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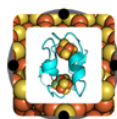
Evolution of Nanomachines In Geospheres and Microbial Ancestors



ENIGMA Astrobiology Symposium

May 10, 2022

Time - EDT	Speaker	Title
9:00am-9:10am	Paul G. Falkowski, PI ENIGMA, Rutgers University	Welcome and Introduction
9:10am-9:30am	Vikas Nanda, Co-PI ENIGMA, Rutgers University	Theme 1 Overview
9:30am-10:15am	Salma Kassem, City University of New York	Approaches for the in-situ emergence of functionality in peptide-based systems
10:15am-10:30am	Break	
10:30am-10:50am	Yana Bromberg, Co-PI ENIGMA, Rutgers University	Theme 2 Overview
10:50am-11:35am	Nir Ben-Tal, Tel Aviv University	Protein archeology: How proteins emerged and evolve?
11:35am-12:00pm	Nathan Yee, Co-PI ENIGMA, Rutgers University	Theme 3 Overview
12:00pm-1:00pm	Lunch	
1:00pm-1:25pm	Dru Myerscough, Rice University	Determinants of multiheme cytochrome electron transfer uncovered by systematic mutation
1:25pm-1:50pm	Bhanu Jagilinki, Washington State University	Selenium oxidoreductases - a promising alternative biochemistry for more reducing worlds
1:50pm-2:15pm	Kenneth McGuinness, Rutgers University	Expanding ENIGMA's 1) public exposure and 2) modeling space
2:15pm-2:40pm	Saroj Poudel, Quantum Si	Ecological distribution of nitrogenase reveals modern isoforms evolved to potentially bind charged proteins to mitigate oxygen toxicity
2:40pm-3:05pm	Diego Ferreira, University Buenos Aires	From evolution to folding of repeat-proteins
3:05pm-3:20pm	Break	
3:20pm-3:45pm	Anirudh Prabhu, Carnegie Institute for Science	Can network science help identify biosignatures?
3:45pm-4:30pm	Akif Tezcan, University of California San Diego	What does it take to fix nitrogen?
4:30pm-5:00pm	Open Discussion	



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ENIGMA Astrobiology Symposium

May 11, 2022

Time - EDT	Speaker	Title
9:00am-9:05am	Paul G. Falkowski, PI ENIGMA, Rutgers University	Welcome and Introduction
9:05am-9:55am	Michael Wong, Carnegie Institute for Science	From NOx to Networks: My astrobiological journey
9:55am-10:20am	Shaunna Morrison, Carnegie Institute for Science	A brief introduction to the mineralogy of Mars
10:20am-10:45am	Corday Selden, Rutgers University	Experimental investigation of amino acid binding as a mechanism for fractionating metal stable isotopes in proteins
10:45am-11:00am	Break	
11:00am-11:45am	Daniel Hummer, Southern Illinois University	Data Mining the Past: Using large mineral datasets to trace Earth's geochemical history
11:45am-12:00pm	Janice McDonnell, Rutgers University	Education and Outreach Overview
12:00pm-1:00pm	Lunch	
1:00pm-1:45pm	Kevin Hand, NASA Jet Propulsion Laboratory	Alien Oceans: The search for life in the depths of Space
1:45pm-2:30pm	Open Discussion	
3:15pm-4:15pm	Optional Tour of Protein Data Bank In-person	