Dear Medical Student!

You have recently registered for the course of „Immunology" offered for the first semester of Academic year 2017/2018. I would like to inform you about the requirements of this course.

Lectures

Lectures will be held from week 1 through week 3, four lectures a week and week 4 through week 14, three lectures a week.

Week 1-3

Location: Dept. of Pediatrics Lecture Hall

Time:

- Thursday: 09:00-10:00

Week 1-14

Location: Theoretical Building

Time:

- Monday: 15:00-16:00
- Thursday: 13:00-14:00 (9:00-10:00 in the first three weeks)
- Friday: 14:00-15:00

Lectures include subject areas of both basic and clinical Immunology

- Lectures of weeks 1-3: Essential immunology. Basic concepts, definitions
- Lectures of weeks 4-8: Functions of the innate and the adaptive immune systems; immune recognition and effector mechanisms.
- Lectures of weeks 9-14: Clinical immunology, immunopathology.

Lecture materials and other information concerning education can be found on our website at www.immunology.unideb.hu by clicking the link "For Students"; and at https://elearning.med.unideb.hu/ after login you have to go to:

1. Course categories: Faculty of Medicine – Department of Immunology.
2. Choose the course, which curriculums you want to study and enrol yourself in the course.

On Both website access to lecture material (downloads) will require an ID and a password.

- ID: *your eduID*
- Password: *your eduID password*

Seminars, practices

The main goal of the 2 hrs seminar sessions held on weeks 1-11 is to review and discuss the material of the lectures given on the previous week. The task of the first seminar will be to discuss the material of Lecture 4 *(The structure of lymphoid tissues and organs, tissue stem cells).*

Practices will be organized on weeks 12-14. Practices will start with a 20-30 min consultation about the material of previous weeks' lectures.

Signing of the Lecture Book:

Participation in the Seminars and the Practical Courses is compulsory. The Department shall refuse to sign the students' Lecture book if he/she is absent from more than two seminars or practices (altogether) during semester. However, students can make up for a missed seminar or practice with another group; yet, only on the same week. Making up for a seminar should be communicated to both seminar teachers prior to the seminar.

Changing of the seminar group is allowed only during the first two weeks of the Semester and requires permission from the Department. For permission please write to *Dr. Gábor Koncz* (responsible for

educational affairs) or to *Prof. Tamás Bíró* (Head of Department). Hand in your letter to *Andrea Rácz Dajkáné* in the department's office (room 2.207).

Self control tests (SCTs), offered grades, end-term exam:

During the semester three self control test (SCT) will be organised (weeks 5, 10 and 14).

- The first SCT *on week 5* contains the material of the lectures of weeks 1-3 as well as the material of seminars on weeks 1-4. To ensure a solid basic knowledge of immunology, students must score higher than 70% to qualify for the 2nd and 3rd SCT, hence for an offered grade.
- The 2nd *on week 10* and 3rd SCT *on week 14* contains the material of lectures 4-8 and 9-13, respectively including the materials of the corresponding seminars and practices.

If a student's score for the first SCT is higher than 70% and the score of the second and third SCT one by one is higher than 50%, she/he will be offered a grade. Should student accept this offered grade, she/he will be exempted from the end-term exam.

The offered grades are calculated by the following algorithm, based on the cumulative percentage points of the three SCTs (i.e. 300 points maximum).

- 170 - 204: pass (2)
- 205 - 239: satisfactory (3)
- 240 - 269: good (4)
- 270 - 300: excellent (5)

Those students who have not qualified for an offered grade must take the end-term exam during the exam period. The end-term exam consists of a written and an oral part.

- "A" exam: To qualify for the oral part of an "A" exam, students must score higher than 70% on the written (entry) exam. Students who score less than 70% on the written part will fail (thus, the oral exam will not take place).
- "B" exam: "B" exams are identical to "A" exams except when the student failed the oral, but not the written, part of the "A" exam. With a score of higher than 70% on the written part of the "A" exam, the student is exempt from the written exam on the "B" exam.
- "C" exam: "C" exams are oral exams only, without a written entry test.
- Those students who would like to improve the grade of a successful ("A" or "B" exam) or do not accept the offered grade, are also exempted from the entry test.

SCT dates, time and syllabus
Test I: week 5 - Thursday, 12th of October 7:00 pm
Test II: week 10 - Thursday, 16th of November 6:30 pm
Test III: week 14 - Thursday, 14th of December 6:30 pm

Syllabus for the Test I.:

- Elements of the immune system and their role in defense against pathogens.
- Components and cells of the innate response.
- Characteristics and function of the innate immune response.
- The structure of lymphoid tissues and organs.
- Structure and function of proteins encoded by the major histocompatibility (MHC) gene complex.
- Processing and presentation of antigens.
- T-lymphocytes.
- Requirements and consequences of T-cell activation.
- B- lymphocytes. Characteristics of the acquired immune response.
- An introduction to antibody structure and function.
- Lymphatic circulation, immune surveillance by re-circulation of immunocytes within the immune system.
- Inflammation and the acute phase response.

Syllabus for the Test II.:

- Recognition of pathogens by the innate arm of the immune system.
- Elimination of pathogens by the innate arm of the immune system.
- The complement system.
- Generation of B-cell receptor diversity.
- Antigen-independent differentiation of B-lymphocytes.
- T-cell development. Central tolerance.
- Antigen presenting cells.
- Effector function of helper T-cell.
- Activation and function of cytotoxic T-lymphocytes.
- Mechanisms of peripheral tolerance. The function of regulatory T-cells.
- Antigen-dependent differentiation of B-lymphocytes.
- B-cell activation, Production of various antibody isotypes and their functions.
- The primary and secondary immune response.
- The development of immunological memory.

Syllabus for the Test III.:

- Monoclonal antibodies. Active and passive immunization.
- Infectious diseases, HIV.
- Congenital immunodeficiencies I (B-cell deficiencies).
- Congenital immunodeficiencies II (T-cell deficiencies).
- Tumor immunology. Tumor antigens and immune response to tumors.
- Escape mechanisms of tumors, suppression of anti-tumor responses. Approaches to overcome tumor-induced tolerance mechanisms. A hope for cancer immunotherapy.
- Hypersensitivity reactions, Type I hypersensitivity (Allergy).
- Hypersensitivity reactions, Type II-IV hypersensitivity.
- Mechanisms of the development of autoimmune diseases.
- Characteristics of the organ-specific autoimmune diseases.
- Characteristics of the systemic autoimmune diseases.
- The immune response associated with tissue and organ transplantation.
- Immunological aspects of Immune reconstitution. Hematopoietic stem-cell transplantation.
- The immune response to extracellular pathogens.

On behalf of the Faculty and Staff of the Department of Immunology I wish you a pleasant Semester and success with your studies!

Sincerely,

Dr. Tamás Bíró
Professor and Chair,
Department of Immunology

8th September 2017.