

BIOGRAPHICAL SKETCH

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NAME Ashano, Efejiro Erowho	POSITION TITLE Assistant Technical Officer, Molecular Diagnostics		
eRA COMMONS USER NAME (credential, e.g., agency login) EFEJIRO			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	MM/YY	FIELD OF STUDY
University of Jos, Nigeria	B.Sc.	05/05	Biochemistry
Covenant University, Nigeria	M.Sc.	05/15	Biochemistry and Molecular Biology (with Bioinformatics)
University of Applied Science and Arts, Hochschule Hannover, Germany		08/17	Clinical Research and Epidemiology
John Hopkins University, USA (via Coursera)	Specialization	03/18	Data Science (for Public Health)
Fogarty International Center National Institute for Communicable Diseases, South Africa		12/18	Computational Disease Modeling and Epidemiology Dynamics
Center for Infectious Disease Research and Evaluation		07/19	Implementation Science

A. Personal Statement

The broad goal of the proposed project is to test evidence-based implementation strategies for the improved management of cardiovascular disease and diabetes mellitus in people living with HIV in Nigeria. I have both expertise and motivation necessary to support carrying out this work.

Following my training in data science aided by my domain knowledge in the area, I have demonstrated my ability to provide innovative data-driven solutions to problems in public health. Examples include tools that improve retention in ART care and predict of 2nd line drug failure in patients. In this project, we will also adopt this approach to provide a cardiovascular disease risk assessment with an improved algorithm that is accurate for People Living with HIV. I have also designed and deployed real-time healthcare continuum monitoring systems which will be adapted for patient follow-up strategies that will be used in this project. My tutored and self-directed capacity development in implementation science and my natural tendency for research transitioning from an 11-year career in infectious disease investigations has also expanded my ability to

maximize efforts that systematically improve patient outcomes which will ensure a greater likelihood of success of the execution of this project.

Working as a technical officer in public health, I have built an expertise in both capacity building with mentoring and continuous quality improvement through mentoring activities directed at strengthening healthcare systems of the HIV continuum of care. This key experience is necessary for knowledge transfer of implementation strategies to healthcare workers required for this project. Carrying out implementing projects in different regions of Nigeria cutting across all tiers of healthcare, I also have a developed an essential capacity to tailor strategies to the different scenarios and terrains of the sites described in this proposal. Lastly, my work and achievements as a part of agency and nation-wide multidisciplinary teams with other healthcare professionals and partners including the Centers for Disease Control towards achieving UNAIDS 90-90-90 goals have further provided me with requisite collaborative skills also needed to achieve project goals that guarantee the improvement patient outcomes.

In summary, I have demonstrated my technical ability for structured innovative implementation research and my experience in developing healthcare systems to improve health outcomes of people living with HIV which are important attributes for the effective execution of this project.

B. Positions and Honors

Positions and Employment

2008-2015	Scientific Officer, Department of Molecular Biology and Bioinformatics, NABDA Abuja Nigeria
2013-2018	Research Assistant, Covenant University Bioinformatics Research Group, Ota Nigeria
2015-2018	Head, Immuno-Vaccine Development Unit, Medical Biotechnology, NABDA, Abuja Nigeria
2018-	Assistant Technical Officer, Molecular Diagnostics, APIN Public Health Initiatives, Nigeria

Other Experience and Professional Memberships

2012-	Member, International Society of Computation Biology
2012-	Member, African Society for Bioinformatics and Computational Biology
2013-2015	Secretary, Regional Student Group, International Society of Computational Biology
2015-	President, Regional Student Group, International Society of Computational Biology
2018-	Member, African Society of Laboratory Medicine

Honors

2013	Travel fellowship, Casablanca, Morocco, International Society for Computational Biology
2014	Node Accreditation for Genome Wide Association Studies, NIH/H3AbioNet
2014	Regional Student Group Grant Award, International Society for Computational Biology
2016	Regional Student Group Grant Award, International Society for Computational Biology
2016	Travel fellowship, Florida USA, International Society for Computational Biology
2017	Nominated Chair, Student Council Symposium Africa 2017 (Entebbe, Uganda)

C. Selected Peer-reviewed Publications (Selected from 10 peer-reviewed publications)

Most relevant to the current application

1. Ashano, E. *et al.* (2016) 'Cluster analysis of Plasmodium RNA-seq time-course data identifies stage-specific co-regulated biological processes and regulatory elements.', *F1000Research*. Faculty of 1000 Ltd, 5. doi: 10.12688/f1000research.9093.1.
2. Shome, S. *et al.* (2016) 'ISCB-Student Council Narratives: Strategical development of the ISCB-Regional Student Groups in 2016.', *F1000Research*. Faculty of 1000 Ltd, 5. doi: 10.12688/f1000research.10420.1.
3. Jongeneel, C. V. *et al.* (2017) 'Assessing computational genomics skills: Our experience in the

H3ABioNet African bioinformatics network', *PLOS Computational Biology*. Edited by F. Ouellette. Public Library of Science, 13(6), p. e1005419. doi: 10.1371/journal.pcbi.1005419.

4. Mulder, N. J. *et al.* (2017) 'Development of Bioinformatics Infrastructure for Genomics Research', *Global Heart*. Elsevier, 12(2), pp. 91–98. doi: 10.1016/J.GHEART.2017.01.005.

Additional recent publications of importance to the field (in chronological order)

1. Rafael, C. N. *et al.* (2017) 'Highlights of the second ISCB Student Council Symposium in Africa, 2017.', *F1000Research*. Faculty of 1000 Ltd, 6. doi: 10.12688/f1000research.13463.1.

D. Research Support

Ongoing Research Support

NU2GGH002098 Okonkwo (PI) 10/01/17-09/30/22

Improving Comprehensive AIDS Response Enhanced for Sustainability (iCARES)

National HIV response through service delivery and technical support and partnership with evidence generation funded by the Department of Health and Human Services/Centers for Disease Control and Prevention.

Role: Assistant Technical Officer

D43TW010934-01A1 Ofotokun (PI) 04/15/19-03/31/24

Emory-Nigeria HIV Research Training Program (EN-RTP)

Enhancing the capacity and the quality of researchers focused on HIV health issues relevant to women in Nigeria.

Role: Assistant Technical Officer

U24HG006941 Mulder (PI) 08/15/12-06/30/22

H3ABIONET: Informatics Solutions for H3Africa

H3ABioNet, a pan African bioinformatics network for H3Africa, is tasked with building bioinformatics capacity for genomics research against a backdrop of high disease burden, limited resources, poor internet and a large gap in bioinformatics skills in Africa.

Role: Research Assistant

Completed Research Support

14-230 RG/BIO/AF/AC_G Adebisi (PI) 12/11/14-07/11/16

Preclinical Evaluation of Novel Computational-aided Designed Compounds as Antimalarial Drug Candidates

TWAS Research grant to establish effective antimalarial drug alternatives by testing the toxicology of compounds identified by computational aided approaches and their drug efficacy against resistant Plasmodium strains.

Role: Research Assistant