose research brings renewed enthusiasm to interrogating and predicting human behaviour beyond current phenomena.

The University of Ghana, through its academic and other staff, continue to make contributions to the national response to the COVID-19 pandemic in Ghana in a variety of ways. The West African Centre for Cell Biology of Infectious Pathogens (WACCBIP), provides key genomic sequencing support to the national effort to track the evolution of new or emergent SARS-CoV-2 variant infections in Ghana; the pivotal contribution by the Noguchi Memorial Institute (NMIMR) as the primary reference centre for laboratory diagnosis of SARS-CoV-2 and leading the national effort to establish and network key laboratory support services across the country; support by faculty of the School of Public Health (SPH) to the national enhanced contact tracing and surveillance efforts; and support by faculty of the Medical School in case management leading the national effort in the management of severe and critical cases at the COVID-19 treatment centres.

The School of Pharmacy (SOP) and Department of Chemistry (School of Physical and Mathematical Sciences) also support the national effort by the production of hand sanitizers that meet approved standards, while researchers at the Department of Crop Science (School of Agriculture) have developed protocols that will ensure the successful cultivation of *Cryptolepis sanguinolenta* (Cs) as a cash crop. In collaboration with the Department of Chemistry (School of Physical and Mathematical Sciences) and NMIMR the active ingredient concentrations and efficacy of domesticated Cs plants, respectively, have been ascertained. In the event that Cs is found to be efficacious against COVID-19, the protocols already in place will ensure the availability of Cs in the quantities required for its cultivation.

Other key areas of support include efforts by staff of the Department of Psychology (School of Social Sciences) through the Psychological Association of Ghana, to offer counselling and mental health support services for afflicted persons to cope with stigmatization. The University, through the Office of Research, Innovation and Development participates in the national research coordination group's effort to among others, prioritize research to guide the national response effort.

In the midst of a global pandemic, the challenge for researchers will be to define a 'new normal' social paradigm.

The University of Ghana remains committed to pursuing a healthy balance between science and society.

*Prof. F. Ankomah Asante*

## RESEARCH BY COLLEGES

Access list of research projects via <http://orid.ug.edu.gh/research-colleges>

College of Basic and Applied Sciences

College of Education

College of Health Sciences

College of Humanities





# RESEARCH PERFORMANCE

# RANKING

## UNIVERSITY OF GHANA WORLD UNIVERSITY RANKINGS

UG is ranked among the top 20 Universities in Africa and the best in Ghana since 2016 by Times Higher Education (THE) and Webometrics.

