OPIS PREDMETA / SUBJECT SPECIFICATION	
Predmet:	**MOLEKULARNA BIOLOGIJA**
Subject Title:	**MOLECULAR BIOLOGY**

Študijski program Study programme	Študijska smer Study field	Letnik Year	Semester Semester
BIOMEDICINSKA TEHNOLOGIJA/BIOMEDICAL TECHNOLOGY 3. stopnja/3rd Degree		1	1/2

Univerzitetna koda predmeta / University subject code: 1004

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Lab work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
20	40		15		195	**9**

Nosilec predmeta / Lecturer: **Red. prof. dr. Uroš POTOČNIK**

Jeziki / Languages: **Predavanja / Lecture:** Slovenski / Slovenian
Vaje / Tutorial: Slovenski / Slovenian

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Kandidat mora imeti pred vpisom ustrezno znanje iz naravoslovnih ved z ustreznega področja na nivoju univerzitetnega študija.

Prerequisites:

Prior to entering, the candidate for postgraduate program must have an appropriate knowledge and understanding of bioscience (biology, chemistry, physics, mathematics) on the university level.

Vsebina:

1. Uvod v molekularne metode v medicini
2. Genomika v klinični praksi
3. Molekularne metode odkrivanja novih zdravil
4. Bioinformatika v molekularni medicini
5. Genska regulacija v bolezenskih procesih

Contents (Syllabus outline):

1. Introduction to molecular medicine
2. Genomics in clinical practice
3. Molecular approaches to drug discovery
4. Bioinformatics in molecular medicine
5. Gene regulation in disease states

Temeljni študijski viri / Textbooks:

1. Molecular Cell Biology; Darnell, Lodish and Baltimore (Scientific American Books, W.H. Freeman and Company).
2. Human Molecular Genetics 2. 2nd ed. Strachan, Tom and Read, Andrew P.Oxford, UK: BIOS Scientific Publishers Ltd; 1999 (available fee of charge on Pubmed under Bookshelf: http://www.ncbi.nlm.nih.gov/entrez/query)

Cilji:

Spoznati najnovejše molekularne metode, ki se uporabljajo v klinični medicini.

Objectives:

Introduce modern molecular approaches to clinical medicine.

Predvideni študijski rezultati:

Znanje in razumevanje:
Genomike, proteomike in genske regulacije.

Prenesljive/ključne spretnosti in drugi atributi:
Uporabnost molekularnih metod v raziskavah bolezenskih stanj.

Intended learning outcomes:

Knowledge and Understanding:
Genomics, proteomics and gene regulation.

Transferable/Key Skills and other attributes:
Practical skills in molecular investigations of disease states.

Metode poučevanja in učenja:

Predavanja, problemsko usmerjeno poučevanje i laboratorijske vaje

Learning and teaching methods:

Lectures, problem-based learning, seminars and laboratory exercises

Načini ocenjevanja:	Delež (v %) / Weight (in %)	Assessment:
Način (pisni izpit, ustno izpraševanje, naloge, projekt)		Type (examination, oral, coursework, project):
Pisni izpit	**70**	Written exam
Seminar	**30**	Seminar

Reference nosilca / Lecturer's references:

PINTO KOZMUS, Carina, POTOČNIK, Uroš. Reference genes for real-time qPCR in leukocytes from asthmatic patients before and after anti-asthma treatment. Gene, ISSN 0378-1119. [Print ed.], 2015, vol. 570, iss. 1, str. 71-77, ilustr. http://ac.els-cdn.com/S0378111915007076/1-s2.0-S0378111915007076-main. pdf?_tid=c571eb96-18a6-11e5-b919-00000aacb35e&acdnat=1434954206_f5d89f50560a750c6f2adafb53dfa94f, doi: 10.1016/j.gene.2015.06.001. [COBISS.SI-ID 512505400]

REPNIK, Katja, POTOČNIK, Uroš. eQTL analysis links inflammatory bowel disease associated 1q21 locus to ECM1 gene. Journal of applied genetics, ISSN 2190-3883, 2016, vol. 57, iss. 3, str. 363-372. http://link.springer.com/article/10.1007/s13353-015-0334-1, doi: 10.1007/s13353-015-0334-1. [COBISS.SI-ID 512573240],

FARZAN, Niloufar, VIJVERBERG, Susanne J, HERNANDEZ-PACHECO, Natalia, BEL, Elisabeth, BERCE, Vojko, BØNNELYKKE, Klaus, BISGAARD, Hans, BURCHARD, Esteban G, CANINO, Glorisa, CELEDÓN, Juan C., POTOČNIK, Uroš, REPNIK, Katja, et al. 17q21 variant increases the risk of exacerbations in asthmatic children despite inhaled corticosteroids use. Allergy, ISSN 1398-9995. [Online ed.], 2018, vol. , no. , str. https://onlinelibrary.wiley.com/doi/abs/10.1111/all.13499, https://doi.org/10.1111/all.13499, doi: 10.1111/all.13499. [COBISS.SI-ID 6386751]