

# Molecular pathophysiology

Elective subject, 3.year

## Timetable, study year 2023/2024

Study program: General medicine ; Study period: 6. Semester

Category of the subject: elective ; Range of courses: 14 h/ semester; Study form: **Lectures**

Venue: Department of Pathophysiology, 8th floor, 2nd section

Form of graduation: exam; Credits: 2

	Date	Time	Lecture	Lecturer
1.	1.3.2024 friday	13:45 – 16:00 3 hours	Molecular endocrinology – Cellular signaling 1	Doc. MUDr. R. Beňačka, CSc.
2.	15. 3. 2024 friday	13:45 – 15:15 2 hours	Cell damage and death Channelopathies	Doc. MUDr. R. Beňačka, CSc.
3.	19.4. 2024 friday	13:00 – 14:30 2 hours	Oxidative damage of cells and tissues; redox homeostasis	MVDr. E. Lovásová, PhD
4.	3.5.2024 friday	13:45 – 15:15 2 hours	Molecular basis of inflammation & healing process	Doc. MUDr. R. Beňačka, CSc.
5.	10.5.2024 friday	13:00 – 14:30 2 hours	Molecular genetics, epigenetics	Doc. MUDr. O. Rácz, CSc.
6.	17.5.2024 friday	13:00 – 16:15 3 hours	Molecular carcinogenesis <b>Credit evaluation</b>	Doc. MUDr. R. Beňačka, CSc.

- *Presented as tutorial lectures with discussion to given topics*
- *Attendance of students in the lectures is required for the credit*
- *Exam is performed via written test (open questions) with further discussion*

### Recommended resources for individual study and provided by teachers :

1. Materials from the presentations; lectures/handouts
2. Basic of cell signaling. [http://www.wiley-vch.de/books/sample/3527313974\\_c01.pdf](http://www.wiley-vch.de/books/sample/3527313974_c01.pdf), 20.2.2016
3. Cell signaling: <http://www.physiology.sdu.edu.cn/Medical%20Books/cell%20signal%20biology/module%20%20cell%20signaling%20pathways.pdf>
4. Reactive oxygen species. [https://en.wikipedia.org/wiki/Reactive\\_oxygen\\_species](https://en.wikipedia.org/wiki/Reactive_oxygen_species)
5. Oxidative stress. [https://en.wikipedia.org/wiki/Oxidative\\_stress](https://en.wikipedia.org/wiki/Oxidative_stress)
6. Kumar, V. Abbas, A.K., Aster, J.C. Fausto, N.: Robbins & Cotran Pathologic Basis of Disease. Online Access, 8<sup>th</sup> Ed, Saunders, 1464 p., 2014 (ISBN-10: 1416031219)

### Other interesting resources used in the education:

7. Runge, M. S., Patterson, C. (Ed.): Principles of molecular medicine. 2.ed., Humana Press, New Jersey, 2006, 1304 s., ISBN-10: 1588292029 (chosen chapters)
8. Lang, F. (Ed.): Encyclopedia of Molecular Mechanisms of Disease. Springer, Berlin, 2009, 766 s. (ISBN-10: 3540671366)