



**Fund “Nauka” Project № 24008 Resume – Special Competition-based Session
2024:**

“Biological effects of Varna sulfur-containing mineral water in an experimental model of compromised intestinal health”

Project leader: Assoc. prof. Milka Asparuhova Nashar, PhD

The project proposal is a collaboration between the Department of Biochemistry, Molecular Medicine and Nutrigenomics and the Department of Biology of the Faculty of Pharmacy. The project aims to investigate the biological effects of Varna sulfur-containing mineral water and biologically active sulfur-containing components from functional foods - sulforaphane, allicin and taurine on a new in vitro model of compromised intestinal health. Human intestinal epithelial cells will be used for model development, based on data about the relationship between the impaired function of the intestinal microbiota and high plasma levels of trimethyl-N-oxide - a product of the metabolism of some food components during their processing by intestinal microorganisms with established pro-inflammatory and hyperlipidemic effect. The planned research is a continuation of a previous project in support of PhD student Stefka Stoeva. It will allow a new experimental approach to be introduced in the dissertation with a scientific value. Highly specialized methods and cell cultures approaches, as well as biochemical and molecular biological methods, will be applied.

The obtained results are expected to increase the scientific value of the dissertation. In addition to scientific contribution, the project will also contribute to the transfer of knowledge and experience and increase the qualification of scientists who are at the early stage of their career. The project team also includes students from Medical University - Varna, with a marked interest in scientific work. All members of the team have the necessary qualifications and experience for the successful completion of the tasks set out in the scientific program.