Level: master

Course title: Steroid Biochemistry-higher course (IB-513)

Status: elective

ECTS: 6

Requirements: none

Learning objectives

Provide students with a balanced and extended knowledge of the biosynthetic routes and the physiological effects of certain classes of steroids. Develop in students the ability to alter the known methods and apply them to solve problems in the field of biochemistry of steroids. To enable students to plan and carry out experiments to process the results and discuss them critically.

Learning outcomes

After successful completion of the course the student is able to:
1. Explain the role of various groups of steroids in physiological and/or pathological processes.
2. Explain the role of endogenous and exogenous factors in the changes in the biosynthesis and/or action of steroids.
3. Demonstrate the interconnections between the individual classes of steroids
4. Critically represents their view on the importance of certain steroids and feasibility of using the commercial products in therapeutic or other purposes.
5. Choose the relevant scientific literature and prepare a presentation on the topic.
6. Modify existing methods by performing tests to quantify the physiological effects of steroids and critically interpret the results.

Syllabus

Theoretical instruction

Class of steroids: sterols, vitamin D, steroidal sapogenines, steroidal alkaloids, cardiac glycosides, bile acids, progestins, corticosteroids, androgens, estrogens: metabolism, mode of action and physiological effects, regulation of biosynthesis. Compounds that modify the synthesis or action of certain classes of steroids.

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