



CEITEC

The expertise offered by the interested researchers (Robert Vácha):

Computer simulations focused on phospholipid membranes, proteins, and their interactions at levels ranging from all-atom to highly coarse-grained. The obtained ERC consolidator grant is focused on peptides and their mechanisms to cross, disrupt and fuse membranes with antimicrobial applications. Obtained results include a new class of peptides leading to 10^{15} novel sequences that disrupt bacterial membranes. Similarly, within this call, peptides affecting membranes of enveloped viruses could be developed. In addition, the group has new projects on nanoparticles and their effect on membranes.

- Robert Vácha is a [junior group leader](#) and ERC CoG Principal investigator (you can find information about his research [here](#) – second article about The Czech Republic)
- Looking to be a partner in [HORIZON-HLTH-2023-DISEASE-03-04: Pandemic preparedness and response: Broad spectrum anti-viral therapeutics for infectious diseases with epidemic potential \(RIA\)](#)

A brief word on CEITEC (where it is based, what it is specialised in, and possible previous experience with Horizon funding):

<https://www.ceitec.eu/ceitec-mu/i1>

CEITEC MU is an independent university institute established at Masaryk university (the Czech Republic) as a part of the CEITEC – CEO Center of Excellence. CEITEC MU is a key part of the state-of-the-art research infrastructure built in 2014 at the University Campus in Brno-Bohunice and provides top equipment and optimal conditions for basic and applied research, especially **in the field of life sciences**. Its researchers tackle fundamental questions in structural biology, RNA biology, plant sciences, biomedicine and neuroscience.

CEITEC currently hosts 3 ERC holders and acts as the coordinator for a number of projects from H2020 and HEU - HEALTH, WIDERA (Twinning, Excellence Hubs, ERA Chair) and EIC Pathfinder. Our core facilities are involved in Horizon INFRA projects.

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