

Course title Wykład dyplomowy - Aktywność biologiczna i synteza glikopeptydów i ich prekursorów/Diploma lecture - Biological activity and synthesis of glycopeptides and their precursors		ECTS code 13.3.0437	
Name of unit administrating study			
Studies			
Field of study	Type	Form	
Chemistry	Bachelor	Full-time studies	
Teaching staff Prof. dr hab. Adam Prahl			
Forms of classes, the realization and number of hours		ECTS credits	
A. Forms of classes, in accordance with the UG Rector's regulations Lecture		30 h classes 5 h consultation 15 h student's own work	
B. The realization of activities Classes in the didactic room		TOTAL: 50 h - 2 ECTS	
C. Number of hours 30 h lecture			
The academic cycle Third year, summer semester			
Type of course optional subject		Language of instruction Polish	
Teaching methods lecture with multimedia presentation		Form and method of assessment and basic criteria for evaluation or examination requirements	
		A. Final evaluation, in accordance with the UG study regulations Course completion (with a grade)	
		B. Assessment methods Written exam with 8-10 open questions; oral exam (supplementary).	
		The basic criteria for evaluation Positive evaluation of the written exam, consisting of 8-10 open questions covering issues mentioned in the lecture's program; oral exam - extension of the written exam, but only for those students who obtained more than 40% of the points possible to receive from the written exam.	
Required courses and introductory requirements			
A. Formal requirements completed subject „Chemia Organiczna”			
B. Prerequisites completed subject „Chemia Organiczna”			
Aims of education			
1. Provide students with the basic issues relating to the synthesis of glycopeptide precursors; 2. making students familiar with the basic glycopeptide types; 3. introduce students to the basics methods used in the synthesis of glycopeptides; 4. knowledge of selected aspects of chemical self-experimentation.			

Course contents

Characterization of amino acids and carbohydrates; preparation of peptides, glycoproteins and simple carbohydrate compounds; methods for purification and identification of biomolecules (chromatography, electrophoresis, IR spectroscopy, UV-VIS, NMR, mass spectrometry), the role and functions of peptides, proteins, carbohydrates and glycoproteins in the body, characterization of selected peptides and carbohydrates.

Bibliography of literature**A. Literature required to pass the course brak****B. Extracurricular readings**

A. Wiśniewski, J. Madaj, Podstawy chemii cukrów, Wydawnictwo Agra-Enviro Lab., Poznań-Gdańsk 1997, ISBN 83-904998-2-7

H.D. Jakubke, H. Jeschkeit, Aminokwasy, peptydy, białka, PWN, Warszawa 1989

Knowledge

1. Evaluates the possibilities of using amino acids and carbohydrates as biologically active compounds;
2. obtains information from the borderline of two types of natural compounds;
3. learns the techniques of separation and analysis of biomolecules;
4. acquires knowledge of basic techniques for the preparation of glycopeptides.

Skills

1. Describes basic methods for the glycopeptides and their precursors synthesis by chemical equations;
2. knows laboratory equipment and apparatus and uses them to carry out chemical experiments;
3. verifies and criticizes the self-conducted experiments results;
4. formulates opinions on basic chemical issues (with caution and criticism in their expression).

Social competence

1. Understands the need for further education;
2. follows established procedures in laboratory work;
3. is careful in dealing with hazardous chemicals..