



**African Union**  
Scientific Technical Research Commission



African Scientific  
Research and  
Innovation Council

## **AFRICAN SCIENTIFIC, RESEARCH AND INNOVATION COUNCIL**

# **Africa's Indigenous Knowledge to Preventing and Controlling Emerging Infectious Diseases on the Continent like COVID-19: Utilizing an Afro-centric Response**

## **Working Group Profile**

## **Introduction**

African Scientific Research and Innovation Council (ASRIC) is a specialized Technical Advisory Body on Science, Technology and Innovation (STI) to the African Union with African Union, Scientific, Technical and Research Commission (AU-STRC) as its Secretariat. The ASRIC was established through the African Union's Executive Council Decision (EX.CL/Dec.747 (XXII)) and it promotes scientific research and innovation in order to address the challenges of Africa's socio-economic development. It also mobilizes African research excellence and provides a platform for dialogue among African scientists and serves as a voice of the scientific community in building and sustaining continental research and innovation nexus.

Launching the ASRIC during its Congress in November 2018 was a land mark in the Science, Technology and Innovation impact on Africa's future and prosperity. The ASRIC Congress is composed of African scientists from all the African National Science Academies, National Research Councils, top Science, Technology and Innovations (STI) Institutes in Africa, Diaspora Scientists and Partners. The Congress decides on the implementation of key science and technology programme and projects in accordance with the Science, Technology and Innovation Strategy for Africa (STISA-2024) and the overarching continental framework AU Agenda 2063.

In light of the unprecedented emergence of the Corona Virus Disease Pandemic (COVID-19) ravaging the world the onus lies on ASRIC to respond to the challenges. The preliminary analysis of the impact of the COVID-19 on the continent and the world is magnanimous and must be contained urgently. Given the disposition that the African Union Network of Sciences has over 16,000 professional and experts' database who are members of the ASRIC. As of that ASRIC called upon its members from National Academy of Sciences of the AU Member States and assemble a working group to develop and implement **Afro-centric response to COVID-19 and other infectious diseases** building on the Africa's abundant indigenous knowledge rooted **in Africa's ethnographical and cultural characteristics without compromising global standards.**

Given the fact that our development in Africa should base on, and benefit from our **cultural, social, traditional determinants** thought processes, perspectives, and history of a continent that prides itself as the **cradle of civilization** in the world.



**Professor Kenneth Anchang YONGABI, PhD; D.Sc, ND**

Professor Kenneth Yongabi Anchang has a PhD in Public health (USA) with specialty in tropical infectious diseases (Infectiology). He is a staff at the department of Public Health, Faculty of Health Science at Imo State University, Nigeria. In his PhD thesis research work, he demonstrated an Afro-centric approach to the control and prevention of infectious diseases in Africa. Part of his thesis work was published in the UNESCO encyclopaedia of Life support systems as a scholarly chapter.

In his second PhD in Chemical Engineering with specialty in Public health and Environmental engineering, he developed simple plant based disinfectants against water borne pathogens. He served as an honorary fellow at the University of Wisconsin-Madison at the Knolls laboratory, Medical Microbiology and Immunology researching on a plasmodium-toxoplasmosis mouse model.

In his previous works, Prof Yongabi developed and brought in the terms for the first time in conventional literature; Phytodisinfectants, Phytocoagulants and Phytobiotechnology.

He has 19 years unbroken experience in research in phytomedicine, African Public health system, Antibiotic resistance, natural product antimicrobials, and African traditional medicines with several peer review and non refereed publications (more than 120, two books, 6 book chapters and more than 100 conference and invited key notes) in this domain. He is a doctor of naturopathic medicine and founder of an integrative medicine in Nigeria and Cameroon. He is adjunct professor of medical Biotechnology, Ebonyi State University, Abakaliki, Nigeria and visiting fellow centre for Global Health and equity, Swinburne University, Melbourne, Australia. Consults and collaborates for WHO AFRO on Health Literacy and traditional medicine.

Appointed expert committee member on Complementary and Alternative medicine development, chaired sub group on Naturopathic medicine, the group looked at the role of naturopathic medicine in the management of COVID-19, meeting held on March 6 -8, 2020 at the Federal Ministry of Health Complex, Abuja, Nigeria.

Appointed expert committee member for the development of first edition of the Nigerian Essential Herbal Medicine List (NEHML) of the Federal Ministry of Health, Abuja. He chairs Working Group 1.

Prof Yongabi has six licensed herbal supplements approved by Food and drug Nigeria (NAFDAC) ([www.stkbiotech.com](http://www.stkbiotech.com)) He gave a talk on a TV programme on NTA –Good Morning Nigeria showing casing the role of Alternative medicine in the management of COVID-19. [stkbiotech.com](http://stkbiotech.com) › [2020/03/27 › prof-kenneth-yongabi-on-nta](#)

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## **Phytobiotechnology Research Foundation (PRF)**

Phytobiotechnology Research Foundation (PRF) Africa (Central Africa) is a Non-Governmental organization registered with the Cameroon in Central Africa Government (CIG Reg. No: NW/GP/29/07/10856). Phytobiotechnology Research Foundation is a NON-Governmental research based organization, registered with the Cameroon government CIG Reg. NW/GP/27/07/10859 and 0068/E.29/1111/Vol.8/APPB and registered with the European UNION: Euroaid No: 958820266. It was registered in May 2007; registration is in accord with the Cameroon Government Provision of law No. 92/006 of August 14 and its decree of implementation No. 92/455/pm of November 23<sup>rd</sup>, 1992.

