



Irina Serysheva, PhD  
Professor and Director  
Structural Biology Imaging  
*Cryo-EM analysis of IP3R channel in a lipid bilayer*

Dr. Serysheva received her Ph.D. from A. N. Bach Institute of Biochemistry of Russian Academy of Sciences (Moscow, Russia). Her interest in the structure-function of biological macromolecular complexes was shaped during the early stages of her research career while she was an undergraduate student at Lomonosov Moscow State University, one of Russia's highest-ranked institution. Since then, electron microscopy has been one of the primary techniques used in her studies of different biological macromolecules. Since 1992, Dr. Serysheva has been at Baylor College of Medicine (Houston, TX), where she has been working on the structural analysis of membrane proteins using single-particle cryo-EM technique. In 2008 she joined the Department of Biochemistry and Molecular Biology at UTHealth Medical School, where she is currently a Professor and a Director of Structural Biology Imaging Center at McGovern Medical School at UTHealth. Since joining the faculty at UTHealth, Dr. Serysheva has continued her work on integral membrane proteins using the versatility of high-resolution cryo-EM and computer reconstruction techniques in conjunction with biochemical and electrophysiological studies and bioinformatics. Her research broadly focuses on the area of structure-function of ion channels with specific emphasis on characterization of Ca<sup>2+</sup> channels. Dr. Serysheva's research aims to understand the molecular mechanisms underlying ion transport across the biological membranes. Dysfunction of Ca<sup>2+</sup> channels has been implicated in abnormal intracellular Ca<sup>2+</sup> levels associated with many pathological conditions such as Alzheimer's, Parkinson's and Huntington's diseases, autoimmune diseases, AIDS, cancer and stroke. Dr. Serysheva's research has received national and international attention, with most prominent contributions published in prestigious peer-reviewed venues such as Nature, Cell Research, PNAS USA, Structure, Journal of Biological Chemistry, and Biophysical Journal.