

GENETIC CONTROL OF GENETIC STABILITY

Moscow Institute of Physics and Technology (National Research University)

Degree or qualification is awarded: **PhD (Candidate of Science)**

Language of study: **English**

Mode of study:

Duration: **4 years**

Availability of free education: **yes**

Price: **375 000 RUB**

Programme webpage at the university website: <https://eng.mipt.ru/programs/genetic-control-of-genetic-stability/>

Programme curator: **Denis Ustyuzhaninov**

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Entry requirements:

- Master's degree / equivalent in a related field
- B2 level of English
- Good track record of publications related to the topic of the intended research
- Strong research proposal 1,500 - 3,500 words

Research supervisor:

[Nataliya Koltovaya](#)

PhD, DSc

Supervisor's research interests:

- Genetic stability (nuclear and mitochondrial).
- Epigenetic modifications.
- Regulatory chemical modifications of enzymes.
- Computer modeling of proteins.
- Genetic control of radio resistance and DNA stability.

Research highlights:

Collaboration with Russian Scientific Centers, Universities and foreign Scientific Institutions.

Supervisor's specific requirements:

- Molecular biology.
- Genetics.
- Biochemistry.

Main publications:

- Koltovaya N, et al. Induction of mutations by heavy ion beams in yeast *Saccharomyces cerevisiae*. *Frontiers in Physics*. 2020, in press.
- Dushanov EB Koltovaya NA. Effect of substitution Pro32Thr on the interaction between dimer subunits of human phosphatase ITPA. *Cur. Enzyme Inhibition*. 2019. 15 (1): 46-54.
- Koltovaya N.A. DNA damage-independent cell cycle arrest in the yeast *Saccharomyces cerevisiae*. *Radiation Biology. Radioecology*. 2018. 58 (1): 5-14 (in Russian)
- Koltovaya N.A. Kinase CDK1/CDC28 and control of DNA integrity in yeast *Saccharomyces cerevisiae*. *Radiation Biology. Radioecology*. 2017. 57 (6): 573-590 (in Russian).
- Koltovaya N.A. Kinase cascade of DNA damage checkpoint. In: *Genetics, Evolution and Radiation*. Springer.

Specializations within this programme