The Mission of PRF is to conduct research into the tropical infectious diseases with view to developing low cost drugs that would address endemic and pandemics like malaria, tuberculosis ,dysentery ,cancers, hepatic diseases/disorders, auto immune disorders, HIV/AIDS respectively in tandem with other areas of need as and when identified. PRF, for its eleven years of existence has developed research collaborative networks on an African approach to meeting health, food security and environmental needs. The networks expand to all the geographical nooks of Africa. Domicile in Bamenda, Cameroon in its permanent site, PRF has developed models based on an African approach to curbing diseases.

The staff: Two PhD holders with specialties in medical laboratory science who currently serve as research

fellows in screening medicinal plants and testing for antimicrobial activities; two laboratory technologists who work in the laboratory division. Two medical doctors who work on part time basis and are skilled in clinical trial monitoring. Four traditional doctors who work with PRF and advice on traditional knowledge and therapies.

PRF labs collaborates with Centre Pasteur laboratories in Yaoundé, other labs in Uganda, Kenya, Botswana, Namibia, Ghana, DR Congo, Angola. PRF works with different traditional groups and religious groups on harnessing afrocentric knowledge across Africa. **Mr Nkwenti Collins (Diaspora, Canada)** diaspora coordinates and drives diaspora participation on an African approach to development. **Mr Fru Ernesto (Diaspora, USA)** Digital technology liaison with more than 7 years experience in cataloguing traditional knowledge under the platform of PRF.

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**Mr. Gideon Adotey**

Gideon Adotey holds a Master of Philosophy Degree in Biochemistry from University of Ghana and lectures Clinical Biochemistry in the Science Laboratory Department of Accra Technical University with more than 20 years experience in teaching and research in drug development.

Gideon's research areas include evaluation of medicinal and functional food properties of mushrooms, development of food ingredients from mushrooms for animal feed, poultry and aquaculture and evaluation of immunomodulating effects of medicinal mushrooms. Other areas include molecular identification of Ganoderma species from the Lower River Basin of Ghana targeting the ITS and nLSU genes, chemical characterization of anticancer, antiviral and immunomodulatory compounds from Ganoderma species.

Adotey was the immediate past president of the Africa Society for Edible and Medicinal Mushroom Biology

(ASEMMB) and the organizing chairman for the 2nd Africa Conference on Edible and Medicinal Mushroom. Has experience in working with testing of plant extracts via bioassays and isolation of bioactive principles as well as undertaking clinical trials and product development in collaboration with a number of institutions within Ghana and in Europe and USA

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**Dr. Amira Adel Taha Abdel Aleem AL-Hosary**

Dr. Amira Adel Taha Abdel Aleem AL-Hosary, I'm an assistant professor of Infectious Diseases within the Department of Animal Medicine, Faculty of Veterinary Medicine, Assiut University, Egypt, specialized infectious diseases especially in the field of ticks and tick-borne diseases and worked on bovine theileriosis and babesiosis since 2007.

Completed her PhD through a scholarship available during the first phase of the African-German projects funded by DFG (2010-2013). Then continued as a post-doctoral researcher in the second phase of the same project (2015-2017) and finally, became the project co-applicant during the third phase (2018-2019). Through this, she built up my skills and a network with different German institutes and some African institutes. She conducted my research on anaplasmosis through a

post-doctoral scholarship provided to by the DAAD at FLI for six months and in Missouri University USA.

Also, she has worked on some bacterial and viral diseases of zoonotic importance like foot and mouth diseases, Salmonella, Staph, etc. Her institute is Assiut University is the second university constructed in Egypt and the first university in Upper Egypt and considered the mother University for All the Universities in Upper Egypt.

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### **Professor Percy Chimwamurombe**

Percy Chimwamurombe is a Full Professor of Biology in the Department of Natural and Applied Sciences at the Namibia University of Science and Technology. His areas of expertise are in Conservation Genetics, Plant Pathology, Host-Microbe Interactions, and Omics technologies. His current research focuses on harnessing ITK through studying various microbiomes of indigenous hosts (Eukarya and Bacteria) and conservation genetics which are within the Indigenous Knowledge research niche area of the Faculty of Health and Applied Sciences.

Professor Percy Chimwamurombe holds a BSc (Hons) in Biochemistry, MSc (Biotechnology) and obtained his PhD (Genetics) degree at University of Pretoria in South Africa in 2001. He did post-doctoral research in genetic modification of maize for antifungal resistance at the Department of Botany at University of Pretoria and University of Rome in Italy (2001-2). He has graduated 10 PhD and 23 MSc students who now are serving the scientific fraternity in various capacities. He has

attracted to Namibia research funding from international and regional agencies as well as being invited to present scientific papers world-wide. To date he has published over 90 peer-reviewed research articles and book chapters.

