

## **Seminar**

### **New generation PNA analogues for effective cell permeation**

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Peptide nucleic acids (PNA) are a class of DNA mimics, wherein the non-ionic ethylenediamine-glycine backbone replaces the anionic sugar-phosphate backbone. They bind complementary DNA or RNA with high affinity and selectivity and hence promised great potential as antisense therapeutic agents. However their poor aqueous solubility, cell penetration abilities and equal affinity for iso-sequential DNA/RNA (which decreases their target specificity by half) have restricted their applications. In order to overcome these drawbacks, we have designed, synthesized and evaluated several cationic PNA and fluorinated PNAs as new generation PNA analogues that have a good compromise of hydrophobic/hydrophilic balance for effective cell permeation. This lecture presents a comparative study of their complementation with iso-sequential DNA/RNA and cell permeation abilities enhanced by their inherent abilities to form nanoparticles.

***Saturday, Mar 12<sup>th</sup> 2016***

***3:00 PM (Tea/Coffee at 2:45 PM)***

***Seminar Hall, TCIS***