



**TIFR Centre for Interdisciplinary Sciences,
Narsingi, Hyderabad 500075**

Colloquium

Molecular DNA devices in Living Systems

Yamuna Krishnan

National Centre for Biological Sciences, TIFR, Bangalore

Due to its nanoscale dimensions and ability to self-assemble via specific base pairing, DNA is rapidly taking on a new aspect where it is finding use as a construction element for architecture on the nanoscale. Structural DNA nanotechnology has yielded architectures of exquisite complexity and functionality invitro. However, till 2009, the functionality of such synthetic DNA-based devices in living organisms remained elusive. Work from my group the last few years has bridged this gap where, we have chosen architecturally simple, DNA-based molecular devices and shown their functionality in complex living environments. Using two examples, from our lab, one of a rigid, DNA polyhedron and the other a molecular switch that functions as a pH sensor I will illustrate the potential of DNA based molecular devices as unique tools with which to interrogate living systems.

Monday, Nov 18th 2013

4:00 PM (Tea/Coffee at 3:30 PM)

Seminar Hall, TCIS