



DEPARTMENT OF MEDICINE, SOLNA

K2F2705, Basic Inflammation, 3 credits (hec)

Basal inflammation, 3 högskolepoäng

Third-cycle level / Forskarnivå

Approval

This syllabus was approved by the The Committee for Doctoral Education on 2023-11-01, and was last revised on 2024-09-19. The revised course syllabus is valid from spring semester 2025.

Responsible department

Department of Medicine, Solna, Faculty of Medicine

Prerequisite courses, or equivalent

Documented knowledge about basic concepts of innate and adaptive immunity (e.g. immunology course during undergraduate education)

Purpose & Intended learning outcomes

Purpose

This course will give a general and broad overview knowledge in the field of inflammation. Ability to think critically will be encouraged during discussions and group work.

Intended learning outcomes

After the course, the participant will be able to:

- Explain basic inflammatory processes, components of inflammation and the mechanisms of resolution and tissue repair.
- Analyze and compare acute and chronic inflammation in the context of chronic inflammatory diseases.
- Describe examples of animal models used in inflammation research

Course content

The course provides the current concept of inflammation and consists of two parts. Part 1 will cover the basic mechanisms and mediators of inflammation (host defence peptides, coagulation, complement, alarmins, lipid mediators, the acute phase proteins, inflammatory cells), non-resolving inflammation, resolution of inflammation. Part 2 will discuss the common and specific features of inflammatory diseases (sepsis, chronic inflammatory diseases), animal models of inflammation, role of genetic and environmental factors, anti-inflammatory treatment. At the end of the course the students will present projects and write web-based exam.

Forms of teaching and learning

Lectures, journal clubs, small-group work with a project, discussions and the project presentation, studying the course literature. The course is full-time for six days separated into two parts and also includes the non-scheduled time (32h) between the parts for the project work including meetings with mentors and the course literature studies.

Language of instruction

The course is given in English

Grading scale

Pass (G) /Fail (U)

Compulsory components & forms of assessment

Compulsory components

The participants must attend the seminars, critical reviews of papers and the oral exam (presentation). Absence has to be compensated for by assignments in agreement with the course leader within 4 weeks from the absence.

Forms of assessment

Presentation of the project selected from assigned topics based on the course seminars. Critical evaluation and discussion of the other participants' presentations.

Course literature

Recommended course literature: Chapters of Book Fundamentals of Inflammation (Cambridge University Press) and published review state-of-the-art articles within the relevant research area.