



## DEPARTMENT OF MEDICINE, SOLNA

### **K2F5749, Cytokines in Inflammation, 3 credits (hec)**

Cytokiner vid inflammation, 3 högskolepoäng

*Third-cycle level / Forskarnivå*

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#### **Approval**

This syllabus is approved by the The Committee for Doctoral Education on 2023-12-28, and is valid from Spring semester 2024.

#### ***Responsible department***

Department of Medicine, Solna, Faculty of Medicine

#### **Prerequisite courses, or equivalent**

Knowledge in immunology corresponding to course "Basic Immunology" is required

#### **Purpose & Intended learning outcomes**

##### **Purpose**

The aim of the course is to enable an increased understanding of the function of cytokines in the context of a healthy immune system and in different disease contexts.

##### **Intended learning outcomes**

At the end of the course the participant should be able to:

- select adequate experimental methods to analyse cytokines based on specific scientific questions.
- present and discuss the relevance of cytokines in the context of their research project.
- compare and contrast the function of cytokines in different organs and different diseases.
- explain how a disease can be treated with drugs targeting cytokines.
- hypothesize future treatment of a disease, where the modification of a cytokine pattern is the target.

#### **Course content**

The course contains lectures on the roles of cytokines in health and disease. Different

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methodologies for analysis of cytokines will be covered by theoretical and practical sessions.

## **Forms of teaching and learning**

The course is partly theoretical, partly practical, where lectures, research seminars and laboratory demonstrations are integrated. Time is also allocated for discussing lab results and the content of the lectures. Practical laboratory sessions will be conducted in small groups.

### *Language of instruction*

The course is given in English

## **Grading scale**

Pass (G) /Fail (U)

## **Compulsory components & forms of assessment**

### **Compulsory components**

All activities included in the course are compulsory. Absence needs to be compensated by an assignment in agreement with the course coordinators.

### **Forms of assessment**

The participant has to:

- actively participate in the discussions during the course and show that the learning outcomes of the course are reached by the end of the course
- prepare a group presentation of a selected topic on the course's content and in the context of their own research project. The presentations will be evaluated by the course organisers. Every student will be assessed individually.

## **Course literature**

Subject-specific literature (relevant cutting-edge scientific papers) will be distributed during the course. For basic immunological knowledge one of the following textbooks should be referred to for information regarding different cell types and cytokines: 'The Immune System' - Parham; 'Immunobiology' - Janeway; 'Immunology' - Kuby