Fundamentals of Pharmacokinetics for the Non-Specialist

6-week online course | Next intake begins 4 November 2019

Module 1: Fundamentals of Pharmacokinetics

Learning Outcomes

- Role of PK
- Absorption
- Distribution
- Metabolism
- Excretion
- Disposition

Module 2: Pharmacokinetic Analysis

Learning Outcomes

- First and Zero Order Processes
- Non-compartmental Analysis
- Compartmental Analysis
- Elimination Half-life
- Clearance
- Volume of Distribution

Module 3: Drug-Drug Analysis

Learning Outcomes

- Definitions of Drug Interactions
- Drug Metabolism
- Enzyme Inhibition and Induction
- Reaction Phenotyping
- Study Design
- Transporter Interactions

Module 4: Regulatory Guidelines

Learning Outcomes

- PK Results Presentation
- Individual and Mean PK Profiles
- Variability in PK
- Crossover Study Design
- Statistical Analysis
- Sample Size Calculation
- First In Man Guideline
Module 5: PK/PD Studies

Learning Outcomes

- Single and Multiple Dose PK Studies
- Linear PK
- Absolute and Relative Bioavailability, Bioequivalence
- Food Effect study
- Biomarkers
- Direct vs Indirect PK/PD
- Hysteresis

Module 6: Pharmacokinetics of Biologics & Population Pharmacokinetics

Learning Outcomes

- Definitions of Biological Drugs
- Biological Drugs ADME
- PK of Biological Drugs Guideline
- Fundamental of Population PK
- Role of Population PK
- Application of Population PK