

**Development in pharmaceutical, drugs, testing, analysis and techniques****James Oppong Antwi**

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The pharmaceutical industry discovers, develops, produces and markets drugs for use as medications to be administered to patients with the aim to cure them, vaccinate them or alleviate the symptoms. Undisputedly, the number of drugs introduced into the market is increasing every hour. These drugs may be new entities or structural modification of already existing ones. Time lags are however placed on these drugs (based on the wider usage and reports of newer toxicities) in order to develop and introduce better drugs using new analytical chemistry techniques.

Analytical chemistry (chemical assay) deals with methods for identification, separation and quantification of the chemical components of natural and artificial materials. The choice of analytical technique is based on many factors such as; chemical properties of the analyte and its concentration sample matrix, the speed and cost of the analysis, type of measurement (quantitative or qualitative) and the number of samples. For instant a qualitative method yields information of the chemical identity of the species in the sample. While a quantitative method provides numerical information regarding the relative method of one or more of the analytes in the sample.

Drug testing as in its technical analysis capitalizes on how biological specimen (for example urine, blood, hair, breath, oral fluid and more) is used to determine the presence of specified parent drug or their metabolites. However, the test of drug depends on multiple factors (drug class, amount and frequency of use, metabolic rate, body mass age and more). For example heroin and cocaine can be detected for a few hours after use, but their metabolites can be detected for several days in urine. On the other hand, newer entities of drugs are tested using computer models and skin cells growing using human stem cell in laboratory, and then passed on to be tested on animal in the second part of a preclinical drug trial after it has passed the first stage and then finally used in human clinical trial.

In conclusion, development in pharmaceutical, drugs, testing and techniques involves a stream of processes involving discovery, product characterization, (formulation, delivery, packaging development), (pharmacokinetics and drug disposition), (preclinical Toxicology testing and IND application), bioanalytical testing and clinical trials.

**Biography**

James Oppong Antwi born on 10<sup>th</sup> October 1986 has completed his MSc in Bio-Chemistry at the Kwame Nkrumah University of Science and Technology in the year 2016. He is a Research Scientist at the Garden City University College, Kumasi. He has published more than twenty paper in reputed article and has been serving as an editorial board member of reputed.

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