

Research

Completed Research

- Spectrophotometric analysis of Lumefantrine-Chloranilic acid charge-transfer complex.
- Determination of physicochemical properties of Lumefantrine.
- Simultaneous spectrophotometric analysis of trimethoprim and sulphamethoxazole via charge-transfer complexation reaction with chloranilic acid.
- Epidemiological survey on hypersensitivity to sulphonamides in over a thousand (>1,000) respondents.
- Genotyping of the N-acetyltransferase enzyme 2 (NAT2) in over five hundred (>500) Nigerians including one hundred (100) HIV-positive patients.
- Phenotype analysis of NAT2 in over three hundred (>300) Nigerian volunteers using two probe drugs: dapsone and caffeine
- Pharmacokinetics of dapsone, a NAT2 substrate drug in Nigerians.

Research in-progress

- Epidemiological genotyping of detoxifying genes (GSTT, GSTP, GSTM) and CYP2C9 drug metabolizing enzyme in Nigerians
- Protocol development for genotype-phenotype correlation of plasma concentration of dolutegravir in HIV-positive Nigerian patients
- Development of point-of-care testing for monitoring adherence to dolutegravir

Research Support

OA Kotila (Awardee)

2013

NIH D43 Re-entry Grant

This fund enabled me travel to Zimbabwe to acquire skills in use of high-throughput equipment – LC/MS/MS in quantifying drugs in bio-matrices (plasma and urine). This followed my being a recipient of the University of Chicago Global Health Pre-doctoral Fellowship.

Role: Graduate researcher

OA Kotila (Researcher)

2014

TETFUND Academic Staff Training and Development Fund (AST&D)

This fund enabled me travel to a south African country to train in use of liquid chromatography-mass spectrometer (LCMS) for analysis of drugs and metabolites in biological matrices. This is needed for pharmacokinetics studies that I am carrying out to complement pharmacogenetics results already obtained

Role: Graduate researcher

CP Babalola (PI)

2011 - 2016

Centre for Drug Discovery, Development and Production (CDDDP) in University of Ibadan.

The rationale for this project is to establish a Centre that will serve as a platform for training, research and development in the area of drug discovery, development and production (DDDP) to meet the needs of Nigeria and Sub-Saharan Africa. This is needed because access to medicines in Nigeria and Sub-Saharan Africa is currently limited by imports.

Role: Investigator

OA Kotila (Researcher)

2017

Thomas-Bassir Biomedical Foundation Small Research Grants

Many populations have reported on homozygous deletions, leading to loss of activity in the two genes: GSTM1 and GSTT1 and these deletions have been strongly associated with development of solid tumors, including lung, larynx, and bladder cancer, especially when linked with absence of other enzymes or

prolonged exposure to carcinogens, such as tobacco. Studies have shown the interrelated effects of NAT2 and GSTs on induction of certain cancers due to loss in detoxification activity. This grant will therefore enable me investigate if such relatedness exists in Nigerians.

Role: Early researcher