



INSTITUTE COLLOQUIUM
(Biological Sciences)
INDIAN INSTITUTE OF SCIENCE

Prof. K. Muniyappa
Chairman, Department of Biochemistry

will deliver a lecture

on

Meanderings with Proteins and DNA

Thursday, September 28, 2006
at 4.00 pm in the Faculty Hall

THE DIRECTOR
will preside

All are cordially invited

Coffee/Tea: 5.00 pm
Venue: Reception Hall

Abstract

In recent years, there has been a profound change in the classical view of genetic recombination. Historically, genetic recombination was thought to be only required for the generation of normal haploid gametes. In the course of that process, called meiosis, recombination not only assures the segregation of one chromosome of each type to progeny germ cells, but also insures increase in genetic diversity in populations. It is also known for many years that recombination plays vital role(s) in the repair of damaged DNA, replication, gene expression, horizontal gene transfer and evolution. In recent years, however, it is becoming increasingly clear that the enzymes of homologous recombination play multiple roles in both mitotic and meiotic cells. Thus, to the classical view of recombination as an engine of inheritance we must add the view of recombination as vital to housekeeping functions, thereby creating a broader awareness of this evolving area of research.

We have been trying to understand the mechanistic aspects of homologous recombination by using genetic, biochemical and structural approaches. I will discuss how our research has uncovered several novel aspects of homologous recombination and its role in various nuclear events including telomere length maintenance and genome stability.