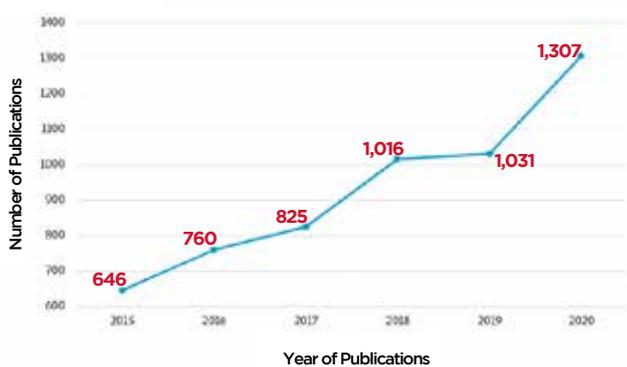


UG subscribes to THE's online articles and digital publications

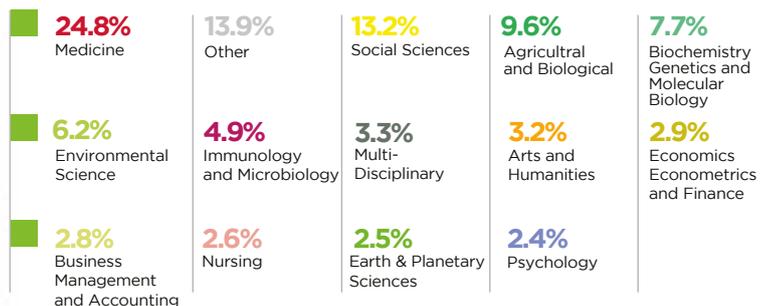


## ☐ PUBLICATIONS IN SCOPUS (2015-2020)

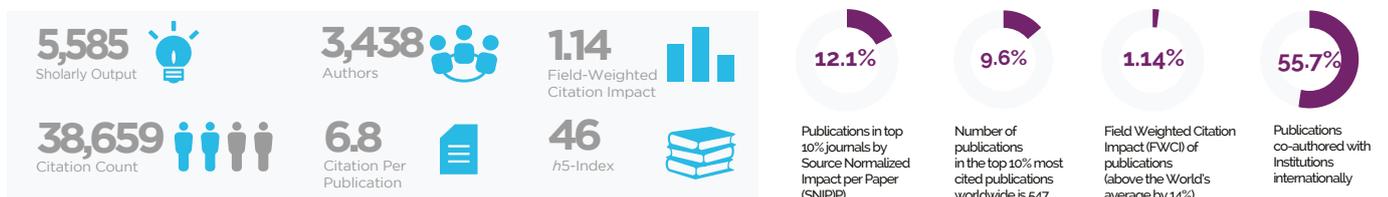
### Publications Trend by Faculty



### Contribution to Publication Output by Discipline



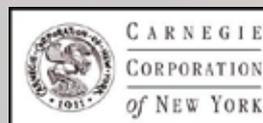
### Selected performance indicators of Publications from 2015 - 2020



