Level: PhD

Course title: Pharmacozoologicals – bioactive molecules of animal origin (DSB622)

Status: elective

ECTS: 15

Requirements:

Learning objectives

The goal of this course is to acquire integrated knowledge of the metabolic fate, chemical structure, biological and medical significance of different compounds of animal origin (poisons isolated from frogs, snakes (venomes), lizards, spiders, bees and wasps toxins, hormones, pheromones). The aim of this course is to introduce the diversity of certain classes of compounds of animal origin as a source of biologically active substances through history (traditional Chinese medicine, Ayurveda, traditional medicine of South American tribes) up to the modern pharmacy and medicine.

Learning outcomes

It is expected that students after completing the course gain broad knowledge of the chemical diversity (sterols, proteolytic enzymes, iridoids, cardiotonical glycosides, etc.), metabolic fate, distribution, and implementation of various compounds of animal origin in contemporary pharmacotherapy (anticoagulants, antibiotics, cytostatics, hormones ...).

Syllabus

Theoretical instruction

The chemical structure, classification and distribution of certain classes of bioactive substances through the animal kingdom - from Coelenterata (jellies) and molluscs, to certain groups of vertebrates. Biological functions. Chemotaxonomic and phylogenetic significance. Pharmacological activity and application of traditional and contemporary pharmacotherapy.

Practical instruction

Practical lessons will follow the program of lectures.

Weekly teaching load				Other:
Lectures: 5 (75)	Exercises:	Other forms of teaching:	Student research: 5 (75)	