החברה הישראלית לכימיה
THE ISRAEL CHEMICAL SOCIETY
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March 6, 2021

Dear ICS members,

It is my pleasure to announce that the 2020 ICS-Adama Prize for Technological Innovation will be awarded to **Prof. Irit Sagi** of the Weizmann Institute of Science for her pioneering research on enzymatic processes using chemical and biophysical approaches, and for developing inhibitory proteins and antibodies to combat acute and chronic diseases.

Prof. Irit Sagi
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Irit Sagi was born in Ashkelon, Israel, obtained her BSc in Physical Chemistry from American University (1988), and PhD in biophysics/bioinorganics from Georgetown University with Prof. Mark Chance (1993). She was a postdoc with Ada Yonath and Francois Fransechi at the Weizmann Institute and the Max-Planck Institute, Berlin. In 1998 she joined the Weizmann Institute Faculty of Chemistry. In 2005 she spent a year at Harvard University and the Novartis research institute. Since 2013 she is a Full Professor at the Department of Biological Regulation. Since 2014 she is Dean of the Feinberg Graduate School, and since 2020 she is Vice President for Technology Transfer. Prof. Sagi holds the Maurizio Pontecorvo Professorial Chair, earned the Landau Prize of Mifal Hapais (2017) and the Juludan Prize (2013). In 2006, she was named Inventor of the Year by Yeda Ltd.

Prof. Sagi investigates extracellular remodeling enzymatic processes using combined chemical and biophysical approaches, including real-time spectroscopy, functional imaging, and hydration dynamics. She revealed the dynamics and complex interactions within the zinc-dependent catalytic sites of matrix metalloproteinases (MMPs), a group of human metalloenzymes linked to developmental biology, cancer, inflammation, fibrosis, and infectious diseases. Her organometallic "Zinc Tripod" synthetic active site mimicry compound, she generated new classes of conformational selective inhibitory proteins and antibodies for these enzymes. Pharmaceutical companies are currently developing these inhibitors against various acute and chronic invasive diseases. She unraveled the chemical and biochemical complexity of individual proteins and the higher-order extracellular matrix protein structures. She holds 7 granted and 3 filed patents. Her newly established start-up company, NanoCell Ltd, offers an engineered MMP enzyme that provides a natural way to attach and implant embryos in mammals to improve tissue receptivity in livestock, humans, and plants intra-uterus administration and mediation of effective embryo implantation.

The award ceremony will take place on May 6, 2021, on the Open University campus.

Congratulations to Irit for her achievements!

Ehud Keinan

ADAMA