



INDIAN INSTITUTE OF SCIENCE  
BANGALORE

Cordially invites you to the  
**INSTITUTE COLLOQUIUM**  
(Biological Sciences)

by

**Professor Sandhya S. Visweswariah**

Molecular Reproduction Development & Genetics

on

**The language of a living cell : Cyclic Nucleotides and Beyond**

Date : Tuesday, 19th November 2013

Venue : Faculty Hall, Main Building

Time : 4-00 p.m.

Professor P. Balaram, Director  
will preside

**ALL ARE WELCOME**

Tea : 5-00 p.m.

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**ABSTRACT**

All living organisms need to communicate with each other. Importantly, disease causing bacteria need to 'talk' to their human host using a common language. Cyclic adenosine and guanosine monophosphates (cAMP and cGMP) are used extensively in developing the syntax of cellular communication. Over the years, we have addressed at the molecular level the way cyclic nucleotides are used by pathogens that cause two important diseases, namely Tuberculosis and Diarrhea. We have discovered and characterized novel proteins that make these cyclic nucleotides, and mediate their actions in both the bacterial and the mammalian cell. Our contributions in the analyses of human mutations that result in congenital and constitutive diarrhea have paved the way for the development of animal models that may mimic human diarrhea. Our studies provide avenues for the translation of our findings to clinically relevant strategies for the treatment of these diseases in future.