

Irina Veretenenko is a junior researcher at the Laboratory of Biomolecular Computer Design at the Research Institute for Systems Biology and Medicine and at the Laboratory of Biomolecular Modeling at the Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry RAS. She holds a Master of Science degree with honors in applied mathematics and physics, with a focus on integrated structural biology and genetics, as well as a Bachelor of Science degree with honors in applied mathematics and physics, with a focus on medical physics and bioinformatics. She is currently working on her Ph.D. in biophysics.

Irina's research focuses on the computational structural biophysics of TRP ion channels. Using molecular dynamics simulations, enhanced-sampling techniques (e.g., well-tempered metadynamics and free-energy perturbation), and structural data from cryo-electron microscopy, she uncovers the mechanisms of ligand-mediated regulation of ion channel structure and function. Since 2024, Irina has co-authored five WoS/Scopus-indexed papers, including two articles in *Nature Communications* on the mechanisms of TRPV6 inhibition by endogenous regulators.



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