

Title: Design, Synthesis and Possible Applications of Water Soluble Chlorins

Abstract: The porphyrin class of molecule has significant contribution to the photo medicine and clinical diagnostics due to their photo physical properties, chlorins happens to be the modified porphyrins. Some of the important application of these molecules is photodynamic theory, optical imaging and flow cytometry etc. The challenge in this area is to attribute the water solubility to this hydrophobic macrocycles. The extent of water solubility is the key for their various applications. Since few naturally occurring porphyrins have moderate water solubility makes it inevitable to develop synthetic alternatives. Another important aspect of chlorins is that they absorb strongly in the red or near infrared region of the spectrum, making these molecules highly useful for various photo induced applications. In this lecture the topics covered would be the various classes' of porphyrinic molecules both natural and unnatural, and the known water soluble chlorins so far, the design of new systems, various strategies in the synthesis and the presentation regarding the various possible applications.