

ACE for Development Impact (ACE Impact)

2022 Annual Workplan Narrative

(to be submitted along with the attached detailed work plan and budget)

Name of Center	West African Centre for Cell Biology of Infectious Pathogens and Non-Communicable Diseases (WACCBIP + NCDs)
Institution	University of Ghana
Country	Ghana
Center Leader	Professor Gordon Awandare
Annual Workplan (Month – Month Year)	Jan-Dec, 2022

Narrative

1. **Center highlights in 2021** (maximum of 3 Highlights, maximum 100 words each). In a concise, descriptive statement suitable for public understanding, provide up to three Highlights from the Center accomplishments in the past year. You may attach: weblinks; press releases; photographs.
 - a) WACCBIP researchers and fellows have been actively involved in COVID-19 related research and national response activities since the beginning of the pandemic. The Centre's research work has been published in several high impact journals. Our research output has featured in various national, regional and global COVID-19 blogs, news articles, and policy briefs. Additionally, our work has gained the attention of several funding agencies who have approached us to provide support to expand our ongoing research projects.

<https://www.waccbip.org/news-events/news/waccbip-completes-additional-phase-of-covid-19-seroprevalence-study>

<https://wellcomeopenresearch.org/articles/6-173/v1>

<https://www.science.org/doi/10.1126/science.abj4336>
 - b) WACCBIP organized its 5th annual research conference from July 21-23, 2021. The three-day conference, under the theme "Building Sustainable Research Capacity in Africa: Lessons from the Pandemic, provided a valuable opportunity to create direct pathways for the young scientists trained at the Centre to connect with world-renowned scientists and industry professionals. It also gave trainees the opportunity to showcase their expertise in new scientific knowledge and novel applications of technology to better inform public health interventions as well as leading to the development of new disease diagnostic tools, drugs, and vaccines especially within

the context of the current COVID-19 pandemic. Global research leaders, including Professor Francisca Mutapi, Co-Director for Global Health Academy and Deputy Director of Tackling Infections to Benefit Africa (TIBA) partnership, University of Edinburgh; Professor Julian Rayner, Director of Cambridge Institute for Medical Research, University of Cambridge; and Professor Christian Happi, Director of African Center of Excellence for Genomics of Infectious Diseases (ACEGID), Redeemers University, presented keynote addresses to both in-person and virtual participants numbering over 350. As part of the conference, the Centre unveiled a new state-of-art next generation sequencing equipment, the NextSeq200, which was purchased to improve the teaching and learning environment under the ACE Impact project.

<https://www.waccbip.org/news-events/news/waccbip-holds-fifth-research-conference-sharing-lessons-from-the-pandemic>

<https://www.waccbip.org/news-events/news/waccbip-unveils-new-state-of-the-art-genome-sequencer>

2. **Key Center achievements in 2021** (Maximum 500 words) Describe the Key Accomplishments of the Center in the preceding Calendar Year. Focus on: Teaching, Research, Center-level Operations. In addition, comment on how the Accomplishments align with the ACE Impact project Disbursement Linked Indicators (DLIs) and the Center Implementation Plan.

COVID-19 research: Since the beginning of the COVID-19 pandemic in Ghana, WACCBIP researchers and fellows have been at the forefront COVID-19 related research and national response activities. Researchers have been sequencing the genomes of SARS-CoV-2 from travelers arriving in Ghana and local viral samples to track the strains circulating in Ghana. The Centre has also expanded the seroprevalence study to include the whole country. These studies were possible due to the improved research environment under the ACE I project, including the procurement of equipment for the establishment of advanced scientific technology platforms for Next Generation Sequencing, High Performance Computing, and Bioinformatics & Data management at the Centre. The Centre's COVID-19 research activities will contribute towards development impact (DLI 2) on the project.

Grant awards: Various funding agencies and collaborators have reached out to the Centre to submit proposals for funding based on the impact of our COVID-19 research. The Centre has received funding from the Rockefeller foundation, the UK's Foreign, Commonwealth & Development Office (FCDO), the Bill and Melinda Gates foundation and the Wellcome Trust, UK, to continue the ongoing seroprevalence study and sequencing work. These grants support ongoing research and training activities at the Centre, and will ensure the Centre's objectives are sustained beyond the ACE Impact

project. These grants will contribute towards externally generated revenue (DLI 5.1) and development impact (DLI 2) on the ACE Impact project.

3. **Status/Progress on Implementation** (Maximum 250 words) Describe in what ways, if any, the Center is ahead of schedule with respect to the Implementation Plan.

The Centre has made significant progress in achieving results on the ACE impact project with an overall 64% of all results achieved at mid-term. WACCBIP achieved the maximum 100% for DLR 5.1 (externally generated revenue) in the first year of project implementation. The Centre has currently achieved 72% for DLR 3.1 (New PhD students) and 75% DLR 3.3 (New Prof. Short Course Students). In addition, the Centre has achieved 94% for DLI 4.2 (publications).

4. **Plan for Acceleration** (Maximum 500 words) Describe in what ways, if any, the Center is behind schedule with respect to the Implementation Plan. How will the Center adjust to achieve the anticipated project deliverables by the conclusion of ACE Impact?

The ongoing COVID-19 pandemic impacted training activities at the Centre including student enrollment and internships due to the imposition of travel bans, and restrictions on gatherings. This led to a decrease in enrolment of regional students for long term programmes and internship placements during the year. Graduate student enrolment for the 2021/22 academic year at the University of Ghana which was due in August 2021 has been postponed to January 2022.

As COVID-19 restrictions were being eased, the Centre proceeded to organize several face-to-face and virtual workshops as most short courses for the previous year were cancelled. Additionally, students were gradually being accepted for internships by the first quarter of 2021. The Centre plans to engage more private sector institutions to ensure the internship target for the project is met.