

TOPICS FOR ORAL PRESENTATIONS

Every year, the Department of Medical Biology organizes a public defense of student presentations on current biomedical problems in Bulgarian and English languages.

REQUIREMENTS – oral presentation of up to 5 minutes and thesis defense with answers to questions from a jury in front of an audience.

CONTENTS - first slide – name and surname of the author and the mentor, fac. number, specialty and group; title of the presentation. The following slides defend the author's thesis and personal position based on scientific literature on the subject.

No plagiarism is allowed! If scientific literature is used, incl. figures and photos, it is correctly cited in the slide itself.

DEADLINE - Presentations or presentation requests must be submitted by **March 31st, 2025** to: **biology@mf.mu-plovdiv.bg**; message subject: *Biology Presentation - 2026*

ASSESSMENT – Only 6 presentations will be allowed to be defended publicly, which will be finally prepared in a team with a Bulgarian student who has chosen the same topic under the supervision of a professor from the Department of Medical biology.

Evaluation criteria: originality, scientific accuracy, convincing and competent presentation, correct answers to the questions.

PRESENTATION TOPICS

1. APOPTOSIS OR "DEATH IS A LONELY JOB"
2. STEM CELLS - "THE GREAT EXPECTATIONS"
3. GENETIC ENGINEERING - "THE ART OF BEING GOD"
4. CANCER – THE PERFECT EVOLUTION
5. IN VIVO FETAL THERAPY – BENEFITS AND RISKS
6. NEURODEGENERATE DISEASES - MOLECULAR MECHANISMS
7. THE BIOLOGICAL CLOCK - CELLULAR AGING
8. REGENERATIVE MEDICINE - ARE WE DOOMED TO ETERNAL LIFE?
9. BIOROBOTICS – THE MACHINE IN THE MAN OR THE MAN IN THE MACHINE
10. AUTOIMMUNE DISEASES – “THE BETRAYAL OF THE IMMUNE SYSTEM”
11. miRNAs – SMALL RNAs WITH BIG FUNCTIONS
12. THE ACTIVE OXYGEN FORMS – TOXINS OR SIGNALS
13. GMO - THREAT OR SALVATION
14. MONOGAMY OR POLYGAMY – THE CHOICE OF EVOLUTION
15. THE NOBEL PRIZES IN PHYSIOLOGY OR MEDICINE IN THE LAST 50 YEARS – THE DISCOVERIES, WHICH INSPIRE US
16. HOPES AND DISAPPOINTMENTS OF THE NEW STRATEGIES FOR (ANTI)CANCER IMMUNOTHERAPY
17. "AND HE THAT INCREASETH KNOWLEDGE INCREASETH SORROW" - 25 YEARS SINCE THE SEQUENCING OF THE HUMAN GENOME AND CANCER PATIENT SURVIVAL HAS NOT IMPROVED SIGNIFICANTLY.

18. SPONTANEOUS REGRESSIONS/REMISSIONS IN ONCOLOGY –
HAVE WE LEARNED SOMETHING FOR MORE THAN 100 YEARS
SINCE THE FIRST DOCUMENTED CASES
19. 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)
20. EPIGENETICS AS A BRIDGE BETWEEN THE GENOME AND THE
ENVIRONMENT
21. MONOZYGOTIC TWINS: GENETIC IDENTITY AND DIVERGENT
BIOLOGICAL FATE
22. MUTATIONS – ERROR, RISK OR A DRIVING FORCE OF
EVOLUTION?
23. THE IMMUNE SYSTEM: GUARDIAN OF HOMEOSTASIS OR A
POTENTIAL AGGRESSOR?
24. AUTOIMMUNE DISEASES: WHEN THE IMMUNE PROTECTION
TURNS AGAINST THE HOST
25. IS MODERN GENETICS EUGENICS?
26. DESIGNER BABIES – IS IT POSSIBLE AND WHAT STOPS US?