Tata Institute of Fundamental Research
Survey No. 36/P, Gopanpally Village, Serilingampally, Ranga Reddy Dist., Hyderabad - 500107

Seminar

Therapeutic Gene delivery and imaging with Non-Viral Vectors - With an Emphasis on Cardiovascular Disease

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Cardiovascular disease is the leading cause of mortality in the developed and developing countries, the targeted gene delivery and imaging approach for the therapy of myocardial infarction, atherosclerosis etc. is our current research topic. Targeted delivery of the drugs and gene to the region of interest, helps in alleviating the off target effects. Monitoring the movement of the delivered drug or gene with the imaging agent aides in tracking the distribution in vivo. Non viral vector mediated gene delivery for cardiovascular targeted gene editing is the initial focus of the presentation. Previously we have worked in the cardiovascular restenosis therapy with surface mediated gene delivery approach. Restenosis is an important issue after the cardiovascular stent implantation, at present drug eluting stents are currently in the market and still there is a room for further improvement. siRNA and microRNA coated stents were implanted in the large animal models e.g. swine and the effects of the gene eluting stents were studied. Research works on anti-cancer gene therapy with the non-viral mediated siRNA, microRNA delivery and gapmer delivery for anti-viral therapy will be discussed finally.

Thursday, May 3rd 2018

4:00 PM (Tea/Coffee at 03:30 PM)

Auditorium, TIFR-H