

<b>Study Programme:</b> Doctoral Academic Studies in Biochemistry			
<b>Course Unit Title:</b> Metabolism and biological significance of arachidonic acid			
<b>Course Unit Code:</b> DSB611			
<b>Name of Lecturer(s):</b> Associate Professor Ivana Beara, Associate Professor Marija Lesjak			
<b>Type and Level of Studies:</b> PhD degree			
<b>Course Status (compulsory/elective):</b> elective			
<b>Semester (winter/summer):</b> summer			
<b>Language of instruction:</b> English			
<b>Mode of course unit delivery (face-to-face/distance learning):</b> Face-to-face			
<b>Number of ECTS Allocated:</b> 15			
<b>Prerequisites:</b> none			
<b>Course Aims:</b> The goal of the course is to provide students with detailed theoretical knowledge of the metabolism and biological significance of arachidonic acid.			
<b>Learning Outcomes:</b> Students should know pathways and properties of enzymes involved in arachidonic acid metabolism, mechanisms of product synthesis and their biological activity.			
<b>Syllabus:</b> <i>Theory</i> The structure and origin of arachidonic acid. The release of arachidonic acid from the cell membrane. Review of the metabolism of arachidonic acid. Types, structure and mechanisms of action of enzymes involved in cyclooxygenase, lipooxygenase and epoxygenase pathways. Biological activity of eicosanoids. Role of eicosanoids in pathological processes. Inhibitors of eicosanoid synthesis. Experimental methods in eicosanoid research. <i>Practice</i> Arachidonic acid in inflammation processes - experiments related to arachidonic acid metabolism, project			
<b>Required Reading:</b> 1. Curtis-Prior, P. (2004): <i>The Eicosanoids</i> . Wiley, Cambridge, England. 2. Marks, F., Fürstenberg, G. (ed.) (1999): Prostaglandins, leukotrienes and other eicosanoids: from biogenesis to clinical application. Wiley-VCH, Weinheim, Germany. 3. Lianos, E. A. Eicosanoid protocols (1999): Humana Press, Totowa, USA.			
<b>Weekly Contact Hours:</b>	<b>Lectures:</b> 75	<b>Practical work:</b> 75	
<b>Teaching Methods:</b> Lectures, laboratory work, desk study projects, seminar(s)			
<b>Knowledge Assessment (maximum of 100 points):</b> 100			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Active class participation		written exam	
Practical work		oral exam	60
Preliminary exam(s)		Project	40
Seminar(s)			

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.