

## *Biophysical Reviews*' "Meet the Editors Series"—Rosangela Itri

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As one of the Executive Editors of *Biophysical Reviews*, it is a pleasure to write a few words to introduce myself to the readers of the journal. Since my adolescence, I have been fascinated by the world of physics, mathematics, and biology. I decided to choose physics for my undergraduate course. I received a B.S degree in Physics from Pontifícia Universidade Católica, São Paulo, and then a Masters and Ph.D. degree in solid-state physics from the Physics Institute of University of São Paulo (IFUSP), Brazil.

Both my Masters and Ph.D. project were focused on studying colloidal particles and liquid-crystal systems experimentally using the small-angle X-ray scattering (SAXS) technique. Since my days as a student, I have become a recognized expert on SAXS methodology, expanding my field of research to explore protein-protein and protein-membrane interactions as well as interactions

between small amphipathic molecules with protein and lipid membranes. These studies have involved a combination of modeling and experimental measurement.

I have spent my entire professional career at IFUSP since 1992, where I am currently a Full Professor. The Brazilian synchrotron source was launched in 1992 and I was one of the first SAXS beamline users. Brazil is now building a new source (Sirius) to be launched in 2021. I was a member of the international scientific community which evaluated its feasibility, having been invited as the Brazilian representative.

Interestingly, since my Ph.D. time, I started developing an interest in biosystems and have spent significant effort in determining how to apply my background expertise in SAXS to better understand biological relevant problems. Having this in mind, I decided to take a 1-year study sabbatical in 1994 to the Chemistry Institute at The Ohio State University, USA, to better learn how to work with protein/multilayered membranes interaction by the X-ray standing wave method. When I moved back to IFUSP, I established the Biophysics Laboratory at the Applied Physics Department and began to have close collaboration with colleagues from the Biochemistry Institute (also at USP) in a multidisciplinary approach. I expanded my experimental horizons combining SAXS with spectroscopic techniques and implementing studies of giant unilamellar vesicles, as model lipid membranes, using optical phase contrast and fluorescence microscopy in the laboratory.

I have trained undergraduate, graduate, and postdoctoral students from Physics, Biology, Biochemistry, and Medical schools. One thing that I have always been interested in has been improving and expanding the education of new biophysicists in Brazil and Latin America through the development of molecular biophysics courses and my active role in the Brazilian Biophysics Society (SBBf). I was previously SBBf's scientific director and am currently the SBBf vice president. Further to this, I am also a member of the

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International Union for Pure and Applied Biophysics (IUPAB), the American Biophysical Society (BPS), and the European Biophysical Society (EBSA).

An appreciation of the major aspects of my research can be gotten from the following papers and reviews (Barbosa et al. 2010; Carducci et al. 2018; Come et al. 2021; De Rosa et al. 2018; Gandini et al. 2003; Itri et al. 2014; Santos et al. 2003; Scanavachi et al. 2020; Tsubone et al. 2019; Tsubone et al. 2017). Currently, my main research lines are (i) synthesis and characterization of biomaterials including guanosine-based hydrogels; (ii) protein conformation and interaction; (iii) lipid photo-oxidation promoting membrane damage; (iv) membrane fission induced by photo-oxidation and amphipathic molecules.

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