



INSTITUTE COLLOQUIUM

INDIAN INSTITUTE OF SCIENCE
BANGALORE

PROFESSOR C RAMAKRISHNAN
MOLECULAR BIOPHYSICS UNIT

will deliver a lecture

on

STUDY OF PROTEIN STRUCTURES: DATA ANALYSIS AS A TOOL

on Wednesday, the 2ND FEBRUARY, 2000

at 4.00 PM in the Faculty Hall

DIRECTOR

will preside.

All are cordially invited.

Coffee : 5.00 PM
Reception Hall

Prof. S S KRISHNAMURTHY
Convener

ABSTRACT

Proteins constitute an important member in the family of biological macromolecules. As the function of a protein is closely related to its structure and folding, a knowledge of the structural details of the protein is of paramount importance and can be of great help in understanding its function. Protein data bank, with only a handful of structures in the eighties, has undergone a phenomenal growth in the last two decades and can be used through judicious analysis to obtain structural insights.

In this lecture, a quick journey will be made through the evolution and details of the "RAMACHANDRAN MAP" to bring out its simplicity and usefulness in representing complex protein structures as a two-dimensional plot. Attention will be focussed on the use of Protein Coordinates data for analysis and modeling studies, illustrating them through some specific examples, such as glycol conformation, alpha-turns, disulfide bridge modeling for site-directed mutagenesis, need-based distortion and hydrogen bonding pattern involving some specific residues.

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