Course title	ECTS code
Pathogen–immune system interactions (lecture)	12.0.0057

Name of unit administrating study

Intercollegiate Faculty of Biotechnology UG-MUG

Teaching staff

dr Adam Iwanicki

Studies

faculty	field of study	type	form	specialty	specialization	semester
Intercollegiate Faculty of Biotechnology UG-MUG	Biotechnology	second tier studies (MA)	full-time	all	all	2

Forms of classes, the realization and number of hours

Forms of classes

Wykład (to translate)

The realization of activities

lectures in the classroom

Number of hours

Wykład (to translate): 15 hours

ECTS credits

2

The academic cycle

2013/2014 summer semester

Type of course

elective (to translate)

Language of instruction

english

Teaching methods

wykład z prezentacją multimedialną (to translate)

Form and method of assessment and basic criteria for eveluation or examination requirements

Final evaluation

Zaliczenie na ocenę (to translate)

Assessment methods

egzamin pisemny testowy (to translate)

The basic criteria for evaluation

Assessment covers contents contained in the box ‘Course Contents’.
The assessment is performed according to percentage index (compliant with the Rules and Regulations for Studies at the UG)
Exam questions cover all effects indicated in the box ‘Learning Outcomes’

Required courses and introductory requirements

A. Formal requirements
Biochemistry, Microbiology, Molecular Biology or equivalent
B. Prerequisites
English language

Aims of education

The aim of the course is to acquaint students with mechanisms of interaction of pathogenic microorganisms with the cells of innate immunity system. Students will acquire knowledge (K_W01) indispensible for understanding the mechanisms of the functioning of immune system in response to an infection with pathogenic microorganisms, get to know in detail the main strategies used by selected pathogens to avoid eliciting immune response. Students will be able to understand (K_W02) the significance of innate immunity system in the host-pathogen interaction and in fighting an infection.

Course contents

Molecular mechanisms of activity of innate immunity system and their role in fighting infective pathogens. Elimination mechanisms and strategies of pathogenic bacteria such as *Mycobacterium tuberculosis*, *Yersinia pestis* or *Listeria monocytogenes*, used to avoid elimination by innate immunity system. Immunological response of plants to an infection by bacterial pathogens.

Bibliography of literature

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Gruenberg J, van der Goot FG, Nat. Rev. Mol. Cell. Biol. 2006, 7:495-504
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Haraga A, Ohlson MB, Miller SI, Nat. Rev. Microbiol. 2008, 6:53-66
Cornelis GR, Nat. Mol. Cell. Biol. 2002, 3:742-752
Hamon M, Biere H, Cossart P, Nat. Rev. Microbiol. 2006, 4:423-434
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Abramovitch RB, Anderson JC, Martin GB, Nat. Rev. Mol. Cell. Biol. 2006, 7:601-611

The learning outcomes	Knowledge
K_W01 K_W02	K_W01 Understands complex biological phenomena on the molecular level, knows their significance for biotechnology and their relationships with other areas and disciplines of science K_W02 Possesses a deepened knowledge in the field of related scientific areas and disciplines allowing him to see connections and dependencies in nature, in particular those essential for biotechnology
	Skills
	Social competence

Contact

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