

PhD position in 2021!

Laboratory for biology of secondary metabolism ([Lab 111](#)) is seeking candidate for PhD position in the field of chemical communication of antibiotic producing bacteria.

WHAT: Increasing antibiotic resistance makes the discovery of new antimicrobial compounds an important issue in recent years. An important source of antimicrobials are microorganisms from environmental sources. The PhD project will focus on the regulation of antimicrobial production with emphasis on the role of bacterial ABCF (ATP Binding Cassette, family F) ATPases, group of ribosomal proteins which includes both translation regulators and antibiotic resistance proteins. Our recent findings show one of the ABCFs to regulate antibiotic biosynthesis in response to antibiotic in the environment. By a combination of genetic and proteomic approaches, the project will expand understanding of bacterial ABCF proteins especially their role secondary metabolite regulation.

See more in: Koberska, Marketa, et al. "Beyond self-resistance: ABCF ATPase LmrC is a signal-transducing component of an antibiotic-driven signaling cascade hastening the onset of lincomycin biosynthesis." *bioRxiv* (2020). or Vimberg, Vladimir, et al. "Ribosome-mediated attenuation of vga (A) expression is shaped by the antibiotic resistance specificity of Vga (A) protein variants." *Antimicrobial Agents and Chemotherapy* 64.11 (2020))

WHERE: The project will take place in research center BIOCEV (Vestec) under the supervision of Gabriela Balíková Novotná, Ph.D.

WHO: We are looking for self-motivated candidate with master's degree or equivalent in molecular biology, microbiology, biochemistry, medicine or related fields, or those expecting to obtain their degree this year. Experience in various techniques of molecular biology, biochemistry and genetics is an advantage. If you are interested, please write to gnovotna@biomed.cas.cz. The deadline for application is April 16, 2021.