Molecular Virologist and Entomologist
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Professional experience

Since -August 2022: Visiting Assistant Professor at The College of Wooster, Wooster, USA.

- Literature searches and experimental designs
- Mosquito surveillance and population genetics (DNA isolation, PCR and sequencing, Bio-informatic analyses)
- Mosquito-borne viruses and evolution (RNA isolation, RT-PCR, RACE, qPCR, sequencing, bio-informatic analyses)
- Mentoring of undergraduate student research
- Teaching in introductory molecular biology and genomics sections

May2020-August 2022: Adjunct Professor, Post doctoral researcher and Research technician at The College of Wooster, Wooster, USA.

- Literature searches and experimental designs
- High Performance Liquid Chromatography/mass spectrometry and analysis of proteins
- Mosquito-borne arboviruses and reproduction studies (Microscopy techniques and PCR)
- Molecular and genomic characterization of seminal fluid proteins (RNAseq, RT-qPCR, and Bioinformatics)
- Virus discovery and arbovirus screening (Bioinformatics and RT-PCR)
- Mentoring of undergraduate student research
- Teaching in introductory molecular biology laboratory sections
- Cell culture overview and discussion

Since-August 2019: Consultant at International Institute for Tropical Agriculture (IITA), Cotonou, Benin.

- Mosquito-borne diseases and arboviruses testing
- Insecticide resistance and viral infections in mosquitoes
- Mentoring of graduate students

July 2019-Feb 2020: Postdoctoral researcher at the Kansas State University, Manhattan, KS, USA.

- Molecular characterization of viruses**:** DNA/RNA purification, qPCR, PCR, sequencing, RNAseq, cloning.
- Interaction endosymbionts and viruses: qPCR and statistical analysis
- Bio-informatic analyses and RNAseq: Trimming (Trimmomatic), Mapping (Bowtie2, STAR, HISAT2), Differential expression (HTseq and DESeq2).

April 2015-June 2019 / Scientist at the Institut Pasteur in Paris, France

- Used molecular tools to characterize insect-specific viruses and arboviruses of malaria vectors
- Designed primer for RNA interference, classical PCR and real time PCR (Taqman and SYBR Green)
- Carried out and analyzed sequencing RNA experiment
- I deciphered the evolution between insect specific viruses and arboviruses
- Cell culture and virus quantification

May-December, 2013 / Assistant Engineer at the University of Strasbourg, France

- Produced transgenic and mutant malaria vectors by using a new tool called the CRISPR/Cas9 mutagenesis through molecular Biology (Cloning, PCR), Immunology and genetic techniques (micro-injection, crossing species)

April 2010-November, 2012 / Medical entomologist of Ministry of public health-Cameroon in the project entitled ‘‘Impact of insecticide resistance on the efficacy of LLINs in the North of Cameroon ’’

- Mosquito larva collection, ELISA, dissection and evaluation of parity rate, infection rate of malaria parasites, evaluation of insecticidal and larvicidal effects of plants extracts. Establishment of SOPs. Wrote technical reports.

Education

2015-2018: PhD in Life Science Complexity, Sorbonne University, Paris, France.

• PhD thesis on Anopheles viruses (RT-qPCR, RNAseq, de novo assembly of viruses, virus discovery and Evolution).

2008-2011: Master’s degree in Biochemistry - Biotechnology and Development / Medical entomology, University of Yaounde I, Cameroon.

• Master’s thesis on malaria transmission: Mosquito collection, Bioassays, *Anopheles* identification, Parity, Infection rate (ELISA) of malaria parasites and Anopheles competence analysis.

2005-2008: Bachelor’s degree in Biochemistry, University of Yaounde I.

• Electrophoresis, Chromatography, Biomolecule properties and structures, Nutrition

Ferdinand

Agriculture (IITA), Cotonou, Benin.

Cristian Amesbury: 2022-2023. Interactions between viruses and Wolbachia. Presented in Partial Fulfillment of the Requirements of Senior Independent Study (Bachelor), at The College of Wooster, Ohio, USA.

Adams Tomoka: 2022-2023. Molecular ecology and population genetics of *Aedes japonicus*. Presented in Partial Fulfillment of the Requirements of Senior Independent Study (Bachelor), at The College of Wooster, Ohio, USA.

Alex Delong: 2021-2022. The virome of Aedes japonicus and Culex spp., collected in Wooster, Ohio, USA.

Since 2021/ Reviewer for International Journal of Environmental Research and Public Health

2020/2022 : Guest editors for insects : Special issue ‘‘Applied Insect Reproductive Biology’’