# FUNDING

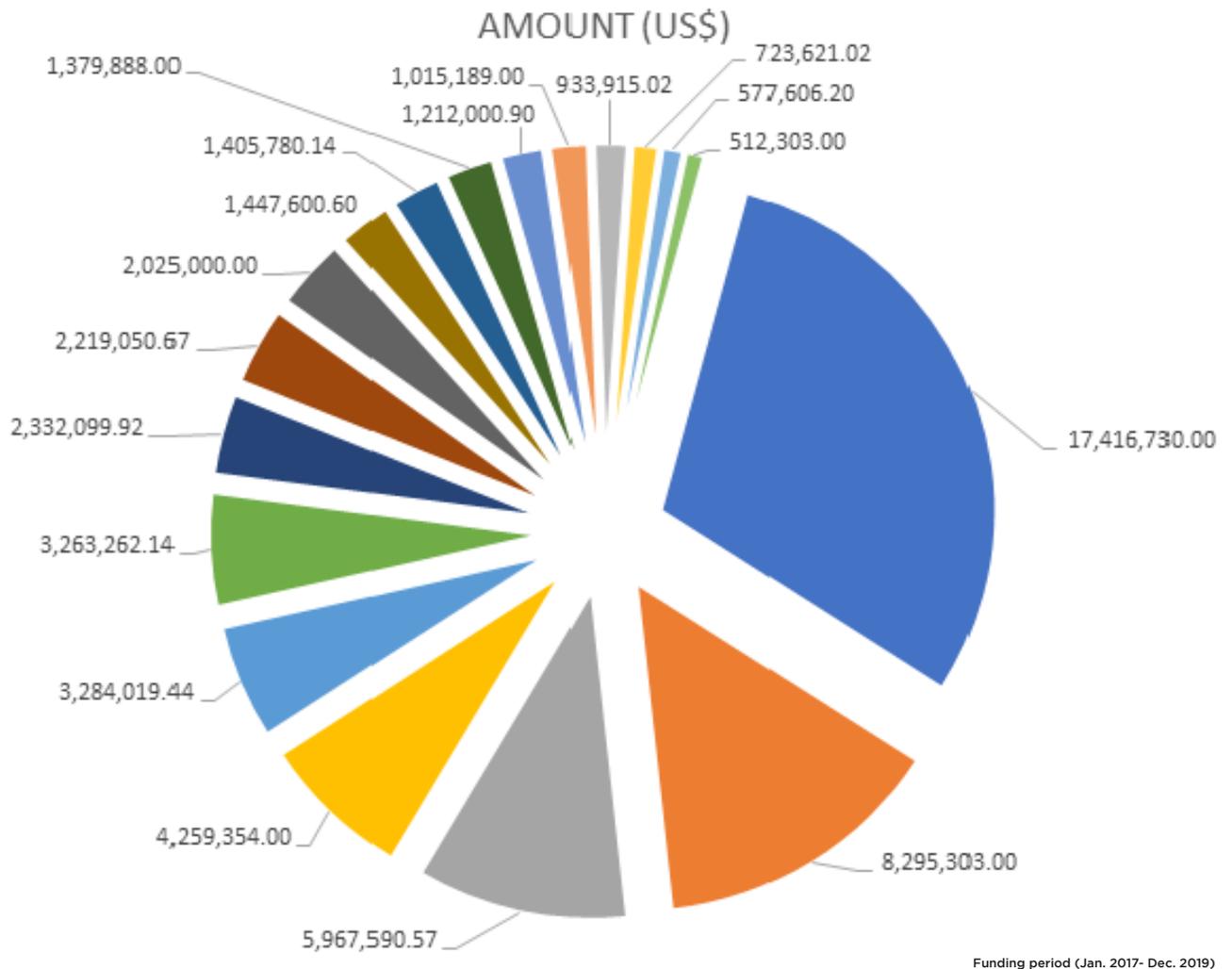
## EXTERNAL RESEARCH FUNDS

### MAJOR RESEARCH PARTNERS



# GRANT AWARDS

## □ DISTRIBUTION OF DONOR GRANTS



- World Bank
- Danish International Development Agency (DANIDA)
- UK Research and Innovation (UKRI)
- Fleming Fund
- Carnegie Corporation of New York
- International Development Research Centre (IDRC)
- Silicon Valley Community Foundation (Open Philanthropy Project Fund)
- Welcome Trust
- University of Oxford
- National Institutes of Health (NIH)
- PATH
- The Andrew Mellon Foundation
- European Union/Commission
- Bill and Melinda Gates Foundation
- Ghana West Africa Program to Combat AIDS and STI (WAPCAS)
- World Health Organisation (WHO)
- The Secretary of State for Health, UK
- Anesvad Foundation

## OTHER PARTNERS

- Academy of Medical Sciences
- Accelerator Fund from Lehigh University
- African Development Bank, Japan Trust Fund
- African Union Commission
- Alliance for Accelerating Excellence in Science in Africa (AESA)
- American Institutes for Research (AIR)
- Arts and Humanities Research Council
- Australia Awards-African Grants
- Australian High Commission, Ghana
- Bradbury Initiatives Group
- British Museum's Endangered Material Knowledge Programme (EMKP)
- Broad Institute
- Cambridge-Africa Programme Alborada Research Fund (CAPREx)
- CHEMONICS International Inc.
- Christian Aid Ghana
- Community Foundations of Canada (CFC)
- Council for Scientific and Industrial Research (CSIR)
- Crick African Network (CAN)
- Danone Nutricia Research
- Defense Advanced Research Projects Agency (DARPA)
- Department for International Development (DFID)
- Department of Foreign Affairs, Trade and Development Canada (DFATD)
- Engineering and Physical Sciences Research Council (EPSRC)
- Foundation Botnar
- Fuji Oil Holdings Inc.
- GIZ
- GlaxoSmithKline Services Unlimited (GSK)
- Global Challenges Research Fund (GCRF)
- Google LLC
- Gulf of Mexico Research Initiative
- Innovate UK
- Institute of Tropical Medicine (ITM) ANTWERP
- International Food Policy Research Institute (IFPRI)
- International Foundation for Science (IFS)
- International Life Sciences Institute
- International Research and Exchange Board (iREX)
- International Science Council
- International Society for Neurochemistry (ISN)
- Leverhulme-Royal Society Africa Award
- Maghua Enterprise
- Medicines for Malaria Venture (MMV)
- MoneyGram
- Nagel Institute of Calvin College
- Natural Environment Research Council, UK
- Network of African Science Academics
- New World African Press
- New York University School of Medicine/ National Institute of Health/FIC
- National Institute for Health Research (NIHR)
- Norwegian Institute for Water Resources (NIVA)
- Office Cheriflen des Phosphates (OCP) Ghana Limited
- Oxford Policy Management Limited
- Research ICT Africa
- Robert Bosch Stiftung
- Royal Society of Chemistry, UK
- Savana Signatures
- SCAPIR- Strengthening Capacity for Implementation Resource
- Social Sciences and Humanities Research Council (SSHRC)
- Society for Research in Childhood Development
- Solidaridad
- SouthSouthNorth Projects (Africa)
- Templeton World Charity Foundation, Inc.
- The African Academy of Sciences
- The Ajinomoto Foundation
- The British Academy
- The Environment for Development (EFD)
- The International Centre for Research in Agroforestry (ICRAF)
- The Research Council of Norway
- The Royal Society
- The University of Nottingham
- The World Academy of Science (TWAS)
- Tullow Ghana Limited
- United Nations International Children's Emergency Fund (UNICEF) Ghana
- United Nations University
- Universities of Canada
- University of Bergen
- University of California, San Francisco
- University of Siegen
- University of Sussex
- U.S Agency for International Development (USAID)
- Volkswagen Foundation
- World Resources Institute
- World Vision International, Ghana

# INTERNAL GRANT PORTFOLIO

The University's internal grant portfolio supports research activity and capacity building for faculty and staff. Since its establishment (2010) the fund has enabled faculty to develop capacity, undertake cutting edge research and participate at international fora. Funding support is categorized as; UG Research Fund, Faculty Development Fund and Conference Grants.

