UNIVERSIDAD DE COSTA RICA

UNA UNIVERSIDAD NACIONAL COSTA RICA

Society for Latinoamerican Biophysicists

Biophysical Society

Academia Nacional de Ciencias Costa Rica

DGfB Deutsche Gesellschaft für Biophysik e.V.

Costa Rican Biophysics Symposium
3rd Edition

July 23-24

Program

Day 1.

Tuesday, July 23rd.

Time		Title / Activity	Speaker Affiliation / Country
1:00 pm – 2:00 pm		Registration and Check-in	
2:00 pm – 2:30 pm		Opening of the Chemistry Congress	
2:30 pm – 3:15 pm		**Plenary Session – Chemistry Congress** Catalyst modified carbon electrodes for renewable energy relevant processes.	Dr. Zeev Gross (Technion, Israel)
3:15 pm – 3:45 pm		Coffee break	
3:45 pm – 4:30 pm		**Plenary Session – Biophysics Symposium** That which does not kill us, makes us stronger: the salutary effect of scorpion peptides on calcium-dependent cardiac arrhythmias.	Dr. Héctor Valdivia (University of Wisconsin-Madison, United States)
4:30 pm – 4:40 pm		Break	
4:40 pm – 5:00 pm		Welcome to the 3rd Costa Rican Biophysics Symposium	Discussion Leader Dr. Gustavo Chaves (Paracelsus Medizinische Universität Nürnberg, Germany)
Session I	5:00 pm – 5:20 pm	Cardiac Channelopathies: Interplay between channel function and clinical phenotype	Kenneth Steele (Università di Padova, Italy)
	5:20 pm – 5:40 pm	C1 *Helix* neurons: Characterization of cationic currents and model applications	María Laura Ríos (Universidad de Costa Rica)
	5:40 pm – 6:00 pm	Retinal organoids: emergent technologies and applications. Prime editing to generate inherited mutations in hIPSC to model human retinal diseases	Marcela Garita (Harvard Medical School, United States)
6:00 pm – 7:00 pm		Welcome cocktail	

Day 2.

Wednesday, July 24th.

Time	Title / Activity	Speaker Affiliation / Country
8:00 am – 8:30 am	Registration and Check-in	
8:30 am – 9:00 am	Opening of the Chemistry Congress	
9:00 am – 9:45 am	**Plenary Session – Chemistry Congress** Title pending	Dr. Seth Marder (University of Colorado-Boulder, United States)
9:45 am – 10:15 am	Coffee break	

Time		Title / Activity	Speaker Affiliation / Country
10:15 am – 10:40 am		**Plenary Session – Biophysics Symposium** Endolysosomal CLC chloride/proton antiporters - from biophysics to human genetic diseases.	Dr. Michael Pusch (Istituto di Biofisica, Italy)
Session II	10:40 am – 11:00 am	Multiscale Modelling and Simulations of Epigenome and Epitranscriptome.	Pablo Dans (Instituto Pasteur de Montevideo, Uruguay)
	11:00 am – 11:20 am	Single-nucleus RNA sequencing reveals role of intracellular cholesterol transport in skeletal muscle denervation.	Cristofer Calvo (Cincinnati Children's Hospital, United States)
	11:20 am – 11:40 am	Targeting dosage compensation in aneuploid cancer.	Rodrigo Mora (Universidad de Costa Rica)
	11:40 am – 12:00 pm	From rational *de novo* protein-protein interaction design to molecular glues using surface-based representations of proteins and biophysics-informed machine learning.	Pablo Gainza (Monte Rosa Therapeutics, Basel, Switzerland)
12:00 pm – 1:00 pm		Lunch	
1:00 pm – 1:45 pm		**Plenary Session – Chemistry Congress** Designing materials for energy and sustainability with simulations and machine learning	Dr. Rafael Gómez (Massachusetts Institute of Technology, United States)
1:45 pm – 2:00 pm		Break	
Session III	2:00 pm – 2:20 pm	Host Defense Peptides in Wonderland: A Computational Biophysics Perspective	William Zamora (Universidad de Costa Rica)
	2:20 pm – 2:40 pm	Detection of the biophysical properties required by *Brucella abortus* to adapt to intracellular life	Esteban Chaves (Universidad de Costa Rica)
	2:40 pm – 3:00 pm	On the crosstalk of amino acid metabolism and the antioxidant response pathway	Raul Castro (University of Arizona, United States)
	3:00 pm – 3:30 pm	Open slot	
3:30 pm – 4:00 pm		Coffee break	
Session IV	4:00 pm – 4:20 pm	Electro-fluidic platforms and bioinspired materials	Leonardo Lesser (Universidad de Costa Rica)
	4:20 pm – 4:40 pm	EM in biological surfaces	Giovanni Saenz (Universidad Nacional de Costa Rica)
	4:40 pm – 5:00 pm	SS-NMR in Biological systems	Isaac Céspedes (Instituto Tecnológico de Costa Rica)
5:00 pm – 6:30 pm		Transport to dinner	
6:30 pm – 8:30 pm		Dinner	