

# safescimet course 3.1 - Biochemical and Molecular Toxicology

(03–07 July 2017, Amsterdam)

A unique opportunity to broaden your knowledge of drug discovery and development with special emphasis on drug safety.

safescimet offers an outstanding faculty of academic and industry experts and an interactive programme, including case studies from the pharmaceutical industry providing a broad understanding of the latest developments in safety sciences.

## 3.1 - Biochemical and Molecular Toxicology: Biotransformation, Bioactivation and Adverse Drug Reactions

Face to Face: 03-07 July, 2017, Amsterdam, The Netherlands

The course looks closely at biochemical and molecular aspects of toxicology especially concentrating on bioactivation processes, drug interactions and resulting ADRs. Polymorphism in genetic factors and idiosyncratic drug toxicity are also given some attention. Special emphasis is given to the biological effects of metabolites (cellular targets and defence systems) and potential safety concerns. Participants will receive an understanding how pharmacokinetic effects (bioactivation, biotransformation) impact drug safety, interrogate experimental approaches and review case studies.

### Key Subjects

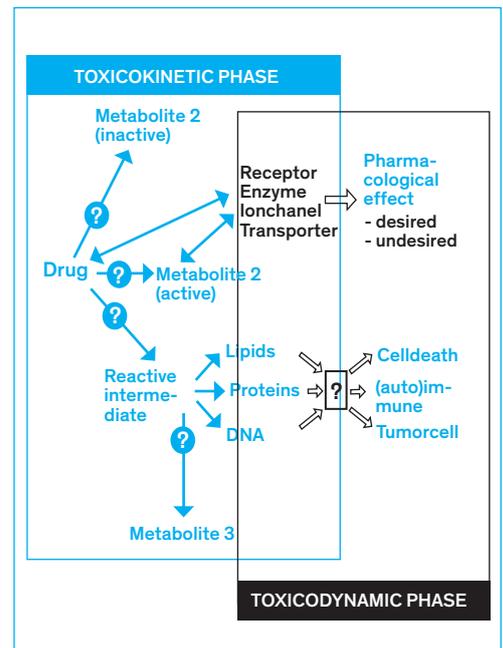
- ADME studies and how they are integrated into drug development
- Role of drug metabolism in pharmacokinetics, toxicology and clinical adverse drug reactions
- Current regulatory guidance on metabolites and drug interactions
- Biotransformation of drugs in general but with an emphasis on active, reactive and disproportionate metabolites
- Enzymology of drug metabolising enzymes and role of genetic factors
- Drug interactions and adverse events resulting from induction or inhibition of human enzymes/transporters
- Cellular targets of reactive metabolites and resulting toxicological consequences
- Constitutive and inducible defensive systems against reactive metabolites
- Hypotheses concerning molecular mechanisms underlying idiosyncratic drug reactions

### Learning Outcomes

- Identify individual drug metabolising enzymes involved in bioactivation and inactivation reactions
- Recognise circumstances where the body's handling of a drug might be altered resulting in changes to either its safety or efficacy profile
- Identify safety concerns resulting from active, reactive, and disproportionate metabolites
- Apply strategies to mitigate risks which consider closely the latest regulatory guidance on metabolites and drug interactions
- Propose biochemical / molecular mechanisms for specific types of toxicity
- Interrogate experimental approaches and integrate ADME studies into development plans

[Link to apply to this course](#)

Deadline for registration 15 June 2017



### Course Organisers



**Dr Jan N M Commandeur**  
Section of Molecular Toxicology,  
VU University, Amsterdam, NL



**Andrew Harrell**  
GSK, Park Road, Ware, Herts. UK Basel,  
Switzerland

### Participant Feedback

The teachers availability was really good.

It was a two way communication during the lectures.

