



Sveriges lantbruksuniversitet  
Swedish University of Agricultural Sciences

# SLUkurs

## Syllabus

**PVS0080 Introduction to Quantitative pharmacology, 2.0 credits**

## Syllabus approved

2012-07-15

## Subjects

Biomedical science

## Education cycle

Third cycle

## Grading scale

Pass / Failed

The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

## Language

English

## Prior knowledge

PhD student in veterinary pharmacology, veterinary medicine, molecular biosciences, translational and comparative medicine or similar background.

## Objective, including learning outcomes

To gain insight in basic principles of quantitative pharmacology (pkpd) and relate them to current topics in translational research. The course is tailored for a broad

audience in mind and focuses on concepts.

## **Content**

Quantitative pharmacology (toxicology) is vital if we are to attempt to relate preclinical results to the acute or long term consequences in humans or domestic animals. The debate on whether preclinical findings can be translated to human usage or across different non-human species is still engaging scientists across industry, academia and regulatory bodies. The intention of this course is to demonstrate how pharmacokinetics (what the body does to the drug) and pharmacodynamics (what the drug does to the body) are interrelated. By deliberately, intimately and systematically integrate these disciplines, our understanding of drug and the efficiency and effectiveness of drug discovery/development may be greatly enhanced. The first two days will contain lectures covering introduction to quantitative pharmacology, biomarkers, principles of kinetics from a pharmacodynamic point of view, plasma protein binding, rapid- and slow concentration-response equilibria, and inter-species scaling. These topics are then practiced in smaller project groups. Each student is expected to have read the relevant parts of the course book before each meeting and to present a 15 min seminar day 3 of the course.

## **Requirements for examination**

Successful completion requires minimum 100% attendance, active presentation and discussion during meetings, and completion and oral 15 min presentation of a course assignment relating the contents to current topics in his/her own research.

## **Additional information**

The course is arranged within SLU's Research School in Translational and Comparative Medicine (TCM; [www.slu.se/tcm](http://www.slu.se/tcm)) and will be held in Uppsala between 12-13th November 2012 with a follow-up session on the 10th of December 2012. A detailed schedule will be distributed prior to the first meeting.

For additional information contact Johan Gabrielsson at SLU, Department of Biomedical Sciences and Veterinary Public Health, Division of Pharmacology and Toxicology

**Responsible department**

Department of Clinical Sciences