



REGIONAL CENTRE FOR BIOTECHNOLOGY  
Seminar series

---

## Enzyme and Transition-Metal Catalysis in Organic Synthesis From Heterocycles to Macrocycles

**Gagan Chouhan, PhD**

The Scripps Research Institute  
La Jolla, California 92037 USA

Tuesday, 28<sup>th</sup> June, 2011

2:30 PM

Seminar Room

The use of enzyme and transition metal catalysis has a great impact on synthesis of biologically active molecules. For example, the lipase-catalyzed kinetic resolution of secondary alcohols for the synthesis of enantiomerically enriched or pure compounds has been widely used in academic as well as industrial research to prepare a range of medicinally important molecules. Also transition-metals particularly palladium and copper catalysis plays an important role in medicinal chemistry to generate drug-like structures. This talk will focus on the synthesis of chiral biologically active compounds through lipase- catalyzed kinetic resolution process. In addition, the use of palladium catalyzed carboxyamidation reaction and copper catalyzed (3+2) Huisgen cycloaddition will be presented for the synthesis of bioactive heterocyclic and macrocyclic molecules respectively.