Dr. Fanis Missirlis, Cinvestav, Mexico

Research interests:

I am seeking to understand how the physicochemical differences between the major metal ions determine their participation in the biosphere. How biology senses, regulates, distributes and uses these metal ions in physiology. In the zinc field, in particular, I am trying to describe systemic zinc homeostasis. The main experimental model we use is *Drosophila melanogaster*, where we uncovered tryptophan catabolism as a key player in zinc storage and excretion.

ISZB statement:

I trained on iron metabolism with Tracey Rouault (co-discoverer of iron regulatory proteins) at the NIH (USA). Every week we opened lab meetings reviewing new publications in the iron field. As a result, when I started my first independent position in London (UK), I felt I knew all I needed regarding iron and turned my attention on how it was different to copper, zinc and manganese. As a biologist, I had to take belated but necessary lessons on chemistry and physics and I remain engaged at this stage of intellectual development. During my PhD with Herbert Jäckle who studied zinc-finger transcription factors at the MPI for Biophysical Chemistry (Germany), I specialized in *Drosophila* genetics. The fly provides a comprehensively studied animal to experiment with, while trying to describe the role of metals throughout its life cycle. My present lab at Mexico's elite research center, the Cinvestav, studies the rat model and collaborates in clinical studies as well.

I joined the 2009 ISZB meeting in Jerusalem, where I discovered and befriended various zincologists and became a member of the society; I also helped with the launching of Zinc-UK, joining our London-based colleagues who took the lead. I then deeply enjoyed the meetings at Asilomar in 2014, Cyprus in 2016, and Kyoto in 2019. I understand that one reason for my nomination to this key post for the society is a proposal that we should organize our next face-to-face meeting in Mexico. I would be happy to lead such an effort. More broadly, I would aim to approach other colleagues who work with zinc and are not members of our community with the message to join our society and I would encourage the participation of younger members, continuing initiatives already taken by the board. I know there are discussions regarding the relationships of our society with other societies of overlapping scientific interest, but I come with no specific agenda to promote in this respect; I would serve the board and follow the decisions taken there, which will of course be put to the society's assembly first. My main focus will be to widely communicate the centrality of zinc in biology. I am humbled, deeply honoured and zinc thankful for this nomination.