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

Internal Seminar

Dynamic control of microbial movement by photoswitchable ATP antagonists

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Adenosine triphosphate (ATP) is the primary energy source for biochemical processes and biomolecular motors. Developing ATP antagonists offers immense potential for controlling biological processes and designing drugs. By attaching photo-responsive molecules, spatiotemporal regulation becomes possible. The talk discusses the design and synthesis of azobenzene-based photo-responsive ATP antagonists, we demonstrate reversible modulation of axonemal dynein activity. Our data showcase the power of a reversible photoregulatory tool in dynamically controlling biological motor function. Further details on our approach, results, and implications will be discussed in the presentation.

Tuesday, Oct 29th 2024

14:30 Hrs

CR-1, TIFR-H