## University of Ghana Research Fund (UGRF)

The UGRF provides seed funding for early to mid-career academics and multidisciplinary research groups.



## Faculty Development Fund

The development fund provides opportunities for faculty to pursue doctoral and post-doctoral training.



## Conference Grants

The fund facilitates the participation of faculty, students and staff in international conferences and funds colloquia organized locally.



# USD 2.2M

## GRAND TOTAL AWARDED

(2010-2020)

# WORLD BANK AFRICAN CENTRES OF EXCELLENCE (ACEs)

In the year 2019, the World Bank awarded a total of US\$16.5 million to three model research centres at the University of Ghana.

The West Africa Centre for Crop Improvement (WACCI) and West African Centre for Cell Biology of Infectious Pathogens (WACCBIP), under the College of Basic and Applied Sciences; and the West African Genetic Medicine Centre under the College of Health Sciences have been classified as African Centres of Excellence under the World Bank's Impact Project (ACE II).

The centres are leading research, and training the next generation of African scientist.

The World Bank award is a significant boost to their outstanding record of delivery in exploratory science and novelties.





## WEST AFRICA CENTRE FOR CROP IMPROVEMENT

WACCI is a leader in the Agricultural ACEs and a hub for plant breeding globally. Established in 2007, WACCI has enrolled 149 PhD and 65 MPhil students from 19 African Countries as well as produced 95 PhD and 30 MPhil graduates. Since its inception, the number of female students enrolled comprises of 36% for PhD and 35% for MPhil.

The centre was recently granted a 5-year accreditation from the Agency for Quality Assurance Germany for its flagship PhD programmes in Plant Breeding and MPhil in Seed Science and Technology.

WACCI has so far released three high-yield maize hybrid varieties in the transitional and savanna zones of Ghana with yields between 9-11 tons/ha.

### VISION

*To become the foremost Centre for post-graduate training and research in crop improvement in Africa.*

In addition, several graduates produced by the centre have developed and released over 60 varieties of crops including rice, maize, sweet potato, cowpea, taro, groundnut and cassava across four African countries.

Notably, Dr. Maxwell Asante, one of the centre's graduates was named Ghana's best scientist for 2017 after releasing five improved rice varieties. He was also acclaimed as the research scientist of the year, 2017 at the CSIR-CRI, Ghana where he leads the rice improvement programme.

**For more information, please visit:**  
<https://wacci.ug.edu.gh/>





## WEST AFRICAN CENTRE FOR CELL AND BIOLOGY OF INFECTIOUS PATHOGENS

### VISION

*To improve the diagnosis, prevention, and control of tropical diseases in sub-saharan Africa by providing advanced-level training and research excellence in cell and molecular biology.*

The West African Centre for Cell Biology of Infectious Pathogens (WACCBIP), is one of the three World Bank Centres of Excellence at the University of Ghana (UG). The Centre conducts applied research into biology and pathogenesis of tropical diseases.

Having established a world-class scientific research environment with wide ranging technology platforms, the centre has the capacity to conduct high-quality research into a range of infectious & non-communicable diseases.

The centre prioritizes diseases such as malaria, trypanosomiasis, tuberculosis, buruli ulcer, HIV, rotaviruses, influenza, dengue, and non-communicable diseases such as cancers, chronic kidney disease, sickle cell disease, and diabetes. For each of the priority diseases/pathogens, research is conducted based on five themes:

- Disease pathogenesis and immunity pathogen genomics/bioinformatics,
- Host genetics/genomics,
- Host/pathogen interactions,
- Molecular diagnosis,
- Molecular epidemiology for surveillance; and target discovery for drug & vaccine development.

WACCBIP aspires to **'conduct cutting-edge research to guide the development of new approaches to disease diagnosis, prevention and control.'**



For more information, kindly visit: <https://www.waccbip.org/>





# WEST AFRICAN GENETIC MEDICINE CENTRE

## VISION

*Improving access to genetic health*

Established in 2019, the West African Genetic Medicine Centre (WAGMC) is an African Centre of Excellence (ACE) for Higher Education charged to train the first cohort of Genetic Counsellors and Medical Genetics Scientists in West Africa.

