MAKERERE UNIVERSITY COLLEGE OF HEALTH SCIENCES,
DEPARTMENT OF PHARMACOLOGY AND THERAPEUTICS

DRUG DEVELOPMENT: FROM RESEARCH TO PERSONALISED MEDICINE (Basics and applications of Pharmacometrics and Pharmacogenetics)

Pharmacokinetics and Pharmacodynamic modeling involves the application of mathematical and statistical tools in the analysis and interpretation of data produced in pre-clinical and clinical trials to provide insights into the processes which control the time course of drug concentrations and clinical, pharmacologic and toxicological responses as well as investigate and predict the changes in disease status as a function of time.

Pharmacometrics is an evolving science that has transformed and continues to improve the way research and drug development is done. It offers a competitive advantage especially to pharmaceutical industries desiring faster and more efficient research methods and finds wide application at all stages of drug development from preclinical studies to post marketing surveillance. With pharmacometric processes and methodologies increasingly becoming standardised, this skill is no longer the preserve of specialised academicians. This training will open the door to this field.

Pharmacogenitcs ; the study of how genes affect an individuals response to drugs is a relatively new field that has rapidly progressed over the last few years. Genes are responsible for coding of proteins such as enzymes that are involved in different biochemical pathways through which drugs are metabolised and eliminated.

Course Description: A Seven day course focusing on Principles of Clinical Pharmacology, PK/PD modeling and Pharmacogenetics facilitated by experts in academia, drug evaluation and regulation and the pharmaceutical industry involving lectures, hands on sessions and presentations.

DATE 30th June to 8th July 2016

PLACE KAMPLA, UGANDA, MAKCHS Dean's conference room

TOPICS

- Clinical Pharmacology and the role of PKPD modelling
- Pharmacokinetics, Pharmacodynamics and Pharmacogenetics
- Fundamentals of biostatistics, modelling and simulation.
- Mathematical description of Pharmacokinetic and Pharmacodynamic models
- Implementing models using software (NONMEM and R)

TARGET GROUP Graduate students, Professionals and researchers in clinical pharmacology, pharmaceutical sciences, drug regulation, applied mathematics and computer science, Biomedical sciences and engineering.

N.B. Participants must carry their own laptops.
Maximum number of participants --20

REQUIREMENT

Submit a statement of intent indicating your background and how you would benefit from the course to
jk.mukonzo@chs.mak.ac.ug
and copy to
aidakawuma@gmail.com

APPLICATION DEADLINE
15th May 2016

FEES

Ugandan Participants
100 US $

International Participants
200 US $

KEY FACILITATORS

Dr Ene I. Ette: The CEO of Anoixis corp has over 26 years of broad experience in academia, drug evaluation and regulation, and the pharmaceutical industry. He is a fellow at the American colleges of clinical Pharmacology and clinical pharmacy. He was a consultant to FDA from 1998 to 2001. In 1999 he was the recipient of the American College of Clinical Pharmacy's prestigious Russell Miller Award for outstanding contributions to the clinical pharmacy literature. He is the primary editor of the classic pharmacometrics reference text, Pharmacometrics: the Science of Quantitative Pharmacology.

Dr Jackson K Mukonzo: Is the head of department of Pharmacology and Therapeutics at Makerere University College of health sciences. He has researched and written extensively on genetic variability in the African population with a particular focus on how this affects HIV treatment with drugs such as Efavirenz .

Dr Jogarao Gobburu: Is a Professor with the School of Pharmacy and the School of Medicine, University of Maryland, Baltimore, USA. He held various positions at the US FDA between 1999 and 2011. Under his leadership, a Division of Pharmacometrics was formed at the FDA and several policies established. He is a world recognized scientific leader in the area of quantitative disease models and their application.

Dr Eleni Aklillu: Is a Senior research scientist and research group leader at the division of Clinical pharmacology, Karolinska Institutet, Sweden Stockholm. She is a member of the Strategic Advisory Committee for European and Developing Countries Clinical Trial partnership (EDCTP). She is currently involved in several studies focusing on pharmagonetics and PK/PD drug interactions and their effects on adverse events and treatment responses in HIV/AIDS and Tuberculosis.

Dr Joel S. Owen: Prior to joining Union University as Associate Professor of Pharmaceutics, Dr. Owen served as a PK/PD Scientist and most recently as director PK/PD at Cognigen Corporation in Buffalo, New York. While at Cognigen he led scientific initiatives, performing pharmacokinetic and pharmacodynamic modeling and analysis. Prior to that, he served as Senior Pharmacokineticist at MDS Harris, Inc. in Lincoln, Nebraska and Senior Pharmacokineticist and Assistant director at Mylan Pharmaceuticals in Morgantown, West Virginia.

Dr Livingstone Lubobi: Is a professor of biomathmatics at Makerere University College of natural sciences. He has extensive experience in modelling the dynamics and effects of diseases such as; HIV/AIDS, Malaria, TB, Trypanasomiasis and dengue fever. He is formally the vice chancellor of Makerere University.

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