Tata Institute of Fundamental Research
Survey No. 36/P, Gopanpally Village, Serilingampally, Ranga Reddy Dist., Hyderabad – 500 046

Seminar

Chemokines, neutrophils and inflammation: Structure, function, physiology and pathology

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Inflammation plays a central role in the pathogenesis of bacterial and viral infections. A hallmark of acute microbial infections is the robust recruitment of neutrophils to the infected tissues. Chemokines direct neutrophils to the insult site by interacting with the CXCR2 receptor and tissue glycosaminoglycans (GAGs). GAGs, which are sulfated linear polysaccharides, tune chemokine function by regulating chemokine levels available for receptor activation and shaping gradients that direct neutrophils to the infected tissue. Clinical and animal model data indicate a dysregulation in chemokine-neutrophil axis is responsible for tissue damage and disease. My lab is interested in understanding the molecular mechanisms by which chemokine-chemokine, chemokine-glycosaminoglycan (GAG) and chemokine-receptor interactions orchestrate in vivo neutrophil recruitment. Our approach is 'structure-centric' and use a range of tools and techniques that encompasses protein engineering, solution NMR, biophysics, computational biology, cell signaling and mouse CRISPR and disease models.

Friday, Aug 26th 2022

04:00 PM (Tea/Coffee at 3:45 PM)

Auditorium, TIFR-H