Central to WAGMC's mandate is the enquiry into Human Genetic Disorders and related blood diseases such as Sickle Cell Disease (SCD) which is most common in West Africa. Ultimately, the centre employs high-level teaching and research techniques to conduct cutting-edge research into genomics.

SickleGenAfrica constitutes the flagship sickle cell disease research project of WAGMC. It is a 5-Year collaborative U54 project funded by the National Institutes of Health (NIH) of the USA, which is focused on the genetics of the body's natural defences against haemolysis in individuals who have sickle cell disease (SCD).

The overall research goals are to:

- Conduct three inter-related but independent genomics research projects,
- Establish scientific cores in molecular haematology and genomics in Ghana,
- Establish a community-engaged core to promote local community-participation in genomics research.

Research is being conducted in six patient-enrolling sites in Ghana (Accra and Kumasi), Nigeria (Abuja, Kano and Lagos) and Tanzania (Dar es Salaam). Towards this end, a webinar series has been launched to allow SickleGenAfrica investigators to easily share information and new findings on their work with colleagues across the multinational sites.

The centre was recently awarded a \$6.8 million grant by the World Bank to address a major development challenge of genetic disorders in West Africa.

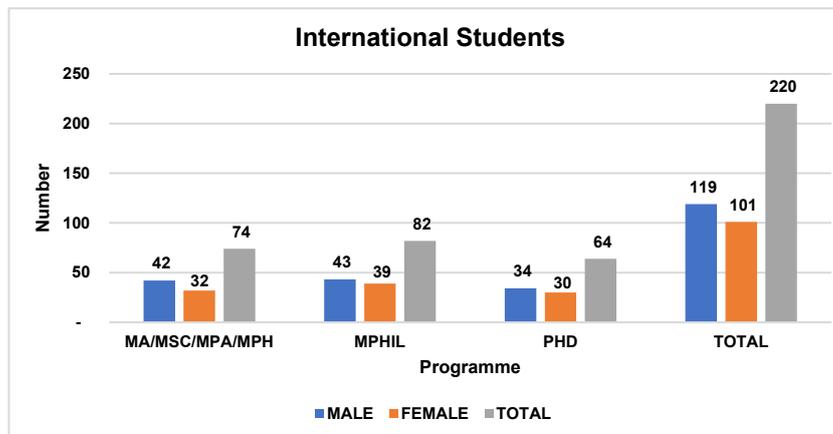
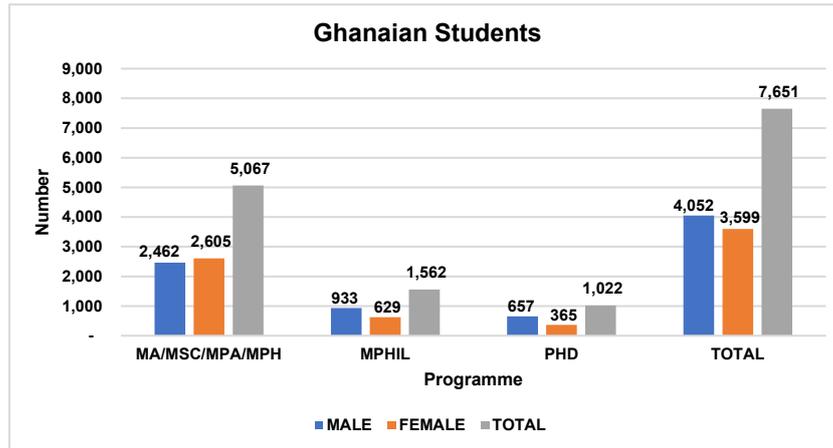


