

Title:	Sports genetics
Lecture hours:	30
Study period: (summer/winter)	winter
Number of credits:	2
Assessment methods:	oral exam, presentation
Language of instruction:	English
Prerequisites:	Basic knowledge of biology
Course content:	<ol style="list-style-type: none"> 1. Structure and function of nucleic acids, 2. Gene concept, 3. Genetic code, 4. Protein biosynthesis, 5. Regulation of gene function 6. Human genome 7. Structure and function of genes study in sport sciences 8. SNP analysis and correlations of these results with the exercise possibilities, 9. Analysis of genes expressions 10. HSP function in molecular adaptation to exercise, 11. Genes encoding interleukins and its expression in different kind of exercise, 12. Iron economy – mainly expression of genes encoding ferritins and changes caused by exercise, 13. Genes doping in sport, 14. Genetic curiosities, 15. Development directions in sport in the 21st century
Learning outcomes:	student has the latest knowledge about genetic research conducted in sport
Name of lecturer:	dr hab. Małgorzata Żychowska, professor UKW

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Literature:	<u>Siddhartha Mukherjee</u> . The Gene: An Intimate History. Scribner, 2016. <u>Epsreit D. Sports gene.</u> : <u>Penguin Publishing Group</u> , 2013 Original thematic articles from scientific bases