

Welcome letter- course in Biologicals

A warm welcome to this course in Biologics with a focus on protein-based drugs. We are really looking forward to seeing you on Thursday the 30th of September. The course will run primarily on campus although some lectures might be via zoom.

Our mission with this course is to introduce you the field of biologics and to also guide you in how you develop a protein-based drug. We will provide you with lectures that focus on development aspects of the drug as well as challenges with both the development phase and the drugability of the molecule. We also aim to give you lectures that provide you with the current clinical use of antibody-based drugs. To guide you in your learning around protein-based drug development we will have a theoretic lab throughout the course.

The course will be held entirely in English. The course literature is Protein Therapeutics by Tristan Vaughan, Jane Osbourn and Bahija Jallal. It is available as a one-day loan at the UU library and as an online book.

Layout

The first few days, the two courses 3FB025 and 3FB028 are run separately. This is due to your different backgrounds and learning outcomes. After these days, the two courses are run together as one.

Theoretic lab

The aim of the theoretic lab is to design a new biological drug that targets a brain disease, and the most important thing with the lab is to gain an understanding of each step rather than succeeding with the design.

The lab will take a lot of time which is why we have scheduled time for you to work on your own outside lectures. You will do the lab together in small groups. We know from experience that it is difficult to take other courses at the same time as this one due to this assignment.

Cases and seminars

We will also work with two case seminars. Case seminars are different from problem-based learning and requires an active participation and that you have done your best to read-up and think about the material you have been handed out. These sessions are mandatory.

The first case seminar will be either an immunology seminar for the master students and chemical engineering students or an introduction to bioinformatics for the pharmacy students. The understanding of immunology and bioinformatics is important for the development of biological drugs and we know that the course participants will have different backgrounds. The second case is a joint case for all students. It is scheduled towards the end of the course and focuses on research questions regarding biological drugs.

Visit at the Testa Center

In the middle of the course, you will get a tour of TESTA center, which is a facility run at Cytiva and is specialized in producing and analysing protein based biological drugs. This has been a very appreciated part of the course and it is mandatory to join the tour.

Exam

The exam will be a home exam and will focus on your ability to demonstrate a deeper understanding of different aspects of Biologics. If you have actively participated in the Theoretic lab and the Case and if you have comprehended what you have done you will have learned a most of what is needed for the exam. We will ask some of the invited lecturers to provide a question as well but the main focus of the course is on the theoretical lab and the case.

Although we have run the course a few times now, there will inevitably be some things that can be changed and improved on for future runs of the course. If there are things, in any part of the course, that you believe could be improved we are grateful if you would let us know.

We are very much looking forward to the course and aim to give you the insights into the diversity of biologics and an overview of the potential gains and drawbacks there is with these drugs.

Best regards,
Greta, Sara and Sofia

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