

CURRICULUM VITAE

DR. FRANCIS BALUNGNAA DHARI VERIEGH

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AREAS OF RESEACH INTEREST:

The application of vast expertise in vector biology, medical entomology and parasitology, and molecular genetic tools for monitoring drug efficacy and assessments of parasitological responses in *Onchocerca volvulus*, Lymphatic Filariasis, Malaria, Leishmaniasis and other Neglected Tropical Disease (NTD) agents to chemotherapeutic agents. Development of molecular diagnostic tools (genetic markers) for improved and efficient diagnosis of infectious disease-causing agents and application of Geographic Information System (GIS) for effective surveillance and monitoring NTDs.

PERSONAL DETAILS:

NAME	Francis Balungnaa Dhari Veriegh
BATE OF BIRTH	22nd December, 1980
MARRITAL STATUS	Married
NATIONALITY	Ghanaian
PROFESSION	Medical Entomology and Parasitology
LANGUAGES SPOKEN	English, Dagara, Twi

EDUCATION

2013-2020	Kwame Nkrumah University of Science and Technology (KNUST), Kumasi	August 2020	PhD Entomology
2007-2010	University of Ghana, Legon,	June 2010	MPhil Entomology
2002-2006	University of Ghana, Legon	May 2006	BSc Zoology

Workshop and Other Training

1. 2016: A five-day training workshop on “Real-Time PCR Training Workshop for Detection of Parasites and Pathogens of Infectious Diseases”. Held on 14-18, May, 2016 at CSIR-Water Research Institute, Accra, Ghana

2. 2013: A two-day Conference on “Moving Towards the Holistic Protection of Human Participants”- The Voice of Research Participants. Held on 27th – 28th November 2013 at CSIR-STEPRI, Accra Ghana.
3. 2013: A twelve-day training workshop on “Presentation, Writing and Grantsmanship Skills for Research in Neglected Tropical Diseases (NTDs)”. Held on 29 April-18 May, 2013 at West African Centre for International Parasite Control (WACIPAC), Noguchi Memorial Institute for Medical Research (NMIMR), University of Ghana, Accra, Ghana
4. 2012: A twelve-day training workshop on “Introduction to Data Analysis for NTDs using R Statistical Software”. Held on 14-25 May, 2012 at West African Centre for International Parasite Control (WACIPAC), Noguchi Memorial Institute for Medical Research (NMIMR), University of Ghana, Accra, Ghana
5. 2011: An eighteen-day training workshop on “Epidemiology, Transmission Dynamics, and Control of Vector-borne and NTDs”. Held on 19-20 May 2011 (Module I) at CSIR-Water Research Institute, Accra and 30 May-14 June 2011 (Module II) at West African Centre for International Parasite Control (WACIPAC), Noguchi Memorial Institute for Medical Research (NMIMR), University of Ghana, Accra, Ghana

WORKING EXPERIENCE

POSITIONS HELD

- 2021** **Lecturer, Department of Basic and Applied Biology, School of Science, University of Energy and Natural Resources.**
- 2010-2020** **PhD Student/Principal Research Assistant**
 Council for Scientific and Industrial Research (CSIR).
 Water Research Institute, Biomedical and Public Health Research Unit.
 Accra, Ghana.
- 2007-2010** **MPhil Student/Research Assistant**
 Noguchi Memorial Institute for Medical Research, University of Ghana.
 Accra, Ghana
- 2006-2007** **Teaching Assistant**
 Department of Animal Biology and Conservation Science.
 University of Ghana, Accra, Ghana.

MAJOR RESEARCH PROJECTS PARTICIPATED

Research Projects Participated

2011-2014 Transmission, control and feasibility of elimination of human onchocerciasis in Ghana. Funded by Royal Society and Leverhulme Trust, UK

2010-2013 Development of genetic markers for early detection and monitoring of ivermectin resistance in *Onchocerca volvulus* and its implication for onchocerciasis control. Funded by European Foundation Initiative for Neglected Tropical Diseases (EFINTDs).

Research Conducted

Graduate training

1. **PhD Thesis Title:** Impacts of semi-annual ivermectin treatment and the spatio-temporal distribution and abundance of *Simulium damnosum* sensu lato vectors on the transmission of *Onchocerca volvulus*.
2. **MPhil Thesis Title:** Studies on the transmission of onchocerciasis in the Mpohor-Wassa East District, Ghana following five years of mass drug administration with ivermectin and albendazole

Undergraduate Training

3. BSc Thesis Title: Determination of mosquito population abundance, breeding ecosystem and sporozoite infection rates at the Noguchi Memorial Institute for Medical Research

WORKSHOPS AND TRAINING PARTICIPATED

1. One day Workshop on Ecohealth: Adapting to effects of climate change on onchocerciasis. Held at Kintampo, Ghana on August 11, 2011. Sponsored by International Development Research Center of Canada.
2. Short course on Laboratory management and safety techniques held at Microbiology and Parasitology Laboratory, Water Research Institute on February, 2010.
3. One day training programme organized by Human Resources Division and Centre for Professional Development on Examination Policy and Results Management in the University Students Information System (USIS) held University of Energy and Natural Resources, 10th September, 2021.
4. One day Workshop for senior members on the new criteria for appointments and promotions, University of Energy and Natural Resources on 20th October, 2021.
5. One day workshop on test construction and examination quality Assurance held at University of Energy and Natural Resources on 1st November, 2021.

