

**African Institute
of Biomedical
Science & Technology**



Certificate of Competence

Presented to

Robert Tsuma

in Recognition of Completing the Course


Pharmacogenetics of Drug Metabolism

22 - 26 June 2009

Nairobi, Kenya

2.2

Grade


Masimirembwa

Dr. Collen Masimirembwa
President & Chief Scientific Officer, AIBST



**University
of Nairobi**



Prof. Anastasia Guantai
Director, AIBST-UON Lab.

Workshop content

Theory

- Pharmacogenetics in the discovery, development and clinical use of medicines
- Pharmacogenetics of ADME genes in African populations
- HPLC/UV and LC/MS applications in drug discovery research and clinical drug analysis
- Molecular biology - a pharmacogenetic perspective
- Bioethical considerations in Pharmacogenetics research
- Fundamentals of HPLC drug and metabolite analysis and HPLC method validation
- Sample collection and preparation for bioanalytical analysis
- Pharmacokinetics and Bioanalytical basis of probe drug selection - Pros and Cons of probe drugs and cocktails used for phenotyping studies
- Fundamentals and Optimization of PCR Conditions.
- Terminologies and technologies of genetic polymorphism studies
- Sample Collection, DNA preparation and storage
- *In vitro* and *in silico* methods of identifying and addressing metabolism of new chemical entities by polymorphic enzymes

Practicals

- CYP2B6 phenotyping: HPLC determination of efavirenz in plasma
- Bioinformatics and Statistical evaluations of genotype data
- NAT-2 genotyping: PCR-RFLP based allele specific determination of variants

Grades: ≥ 80 = First Class (1.0), 70-79 = Upper Second Class (2.1)

60-69 = Lower Second Class (2.2), 50-59 = Third Class (3.0)

$< 50\%$ = Attendance