

Program of Study : General Medicine
Course : Medical Immunology
Abbreviation : KIM/VAB12
Schedule : 14 hours of lectures
 12 hours of exercises
Course Distribution : 5th term, 3th year
Number of Credits : 3
Course Form : Seminars and tutorials

Seminars:

Teachers: prof. MUDr. Mgr. Milan Raška, Ph.D.
 doc. MUDr. František Mrázek, Ph.D.
 doc. Ing. Eva Kriegová, Dr

Time: 9:15 – 10:45
Room: LLH - Left Lecture Hall

	Termín	Téma	Vyučující
1	18.2.2019	Introduction, history of immunology, innate immunity mechanisms	prof. MUDr. Mgr. Milan Raška, Ph.D.
2	4.3.2019	Mechanisms of specific immunity - humoral immunity, antigen, mucosal immunology, epithelial barriers.	prof. MUDr. Mgr. Milan Raška, Ph.D.
3	18.3.2019	HLA system, antigen processing and presentation, interactions between specific and innate immunity.	prof. MUDr. Mgr. Milan Raška, Ph.D.
4	1.4.2019	Mechanisms of specific immunity – cellular, NK cells	prof. MUDr. Mgr. Milan Raška, Ph.D.
5	15.4.2019	Cytokines and other factors involved in immune regulation.	doc. Ing. Eva Kriegová, Dr
6	29.4.2019	Immune defense against infection and cancer.	prof. MUDr. Mgr. Milan Raška, Ph.D.
7	13.5.2019	Hypersensitivity reactions as a mechanisms of immune-associated pathologies, final test.	doc. MUDr. František Mrázek, Ph.D.

Tutorials:

Teachers : prof. MUDr. Mgr. Milan Raška, Ph.D.
doc. MUDr. František Mrázek, Ph.D.
doc. Ing. Eva Kriegová, Dr.

Time: 8:00 – 10:15

Room: FN ALE - Library of the Department of Immunology (building F)

prof. Raška doc. Kriegová doc. Mrázek

Group	Dates
A	12.2., 19.2, 26.2., 5. 3.
B	12.3., 19.3., 26.3., 2. 4.
C	9.4., 16.4., 23.4., 30.4.

Topic

I. Cellular Immunity

prof. MUDr. Mgr. Milan Raška, Ph.D.

Indication for laboratory examinations, processing of biological specimens. Laboratory diagnostics of immunodeficiencies I, examination of lymphocyte subpopulations, test of lymphocyte blastic transformation, testing of phagocytosis, laboratory diagnostics of allergic diseases – total and specific IgE, demonstration of selected methods in laboratory.

II. Humoral Immunity

prof. MUDr. Mgr. Milan Raška, Ph.D.

Laboratory diagnostics of immunodeficiencies II, examination of antibodies concentration and complement components, complement function tests. Autoimmunity, autoantibodies testing.

III. Molecular biology methods in Immunology, next generation sequencing

doc. Ing. Eva Kreigová, Dr.

Examination of gene mutations and polymorphism in clinical practice, principles of sequencing and other molecular biological methods, clinical examples, interpretation in diagnostics.

IV. HLA typing, ensuring of histocompatibility for transplantations, association of HLA with diseases

doc. MUDr. František Mrázek, Ph.D.

HLA typing – serological and molecular biology approaches, testing of anti-HLA antibodies, immunological aspects of transplantation of solid organs and stem cells, ensuring of histocompatibility match between donor and recipient, HLA-associated diseases.

The tutorials includes excursions into the clinical laboratory, each student must have the coat, slippers and a identification card (badge) !!

Completed by: Credit

Requirements: 100% attendance on all seminars and tutorials, > 80% of the points in the **final test is required** to obtain the credit.

Literature: Rabson A, Roitt IM, Delves PJ: Really Essential Immunology