

## **ESSAY TOPICS IN MEDICAL BIOLOGY**

**For another academic year, the Department of Medical Biology will be expecting essays written by outstanding students from Medical University of Plovdiv. After peer review, the award-winning essays will be published in a special collection. You may check previous editions in which your talented colleagues have shared their creative works.**

**REQUIREMENTS** - text up to 2 A4 pages, font Times New Roman, 12 pt, space 1.5

**CONTENT** – name and surname of the author, fac. number, specialty and group; title of the essay.

The text must be written competently, in the correct English language. Biological culture and knowledge, combined with a literary "reading" of the topic and a personal position should be shown. No plagiarism or AI is allowed! If scientific literature is used, it is correctly cited at the end of the text.

**DEADLINE** - Essays must be sent by **April 30<sup>th</sup>, 2026** to: **biology@mf.mu-plovdiv.bg**; message subject: *Biology Essays - 2026*

Until the same deadline, **graphic design proposals** for the front cover of the edition are also accepted (for reference - collections from previous years) on the same email address.

**EVALUATION CRITERIA** - originality, scientific accuracy, artistic presentation, literacy.

*It is possible to submit an essay on a topic different from those proposed in the list, but after prior agreement.*

## ESSAY TOPICS

1. Vaccination, immunization or infection - the best choice.
2. The life of a lymphocyte.
3. The complement – an addition or a necessity?
4. Inflammation - a fight of life and death.
5. Transplantation of organs - the new challenges.
6. Tissue regeneration - now where and to where?
7. Human DNA – how human is it?
8. What does CRISPR promise?
9. Animal models in medicine - pros and cons?
10. Autophagy – survival or self-destruction?
11. Homo sapiens after 100 years...
12. The physician of the future – AI or a human?
13. Smart parasites.
14. The Nobel prizes in physiology or medicine in the last 50 years – the discoveries, which inspire us
15. Hopes and disappointments of the new strategies for (anti)cancer immunotherapy
16. "And he that increaseth knowledge increaseth sorrow" - 25 years since the sequencing of the human genome and cancer patient survival has not improved significantly.
17. Spontaneous regressions/remissions in oncology – have we learned something for more than 100 years since the first documented cases
18. Charlatans in science – lessons from Paolo Macchiarini, Haruto Oboka, He Jiankui and Elizabeth Holmes (the great expectations and even more scandalous frauds in regenerative medicine, gene therapy and diagnostics)
19. Epigenetics as a bridge between the genome and the environment

20. Monozygotic twins: genetic identity and divergent biological fate
21. Mutations – error, risk or a driving force of evolution?
22. The immune system: guardian of homeostasis or a potential aggressor ?
23. Autoimmune diseases: when the immune protection turns against the host
24. Is modern genetics eugenics?
25. Designer babies – is it possible and what stops us?