6. A three day workshop on Research Proposal Writing (SEAL-IT) held online at Kumasi Centre for Collaborative Research (KCCR) by SEAL-IT organizers from 6th to 8th December 2021.

COMMITTEES AND BOARDS

1. Department Representative on the Academic Board of the University of Energy and Natural Resources.
2. Reviewer for Committee for Human Research and ethics (CHRE)
3. Department Representative on the School of Science Webometric Committee
4. Department Coordinator for the Science, Technology, Engineering and Mathematics (STEM) Festival, University of Energy and Natural Resources.
5. Department Coordinator for in-school student industrial attachment, University of Energy and Natural Resources.
6. Postgraduate Committee of School of Science, University of Energy and Natural Resources
7. Examination Officer for Department of Biological Sciences, University of Energy and Natural Resources
8. Quality Assurance Committee, School of Science, University of Energy and Natural Resources
9. Distance Learning Committee of the School of Science, University of Energy and Natural Resources
10. Webometrics Committee of the School of Science, University of Energy and Natural Resources
11. Book and Publication Committee of the School of Science, University of Energy and Natural Resources
12. Member of School of Science Board, University of Energy and Natural Resources.

RESEARCH PUBLICATIONS

1. Minetti C, Pilotte N, Zulch M., Canelas T, Tettevi EJ, **Veriegh FBD**, Osei-Atweneboana MY, Williams SA, Reimer LJ. (2020). Field evaluation of DNA detection of human filarial and malaria parasites using mosquito excreta/feces. PLoSNegl Trop Dis 14(4):e0008175.<https://doi.org/10.1371/journal.pntd.0008175>.
2. Millicent Captain-Esoah, Philip Kweku Baidoo, Kwadwo K Frempong, Delphina Adabie-Gomez, Joseph Chabi, Dorothy Obuobi, Godwin Kwame Amlalo, **Francis Balungnaa Veriegh**, Martin Donkor, Victor Asoala, Eric Behene, Daniel Adjei Boakye, Samuel Kweku Dadzie, Biting

Behavior and Molecular Identification of *Aedes aegypti* (Diptera: Culicidae) Subspecies in Some Selected Recent Yellow Fever Outbreak Communities in Northern Ghana, *Journal of Medical Entomology*, Volume 57, Issue 4, July 2020, Pages 1239–1245, <https://doi.org/10.1093/jme/tjaa024>.

Article submitted and under Review:

1. **Francis B.D. Veriegh**, Samuel Armoo, Philip K. Baidoo, Adelaide Agyeman, Michael D. Wilson¶, Daniel A. Boakye¶, Robert A. Cheke5, Maria-Gloria Basáñez, Mark Taylor, Mike Y. Osei-Atweneboana (2019). Feasibility of onchocerciasis elimination in Ghana: seasonal variations in biting periodicity, vector densities and parous rates of *Simulium damnosum* sensu lato in and around areas showing sub-optimal response to ivermectin treatment. Submitted to Journal of Medical Entomology.

2. **Francis, B. D. Veriegh**, Samuel, K. Armoo, Philip, K. Baidoo, Adelaide Agyemang, Michael, D. Wilson, Daniel, A. Boakye, Nana-Kwadwo Biritwum, Robert, A. Cheke, Maria-Gloria Basáñez, Mark Taylor, Roger K. Prichard, Mike, Y. Osei-Atweneboana. (2019). Entomological evidence of suppression of *Onchocerca volvulus* transmission after six rounds of biannual ivermectin treatment including areas showing sub-optimal responses to ivermectin: Implications for onchocerciasis elimination in Ghana. Submitted to PLoS NTD.

3. M.J.R. Hall, D. Martín-Vega, B. Clark, D. Ghosh, M. Rogers, **F. B. D. Veriegh**, A Tetteh-Kumah, M.Y. Osei-Atweneboana and R. A. Cheke. Micro-CT imaging of *Onchocerca* infection of *Simulium damnosum* s.l. blackflies and comparison of the peritrophic membrane thickness of forest and savannah flies.

CONFERENCE ABSTRACTS SUBMITTED

1. **Francis BD Veriegh**, Maria-Gloria Basáñez, Samuel Armoo1, Michael D Wilson, Daniel A Boakye, Robert A Cheke, Mark Taylor, Mike Y Osei-Atweneboana (2015). The impact of four years of semi-annual ivermectin treatment on transmission of *Onchocerca volvulus* and the feasibility of onchocerciasis elimination in some Ghanaian communities. Held at American Society of Tropical Medicine and Hygiene Annual Meeting, Pennsylvania, UAS, 25th – 29th October 2015.
2. Millicent Captain-Esoah, James Owusu-Kwarteng, Martin Bonu-Ire, Fortune Akabanda, Martin N. Donkor, Elijah A. Dakorah, Kwadwo K. Frempong, **Francis B. D. Vereigh**,

Samuel Dadzie, Maxwel Appawu, Daniel Adjei Boakye (2015). Response of mosquitoes to ovitraps set in different Coloured containers at their natural breeding Sites and the bio-insecticidal activity of *Bacillus* spp on mosquito larvae. Held at American Society of Tropical Medicine and Hygiene Annual Meeting, Pennsylvania, UAS, 25th-29th October 2015.

REFERENCES

Prof. Philip K. Baidoo

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