

Accessing Mitochondrial Targets for Therapeutic Gain in Major Diseases

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**Chemistry
Seminar on
Nanotechnology
and
therapeutics**

**4:00 p.m.
Monday
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Via Zoom**

Please contact **Dr. Amitava Choudhury** at choudhurya@mst.edu for the zoom link.

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Abstract: Noncommunicable and infectious diseases need innovative ways for treatment and prevention. For example, tumor cells adapt to diverge survival strategies defying traditional cancer therapies and challenge us to pursue new mechanistic and multimodal approaches. Our community needs to be well-equipped to handle emerging and re-emerging pathogens through rapid intervention, prevention, and treatment. Similarly, atherosclerosis and other hypercholesterolemia-related conditions pose a unique threat. Addressing resistant cancers, viral diseases, and cardiovascular diseases in general population as well as in pregnant women comes with significant barriers to effective treatment. In this presentation, I will discuss some of our recent developments on platform nanotechnologies which can utilize intracellular targeting strategies, use of prodrugs, and selective biological membrane crossing abilities to bring therapeutic gain in major diseases such as resistant cancers, atherosclerosis, and viral diseases such as HIV.

About the speaker: Dr. Shanta Dhar is an Associate Professor of Dept. of Biochemistry and Molecular Biology and Assistant Director of Technology and Innovation at Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine. Shanta received the Ralph E Powe. Junior Faculty Enhancement Awards from Oak Ridge Associated Universities, Department of Defense Congressionally Directed Medical Research Programs Prostate Cancer Idea Development Award, Targeting Mitochondria 2012 Scientific contribution Award, Scientist Development Award from the American Heart Association. Shanta was listed as one of the “Georgia top medical researchers” by Atlanta Business Chronicle. Georgia Trends Magazine listed Shanta as Top 40 under 40: Georgia’s Best and Brightest. Shanta received Thieme Chemistry Journal Award, Synform Young Career Focus Award, Florida Department of Health Zika Research Initiative Discovery, Bankhead Coley Cancer Research Award. In 2019, Shanta was listed as one of the top 5% of authors highly cited in the Royal Society of Chemistry Journals. In 2020, Shanta was awarded with Women in Academic Medicine trail blazer award. In 2021, Shanta was inducted as a Full Member of Sigma XI Society and a Fellow of Royal Society of Chemistry. In 2021, Shanta as the founding Chair created a Focus Group on Nervous System Delivery Group for the Controlled Release Society.