

William J. Zamora

Full Professor at the University of Costa Rica (UCR) and the National University of Costa Rica (UNA), and Research Associate at the National High Technology Center of Costa Rica (CeNAT). My research integrates artificial intelligence and machine learning, chemoinformatics, quantum chemistry, and structural bioinformatics to advance drug discovery, address antimicrobial resistance, and investigate emerging chemical and biological threats. My work lies at the interface of chemistry, artificial intelligence, biology, and security science, with a particular focus on the responsible development and application of emerging technologies. I am strongly committed to Open Science and reproducible research. I co-organized the SAMPL9 International Blind Challenge, evaluating computational methods for predicting the physicochemical properties of drug-like molecules, and lead the development of NAPRORE-CR, an open-access natural products database built on FAIR data principles. I also promote the dissemination of open datasets, computational tools, and reproducible workflows to facilitate international scientific collaboration.

My scientific contributions have earned international recognition through articles selected as journal covers in international scientific journals; election to Sigma Xi, The Scientific Research Honor Society, during its 140th anniversary year (2026); selection as a DAAD Postdoc-NeT-AI Fellow; and a prestigious Coimbra Group research fellowship. Beyond academic research, I contribute to the international science-policy and diplomacy community as an invited scientific expert and speaker in programmes involving the European Platform for Regulatory Science of the [European Medicines Agency](#) (EMA), the Organisation for the Prohibition of Chemical Weapons (OPCW), the International Union of Pure and Applied Chemistry (IUPAC), and the United Nations Office for Disarmament Affairs (UNODA). My contributions focus on the opportunities, risks, governance, and responsible use of artificial intelligence and emerging technologies in chemistry, biotechnology, chemical security, and disarmament.