



SPARC Project Symposium “Point-of-Care Healthcare Devices”

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Pant Workshop Series on Medical Technology & Future Medicine

November 25-27, 2024

Day- 1, November 25, Monday, MFCEM Seminar Hall

Time	Speaker	Title
10:00 – 10:10 am	Prof Richard Strugnell Prof Debnath Ghosal Prof Sandeep Verma	Welcome
Session chair: Prof Richard Strugnell, University of Melbourne		
10:10 – 10:45 am	L1: Prof Justine Mintern University of Melbourne	Precision cell targeted mRNA-LNP immunotherapeutics
10:45 – 11:20 am	L2: Prof Ritika Gautam IIT Kanpur	Redox Modulation of Health and Disease: From Inorganic Chemistry to Translational Medicine
11:20 – 11:50 am	Coffee	
Session chair: Prof S Ganesh, IIT Kanpur		
11:50 – 12:25 pm	L3: Prof Debnath Ghosal University of Melbourne	Understanding the biogeography of human oral microbiome at molecular resolution.
12:25 – 1:00 pm	L4: Prof Arun K Shukla IIT Kanpur	Why so DARC: Structural visualization of the Duffy antigen receptor
1:00 – 2:00 pm	Lunch Break Venue: VH, New Dining Hall	
Session chair: Prof R Sankararamakrishnan, IIT Kanpur		
2:00- 2:35 pm	L5: Prof Nisanth Nair IIT Kanpur	Molecular simulation guided design of novel beta-lactamase inhibitors
2:35 – 3:10 pm	L6: Prof Lachlan Coin University of Melbourne	Applications of Machine Learning and Artificial Intelligence to Biological Sequence Analysis
3:10 – 3:40 pm	Coffee	
Session chair: Prof Natalie Sims, University of Melbourne		

3:40 – 4:15 pm	L7: Prof Geetha Kumar Amrita Vishwa Vidyapeetham	Resisting Antimicrobial Resistance: Strategies to combat AMR
4:15 – 4:50 pm	L8: Prof Jonaki Sen IIT Kanpur	Molecular mechanisms of cerebral hemisphere formation

Day- 2, November 26, Tuesday, MFCEM Seminar Hall

Time	Speaker	Title
Session chair: Prof Sandeep Verma, IIT Kanpur		
10:00 – 10:35 am	L9: Prof Bipin Nair Amrita Vishwa Vidyapeetham	Integrating Traditional and Conventional Combat Strategies in Disease Biology
10:35 – 11:10 am	L10: Prof Richard Strugnell University of Melbourne	Addressing AMR through vaccination
11:10 – 11:40 am	Coffee	
Session chair: Prof Justine Mintern, University of Melbourne		
11:40 – 12:15 am	L11: Prof Andrea O'Connor University of Melbourne	Multifunctional Antimicrobial Nanomaterials to Combat Drug-Resistant Infections for Medical Devices and Tissue Engineering
12:15 – 12:50 pm	L12: Prof J Ramkumar IIT Kanpur	Collaborative Robot (COBOT) assisted Operative Dentistry
1:00 – 2:00 pm	Lunch Break Venue: VH, New Dining Hall	
Session chair: Prof Ashok Kumar, IIT Kanpur		
2:00- 2:35 pm	L13: Prof Natalie Sims University of Melbourne	Bone heterogeneity: how cells and signals control material quality
2:35 – 3:10 pm	L14: Prof. Dharmaraja Allimuthu IIT Kanpur	Tuning isatoic anhydrides' lysine ligation chemistry for bioconjugation and drug delivery
3:10 – 3:40 pm	Coffee	
Session chair: Prof Andrea O'Connor, University of Melbourne		
3:40 – 4:15 pm	L15: Prof Ashok Kumar IIT Kanpur	Advancing Bone Health: Biomaterials and Emerging Therapies for Regeneration

4:15 – 4:50 pm	L16: Prof S Sivakumar IIT Kanpur	Designing Nanomaterials for Precision Biosensing, Targeted Drug Delivery, and Organ-on-a-Chip Systems
Closing Remarks: Prof Debnath Ghosal, Prof Sandeep Verma		

Day- 3, November 27, Wednesday

Time	Agenda	Venue/Contact Person
9:45-10:20 am	Visit to SIDBI and meeting with Prof Deepu Philip	Meeting Room, PBCEC
10:30 – 11:45 am	Visit To LVAD	LVAD Lab, DJAC Building
11:45 - 1:00 pm	Collaborative meetings	GSMST Building Near Airstrip
2:30-3:30 pm	Visit to Cryo-EM Facility	Prof Arun K Shukla