For more information, kindly visit: <https://wagmc.org/>

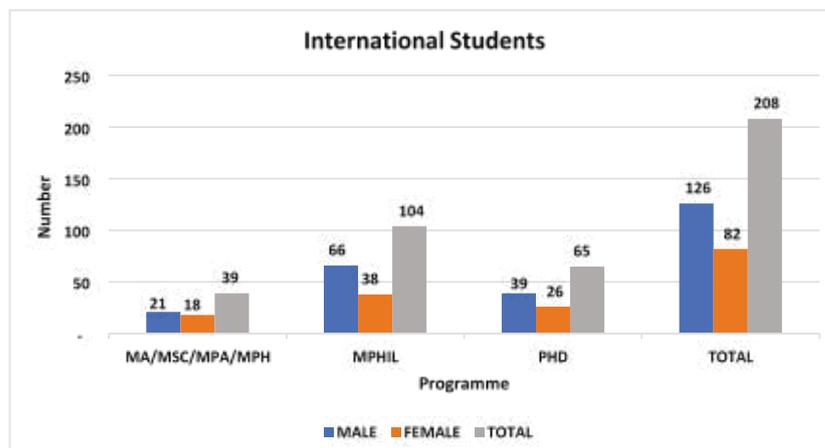
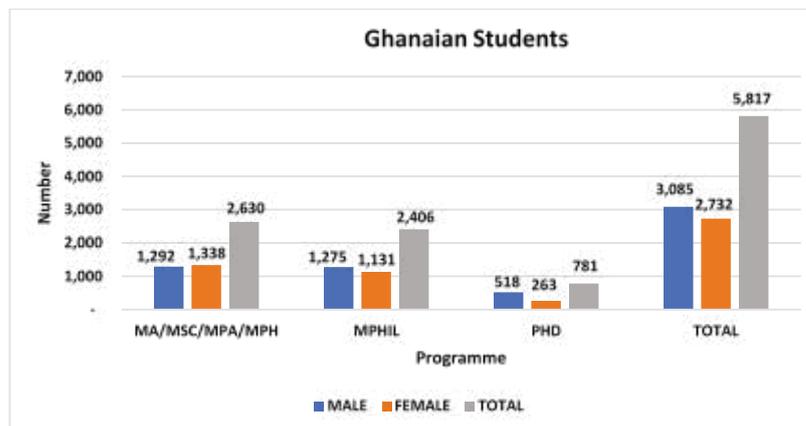


## POSTGRADUATE STUDENT ENROLLMENT

### 2019/2020 ACADEMIC YEAR



### 2018/2019 ACADEMIC YEAR





# Vice-Chancellor's ACADEMIC AWARDS



Outstanding Doctoral Dissertation in  
the Humanities (2018/2019)

**Recipient**

ABUBAKARI SULEMAN (PhD)

Regional Institute for Population Studies (RIPS)

**Thesis Title**

RELATIVE RISK OF WOMEN DYING FROM  
INFECTIOUS OR NON-COMMUNICABLE  
CAUSES IN KINTAMPO, GHANA;  
A COMPETING RISK ANALYSIS

Outstanding Doctoral Dissertation in  
the Sciences (2018/2019)

**Recipient**

JOSEPH OSAFO EDUAH (PhD)

Department of Soil Science

**Thesis Title**

PHOSPHORUS REACTIONS IN THREE  
CONTRASTING SOILS AMENDED WITH  
BIOCHAR



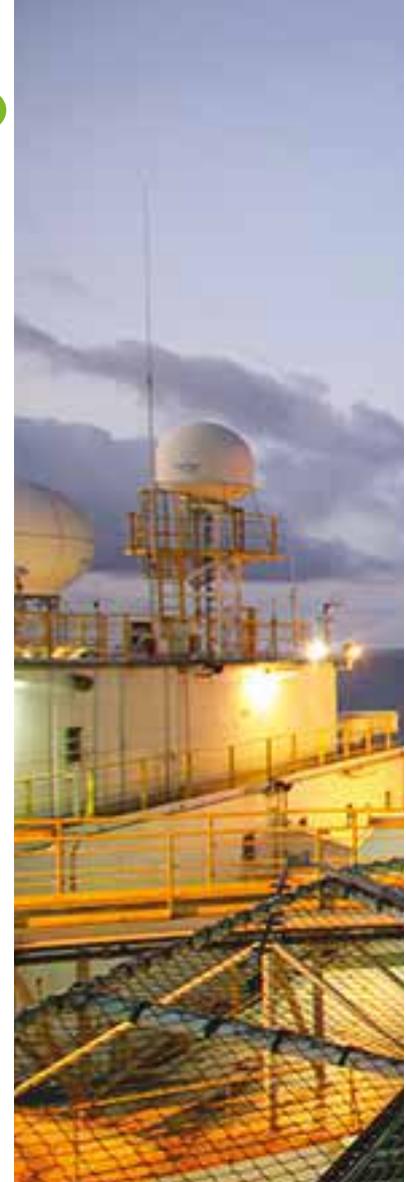
*Prof. Nana Aba Appiah Amfo (Pro VC, Academic and Students Affairs) presenting the awards to the recipients*

# SCHOLARSHIPS/FELLOWSHIP PROGRAMMES



## TULLOW GROUP SCHOLARSHIP SCHEME

The Tullow Group Scholarship Scheme (TGSS), supports students up to postgraduate level in subjects related to the oil and gas, engineering, law, environmental sciences sector. Scholarships are tenable at leading universities in the UK and aim to develop local capacity in Ghana for the oil and gas sector.



