INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A&B, Raja S.C. Mullick Road, Jadavpur, Kolkata700032, India

Seminar Notice

Title

Engineering Biomaterials and Antibacterials in the Era of Drug Resistance

Speaker

Dr. Jayanta Haldar
Associate Professor, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore, India

Date, Venue and Time

18-April-2018 (Wednesday); 3.30 PM; C. V. Raman Hall, IACS

Abstract

As arsenal of antibiotics dwindle, more and more effort is being focussed on the development of novel strategies to tackle drug resistant bacteria. This talk involves our efforts in engineering new polymeric materials to prevent the spread of bacterial infections.[1,2] The development of synthetic mimics of antimicrobial peptides with different mechanism action compared to most of the antibiotics as an alternative class of antibacterial agents will be discussed.[3,4] The novel approaches to overcome bacterial resistance towards glycopeptides and tretracyclines classes of antibiotics will also be presented.[5,6]

References:

1. Jiaul Hoque, *et al.*; "Dual Function Injectable Hydrogel for Controlled Release of Antibiotic and Local Antibacterial Therapy", *Biomacromolecules*, **2018**, 19, 267-278.
2. Jiaul Hoque, *et* al.; "A Biodegradable Polycationic Paint that Kills Bacteria In Vitro and In Vivo", *ACS Appl. Mater. Interfaces*, **2016**, *8*, 29298–29309.
3. Mohini Mohan konai *et al.*; "Fatty Acid Comprising Lysine Conjugates: Anti-MRSA Agents that Display In-vivo Efficacy by Disrupting Biofilms with no Resistance Development", *Bioconjugate Chem.*, **2017**, *28*, 1194–1204.
4. Chandradhish Ghosh, *et al.*; "Aryl-alkyl-lysines: Membrane-active fungicides that act against biofilms of Candida albicans", *ACS Infect. Dis.*, **2017**, *3*, 293-301.
5. Divakara S S M Uppu, et al.; "Amide Side Chain Amphiphilic Polymers Disrupt Surface Established Bacterial Bio-films and Protect Mice from Chronic *Acinetobacter baumannii* Infection", *Biomaterials*, **2016**, 74, 131-143.
6. Venkateswarlu Yarlagadda, *et al.*; "Incorporation of Pyrophosphate Binding Ability to Vancomycin: A Strategy to Combat Vancomycin-resistant Bacteria", *Angew. Chem. Int. Ed.*, **2016**, *27*, 7836-7840.

.All are cordially invited to attend the seminar.