Assaf Zinger, PhD

www.TheZingeLab.com

At the Technion- Israel Institute of Technology, my research group is developing biomimetic nanoparticles (NP) to treat neurodegenerative pediatric diseases, traumatic brain injuries, and breast and ovarian cancers. Our lab's main goal is to be one of the world's leading research groups in developing targeted biomimetic NP that can encapsulate a wide range of therapeutic molecules, including mRNA, proteins, and small molecules, thus revolutionizing how we treat numerous diseases. For example: (1) We improved the therapeutic outcome of pancreatic cancer treatment using a controlled-release enzyme delivery system. (2) We mimic white blood cells binding to inflammatory sites and develop a macrophage biomimetic drug delivery system. (3) We developed the first ever neuron biomimetic nanoparticles that mimics how neurons bind to other neurons through homotypic cell-cell adhesion protein. All these breakthroughs were published in top-tier journals (2273 citations and h-index 20).

Personally, I was awarded more than **15 international and national excellence awards,** among them: the **Alon Scholarship for Outstanding Young Scientists**, the most prestigious scholarship from the Israeli Council for Higher Education; the international **Umbrella Award**, focusing on Life Science and Engineering; the **Norman Seiden Fellowship in Nanotechnology and Optoelectronics, Career Advancement Chair,** and the **Young Investigator Award**, from the International Controlled Release Society focus group. I was also chosen as a member of the **Global Young Academy** and the **Lindau Noble Laureates Meeting** and **organized three international** and **three national conferences**. I am holding **two Adjunct Assistant Professor positions** in the Cardiovascular Science and Neurosurgery Departments at Houston Methodist Academic Institute, TX, USA, and I am a **Visiting Professor** at the University of Turin, Italy. Finally, last year, I was admitted to the **Royal Society of Chemistry as a Fellow**, and I was awarded the prestigious **ERC-starting grant** for exploring how human breast milk biomimetic nanoparticles might pave the way for a new oral drug delivery system.