Level: bachelor

Course title: Biochemistry of Steroids, IB-408

Status: elective

ECTS: 5

Requirements: none

Learning objectives

Provide students with broad and balanced knowledge of the biosynthetic routes and the physiological effects of certain classes of steroids. Develop practical skills necessary for understanding and independent solving problems and issues in the field of steroid biochemistry using a standard methodology.

Learning outcomes

After successful completion of this course, the student is able to: 1) describe the structure of certain classes of steroids and the processes by which they are synthesized, 2) explain the role of certain classes of steroids in plant and /or animal organisms, 3) to explain the regulation of metabolic pathways of biosynthesis and action of certain steroid group, 4) describe the impact of some substances on the biosynthesis / or action of steroid molecules, and 5) apply standard experimental methods used in the study of metabolism, 6) Analyzes the relationship between the action of steroids and etiology of human disease and potential use of steroid therapy.

Syllabus

Theoretical instruction

Biosynthesis, structure, metabolism, mechanism of action and physiological effects of certain classes of steroids: sterols, vitamin D, sapogenines, steroid alkaloids, cardiac glycosides, bile acids, progestins, corticosteroids, androgens, estrogens. Compounds that modify the synthesis or action of certain classes of steroids (e.g. inhibitors of steroidogenic enzymes; antihormones; xenoestrogens).

Weekly teaching load				Other:
Lectures: 3	Exercises: 2	Other forms of teaching:	Student research:	