Level: bachelor

Course title: BASIC MOLECULAR AND CELLULAR IMMUNOLOGY

Status: elective

ECTS: **5**

Requirements: none

Learning objectives

To study the fundamental mechanisms of immune system on the molecular and cellular level.

Learning outcomes

Students will be able to understand and describe the basic mechanisms of the immune system functions on molecular and cellular level, as well as to acquire the ability to understand the scientific hypothesis and experimental results in immunological investigations.

Syllabus

Theoretical instruction

Functional organisation of the immune system. Recognition of antigens. Maturation, activation and regulation of lymphocytes. Effective mechanisms of the innate and adaptive immune response. Immune system in disease (immune response against tumors and against diseases which are caused by immune response).

Practical instruction

Isolation and cultivation of the lymphocytes. Immunisation. Determination of the ABO-Rh blood groups. Quantitative analysis of antigens. Antigen detection in cells and tissues. Work on the short scientific project in the field of molecular and cellular immunology.

Seminars

Short presentation of the specified topics connected to a student's Master thesis.

Weekly teaching load				Other:
Lectures: 2	Exercises: 2	Other forms of teaching:	Student research: 1	