# AFRICAN INITIATIVE FOR BIOINFORMATICS ONLINE TRAINING IN NEURODEGENERATIVE DISEASES (AI-BOND)

BRAIN RESEARCH AFRICA INITIATIVE

Online Training (Zoom) | December 4, 2023 | June 30, 2024 | Free Participation

Training the Next Generation of African Scientists in State-of-theart Bioinformatic and Epidemiologic Methods in Neurodegenerative Diseases

Bioinformatics
R, Python, SAS
HPC Programming
Biostatistics
Genetic Epidemiology
Genomics
Epigenomics
Epigenomics
Metabolomics
Neurodegenerative Diseases



To Submit your Application Scan the QR code or visit



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### AFRICAN INITIATIVE FOR BIOINFORMATICS ONLINE TRAINING IN NEURODEGENERATIVE DISEASES (AI-BOND)



Murali Sargurupremraj, PhD **Assistant Professor, UT Health San** Antonio (USA)



Bernard Fongang, Ph **Assistant Professor, UT Health** San Antonio (USA)



Associate Professor, BRAIN & University of Garoua (Cameroon)



Dec. 4, 2023 | June 30, 2024 **Free Online Training (Zoom)** 

**FACULTY** 

Application deadline: Sept. 30



Xueqiu Jian, PhD Assistant Professor, UT Health San Antonio (USA)



Associate Professor, Huntington Medical Research Institutes, Pasadena (USA)



Jayandra Himali, PhD Associate Professor, UT Health San Antonio (USA)



Abdon Atangana, PhD

**Professor, Institute of Groundwater Studies** (South Africa)



Alfred K. Njamnshi, MD, MA, DMS, FMH

Professor, BRAIN & The University of Yaoundé I (Cameroon)

To Submit your Application Scan the QR code or visit

PLANNING COMMITTEE: Emmanuel EPENGE, MD; Yembe NJAMNSHI, MD; Cyrille Nkouonlack, MD; Biniyam Ayele, MD

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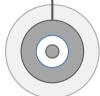
#### **AI-BOND TIMELINE**

Sept. 30, 2023

**Application Deadline** 

Dec. 4, 2023

Start Date for the Training



Screening



**Course Preparation** 



Training + Projects



Manuscripts

June 30, 2024

End of the Training Graduation

#### Nov. 15, 2023

Final list of Trainees

#### **AI-BOND TRAINING MODULES**

#### **PROGRAMMING**

- Introduction to Programming
- Introduction to R, Python, LinuxIntroduction to HPC Computing
- Connecting and Submitting jobs on HPCs





#### NEURODEGENERATIVE DATABASES

- Query online neurodegenerative databases
- Selecting the right data and quality control
- Data visualization
- Statistical approaches

#### **GENETIC EPIDEMIOLOGY**

- Performing genome-wide association studies (GWAS)
- Performing meta-analysis of GWAS
- Whole-genome sequencing analysis





#### **OMICS**

- Performing transcriptomics analysis (RNA-seq, scRNA-seq,.)
- Performing epigenomic analysis (DNA-Methylation)
- Conducting Microbiome Studies
- Conducting Metabolomics Studies

RESEARCH PROJECT MATURATION AND PUBLICATION



#### **GRADUATION**

CERTIFICATE OF PARTICIPATION (BRAIN CONSORTIUM)