## COMMONWEALTH SECRETARIAT



The Queen Elizabeth Commonwealth Scholarship Commission (QECSC) has offered fully funded scholarships for postgraduate studies to Commonwealth citizens.

Scholarships at master's level are hosted by institutions in 12 countries across the Commonwealth. Eligible countries include, Bangladesh, eSwatini, Kenya, Malaysia, Mauritius, Pakistan, Rwanda, Tanzania, Uganda, the West Indies (Jamaica, Barbados or Trinidad) and Zambia.

At PhD level, scholarships are tenable at any approved UK institution with which the Commonwealth Scholarship Commission (CSC) maintains part-funding agreements. Awards are reserved for individuals who do not have the financial means to fund their study in the UK.

# FOX INTERNATIONAL FELLOWSHIP PROGRAMME



The Fox International Fellowship Program aims to identify and contribute to the education of outstanding students and identify “citizen scholar ambassadors” who, by virtue of their academic and extracurricular record, can be expected in the future to participate in guiding the world towards a more peaceful order.

By `citizen scholar ambassador` the selection criteria aim to identify a candidate whose research has strong policy relevance and demonstrates the potential to become a leader within and outside academia.

With the aim of nurturing global leadership, Yale has partnered with 19 of the world’s leading universities in Africa, Asia, Australia, Europe, the Middle East, and the Americas.

With a growing network of Fox Fellows worldwide, the vision of the programme’s patron, who was an alumnus of Yale is to foster peace, bridge cultural gaps and promote prosperity. A vision being championed through the programmes numerous beneficiaries.

## CARNEGIE HIGHER EDUCATION AND RESEARCH PROGRAMME

Over the last decade the Carnegie Corporation has awarded approximately US\$10,000,000 in grants to the University of Ghana . Under the corporations programme for Higher Education and Research in Africa, PhD and master’s degrees are offered to successful applicants.

The corporation’s higher education and research programmes aim to advance local scholarship and improve the retention rates of african scholars. Since 2008 successive funding cycles have built on the achievements of this programme to consolidate gains and create opportunities to further develop research capacity of early-career, doctoral, and postdoctoral candidates.

The pan-African doctoral academy programme organized at the Centre for African Wetlands (CAW, UG), brings together young African scholars to be mentored by seasoned african-born professors in the diaspora who deploy diaspora linkages to harness talent on the continent.





**BUILDING STRONGER UNIVERSITIES  
IN DEVELOPING COUNTRIES**



**World Health  
Organization**



**For research on  
diseases of poverty**

UNICEF • UNDP • World Bank • WHO



**Africa Regional  
International  
Staff / Student Exchange**

**Food Security and  
Sustainable  
Human Wellbeing**



**INTRA-ACP  
MOBILITY**



# RESEARCH SUPPORT FACILITIES

## SERVICES

### OFFICE OF RESEARCH, INNOVATION AND DEVELOPMENT (ORID)

The Office of Research, Innovation and Development (ORID) provides a range of research management services to faculty, students and staff. As the University's central research administration unit, ORID facilitates increasing volumes of funded research and provides other research related services in the following areas:



Technology Transfer and Intellectual Property Services (TTIPS)

TTIPS leads the University's intellectual property and technology transfer activities and develops innovative mechanisms for engaging with industry.

- 3 patent applications processed.
- 12 intellectual property disclosures comprising of:
  - 8 invention disclosures and
  - 4 trademark disclosures.



Research Performance Services (RePS)

• Facilitates the evaluation and interpretation of research and related data to enhance UG's position in the World Universities Rankings.

- Capacity building for academic staff in identifying high impact publishing outlets.



Human and Animal Research Ethics Services (HARES)

The Institutional Animal Care and Use Committee (IACUC) is one of five (5) committees under HARES. HARES has processed;

- 1155 applications locally, and
- 80 applications externally, with **90%** success rate.



Capacity Development Services (CaD)

Facilitating grantsmanship training programmes for faculty. Providing support for:

- Elsevier Editors training on “Scopus Selection Criteria for Journal Indexing”.
- Facilitating staff training in research management trends and tools.