He is a fellow of the Zimbabwe Academy of Sciences and the Alexander von Humboldt Foundation. Percy Chimwamurombe has harnessed a strong relationship with the local farmers to develop marama bean into a climate-smart crop alternative. He is now innovating ways of making marama bean prototype products.

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**Mr. Enock Mac'Ouma**

Mr. Enock is an academic with vast experience in research and teaching. He is a lecturer of communication and specializes in communication for social change, communication for development and media studies. His previous experience includes linkages, partnerships and collaborations at local and global levels. He is an avid grant writer for collaborative research and rural development.

He is a PhD student in the University of New South Wales, Australia. He holds a Master Degree in Communications Studies, Bachelor of Arts degree in Education, Diploma in Education and a Certificate in Research and Evaluation in the NGO Sector, delivered by the Human Rights Education Associates – HREA, Netherlands.

Mr. Mac'Ouma is a member of the following professional associations: the Public Relations Society of Kenya (PRSK), Communication for Development Network (C4D Network), European Communication

Research and Education Association (ECREA), International Association for Media and Communication Research (IAMCR), Global Forum for Agricultural Research (GFAR) and the Public Communication of Science and Technology Network (PCST Network).

His research interests are in the following areas:

- (i) Development communication and communication for social change;
  - (ii) Community radio and community media for development and social change;
  - (iii) Public health communication;
  - (iv) Communication Theory.
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### **Dr. Joseph Nicolao Otieno**

Bsc, MSc. Forestry (Sokoine University of Agriculture), PhD Ethnobotany (University of Dar es Salaam). A Tanzanian born on 21<sup>st</sup> December 1966. Currently a Senior research fellow at the Institute of Traditional Medicines. Specialized in Forest management & Mensuration and Ethnobotany. Main duties include ethno biomedical surveys and medicinal plant conservation, agronomic and plant breeding research, consultancy and teaching of post graduate students. Have short term training in Research Methodology, effective Project Planning and Evaluation in Biomedical Research, biodiversity Information Sharing policy and IPR issues. He has published 6 articles in retrievable proceedings, 34 papers in regional and international peer reviewed journals, 4 book chapters and technical reports.

Post Doc Diploma in Herbarium data management from Florence University-Italy. Post Doc training in Identification of plant samples by means of genomics-

based DNA barcoding at Naturalis Biodiversity Centre-Leiden. Ongoing research projects: Annotated catalogue creation of indigenous flora and fauna in Dar es Salaam city funded by ICLEI and Non Detriment Findings of Sandalwood of East Africa funded by CITES International.

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**Prof. Ester Innocent (BSc. (Educ); MSc. (Chem.); PhD**

**Academic credentials and employment:** Prof. Innocent studies natural product chemistry at the Department of Chemistry of the University of Dar es Salaam. She is an employee of the Institute of Traditional Medicine (ITM) of the Muhimbili University of Health and Allied Sciences (MUHAS) since 2002 until todate serving at the rank of Associate Research Professor. She is active as supervisor for 5 PhD and 7 MSc students. She has over 45 publications in peer reviewed international journals [https://www.researchgate.net/profile/Ester\\_Innocent](https://www.researchgate.net/profile/Ester_Innocent)

**Research Interest:** Prof. Innocent research interest focus on bio-prospecting, Natural Products Chemistry, Biological testing with the goal of discovery of bioactive compounds for herbal medicines and botanical insecticides development through; a) field survey to discover and document ethnobotanical uses of plant species for control of diseases pests and vectors and

for treatment. b) Screening of different extracts from different parts of plants as well as pure compounds by using *in-vitro* and *in-vivo* models. c) Identifying distinct chemical markers in the active extracts, formulations or plant materials as basis for quality control in standardization of herbal medicines and botanical insecticides and d) Innovation and Intellectual property right in traditional medicine. She shares her knowledge and professional skills in a number of networks <https://www.campus-halensis.de/artikel/gastprofessorin-aus-tansania-sie-ist-eine-autoritat-vor-ort/>.

**Professional affiliation and assignments:** Prof Innocent is a member and/or served at different capacities in professional bodies as well as National, Regional and International technical committees such as Tanzania Chemical Society (TCS); IUPAC Organic and Bio-molecular Chemistry Division (III); The Natural product Research in Eastern and Central Africa (NAPRECA); The ARPPIS Scholars Association (ASA); The Tanzania Academy of Science (TAAS); The Chemist Professional Council; The academic committee of Traditional and alternative health practitioners council; The Public health and medicine of the Tanzania Commission for Science and Technology (COSTECH); and Traditional medicines technical committee (CDC 20) of the Tanzania standard bureau (TBS); the EAC Expert Working Group on Research, Innovation and Development of the EAHRC and the African Traditional Medicine Standards (THC-013) of the ARSO.

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