



# Special Talk

7<sup>th</sup> November 2016



Talk on “NEW HORIZONES IN STRUCTURAL BIOLOGY” by Dr. Balaji Prakash, FNASc, Senior Principal Scientist & Professor (AcSIR), Head, Department of Molecular Nutrition, CSIR-Central Food Technological Research Institute, Mysore 570 020, Karnataka, India.



**P**roteins that make up the cells in our body or a small bacteria, are made up of atoms that adopt a regular well-defined three-dimensional structure. These structures can be determined using X-ray crystallography or Nuclear Magnetic Resonance. There exists a clear relationship between the structure of proteins and the function(s) that they carry out. We attempt to identify this relationship in several important proteins; involved in key cellular processes like ribosome assembly. By understanding these processes in bacteria that spoil food, we attempt to design new preservatives. Towards this endeavor, we determine the three-dimensional structure of these proteins using X-ray crystallography and to understand their function we use a combination of bioinformatics, biochemistry, and other biophysical techniques.

- Dr. JR Kumar