Publication, Dissemination and Translation (PDT)

PDT publicizes research and extends learning outcomes to key stakeholders and the public.

Research magazines and reports available at:  
<https://orid.ug.edu.gh/research-magazine>

<https://orid.ug.edu.gh/annual-research-report>



Pre and Post Award Services (PPA)

The PPA team provides research management services to faculty and staff by identifying and disseminating funding opportunities; enabling institutional support for grant applicants, facilitating proposal submission; monitoring and compliance of funded projects.



Accounts Office

The ORID Accounts office provides support services to Principal Investigators (PI's).

Services include budget preparation to secure funding, managing project funds, and adhering to the financial reporting guidelines of respective donors.

# UNIVERSITY OF GHANA COMPUTING SYSTEMS (UGCS)

The University of Ghana Computing Systems (UGCS) provides a range of IT services required to fulfil the University's research objectives. Our core IT infrastructure systems, tools, and services provide researchers with stable connectivity, administrative and academic computing end user support services. We deliver these innovative services through:

- The establishment and support for High Performance Computing (HPC) platform Infrastructure that provides credible and suitable Computing Power for conducting complex computing simulations and analysis by WACCBIP, WACCI, Physics and other units for quick turnaround research output on a world class scale.
- The establishment and management of fibre backbone connectivity; providing a reliable and high-speed internet access to all units in the University through the Ghanaian Academic and Research Network and Vodafone Ghana.
- The establishment, development, and support for Institutional Repository (IR) and availability of digitised research material for referencing by the research community, as well as storage and publication of research reports.
- The provision of relevant and targeted capacity building training in the use of statistical and research software tools for faculty, staff and students, to support research activities.
- The deployment of anti-plagiarism checker solutions to promote originality of research output.
- The provision of cyber security tools, solutions, and other collaborative applications to promote, protect and facilitate communication among UG researchers and their counterparts globally.
- Publication and maintenance of relevant information on UG's websites to enhance the visibility of UG Research output.



High Performance Computing (HPC) Platform

# ELECTRONIC RESOURCES FOR RESEARCH

## @ BALME LIBRARY

The Balme Library holds the repository of information resources for research with links to satellite libraries in Schools, Institutes, Centres, Departments and Halls of Residence.



### UG CAT

Lists the books and theses in the libraries . Can be accessed at <http://library.ug.edu.gh>



### ELECTRONIC BOOKS

Compilation of thousands of e-books by subject areas. Can be accessed at <http://balme.ug.edu.gh/index.php/research-tools/ebooks>



### RESEARCH GUIDES

Comprises of teaching, learning, and research resources compiled by subject librarians. Available at: <http://libguides.ug.edu.gh/?b=g&d=a>



### PAST EXAM QUESTIONS

Downloadable PDFs of past examination questions in all subject areas. Available at: <http://balme.ug.edu.gh/past.exampapers/>



### UG SPACE

Open access electronic achieve for the collection, preservation and distribution of digital materials. Available at: <http://ugspace.ug.edu.gh/>



### OFF-CAMPUS ACCESS

Provides off- campus access to the library's e-books and e-journal databases. Available at: <https://ezproxy.ug.edu.gh/>



### ARTICLE REQUEST

Request for an article not available in the Library's subscribed or free databases. Available at: <http://balme.ug.edu.gh/index.php/services/article-request-service>



### DATABASES QUICK A-Z

An alphabetical list of academic databases offering full-text articles, books, images and videos. Available at: <http://balme.ug.edu.gh/index.php/research-tools/databases-quick-a-z>



### ENDNOTE INSTALLATION

Software for managing your references. Available at: <http://balme.ug.edu.gh/index.php/research-tools/software-installation-request>



### RESEARCH COMMONS ROOM RESERVATION

Reserve a discussion room in the Research Commons (RC). Available at: <http://libcal.ug.edu.gh/booking/rcrooms>



### ASK A LIBRARIAN

Chat with a librarian online to help answer your questions. Available at: <http://balme.ug.edu.gh/chat/index.php/chat?locale=en&url=http%3A%2F%2Fbalme.ug.edu.gh%2F&referrer=>



### SEARCH ALL DATABASES

Search the UGCat and all academic databases simultaneously

# ORID

Phone : +233 303 930 436

Email : [orid@ug.edu.gh](mailto:orid@ug.edu.gh)

P. O. Box LG 571,  
University of Ghana, Legon

[orid.ug.edu.gh](http://orid.ug.edu.gh)