TOPIC OF A COMPETITION PROMOTING STUDENT ENGAGEMENT IN SCIENTIFIC ACTIVITIES

Topic:

Let’s investigate: how functionalized nanomaterials interact with biological systems

Goal:

To investigate how nanomaterials with functionalized surfaces interact with the biological environment/system.

Short description (max. 2000 characters):

During this scientific activity, the student will conduct a detailed literature review, get acquainted with the topic of the work. Later, student will learn how to correctly use information/article search systems, will be able to critically evaluate the literature found, process it and present it, both orally and in writing. After getting acquainted with the theoretical part, the theoretical knowledge will be tried to be applied in practice. During work in the laboratory, the student will learn how to manage and be able to independently use a spectrophotometer, fluorimeter, zeta potential meter, i.e. will be able to characterize nanoparticles. Later, student will learn to cultivate eukaryotic cells. When he learns to take care of cells grown *in vitro*, the student will try to conduct research on the interaction between nanoparticles and cells. If it goes well, will try to conduct studies with a confocal microscope. Finally, the student will have to process the available results according to the rules of scientific data processing: describe, compare with the data in the literature, systematize the obtained data. With significant and reliable results, the student will be able to present them at a national or international conference.

Supervisor researcher/lecturer:

Dr. Evelina Kazlauskė