



## DEPARTMENT OF MEDICINE, SOLNA

### **K2F2705, Basic Inflammation, 3 credits (hec)**

Basal inflammation, 3 högskolepoäng

*Third-cycle level / Forskarnivå*

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#### **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**

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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.