

**Number of Available Seats**

50

(Note: we have a limited number of seats and these will be filled on a first-come-first basis)

**Fee to Attend this Course**

INR 60,000.00 per participant

(including all the meals during 4 days)

*Please contact the SOS course coordinator at the following address if you are interested in attending this course:*

**Dr. Arvinth Pradheep Shanmugam**

Head, Corporate Development &  
Project Management

**Institute of Life Sciences**

(An Associate Institute of University of Hyderabad Supported by Dr. Reddy's)

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**INSTITUTE OF LIFE SCIENCES**

(An Associate Institute of University of Hyderabad supported by Dr. Reddy's)



**Advanced Course  
(Two Parts) in  
Stereoselective  
Organic Synthesis (SOS)**

Overall 24 Hrs Over 4 Days

Schedule:  
July 15-16, 2011 (Part A)  
and  
August 19-20, 2011 (Part B)

***The Institute of Life Sciences located on the University of Hyderabad Campus is organizing again a teaching course in “Stereoselective Organic Synthesis (SOS)” to keep up with the growing demand to sharpen the advanced organic chemistry knowledge within the pharmaceutical industries.***

The course aims to reach the pharmaceutical medicinal and process chemistry communities interested in improving their knowledge and skills in several aspects of advanced organic synthesis topics.

The course will be given in two parts (12 hr each part) 6 hr per day over 4 days period (July 15-16 and August 19-20, 2011) and will cover the following topics:

- Basic principles in asymmetric synthesis.
- Stereocontrolled carbon-carbon and carbon-hetero atom bond forming reactions using chiral auxiliary and catalytic approaches (including asymmetric organo-catalysis).
- Applications of stereo- and enantio-selective organic reactions in total synthesis of bioactive natural products.

### **What this course has to offer to pharmaceutical medicinal and process chemistry communities:**

The growing interest in the modern drug discovery arena is challenging the organic, medicinal and process chemistry communities to access a wide arsenal of novel small molecules in highly efficient and practical manners. In particular, the post-genomic drug discovery demands an access to highly unique small molecules that could function as selective modulators of protein-protein interactions and as selective dissectors of signaling pathways. To keep up with this demand our chemical community needs to be well-equipped with the modern knowledge and skill-sets to come-up with highly innovative, clever, and cost-effective approaches to access small molecules. The course in SOS is designed to prepare our industrial medical and process chemistry communities (at MS and PhD levels) to undertake these challenges. In addition to attending this course, the participants will also receive the detailed course material with well-cited literature references as hard and electronic copies.

The course champion, Prabhat Arya, has several years of experience in teaching this course material to highly advanced students at MS and PhD levels in the North American University System and is known to deliver the material effectively through an extensive use of molecular models.

### **Course Champion**

Prabhat Arya  
Professor and Leader  
Chemical Biology Program  
Institute of Life Sciences

Adjunct Professor, Biochem, McGill Univ  
Member, Ottawa Inst of Systems Biology

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After spending more than 22 years of academic career with the National Research Council of Canada and Ontario Institute of Cancer Research, Prabhat moved back to India to establish a Chemical Biology Program to undertake post-genomic drug discovery challenges. With an objective to explore a new chemical space, his research aims to develop novel methods leading to high-throughput generation of natural product-inspired small molecules. Through developing partnerships with the biomedical community, small molecules from his team are then subjected to a wide variety of evaluation machinery in a hunt for modulators of signaling pathways. Over the years, his team has written several authoritative articles on the need to strengthen the advanced organic chemistry efforts to produce natural product-inspired chemical probes to explore their utilization in the signaling biology arena.

After completing his education (BSc Hons, MSc, MPhil, PhD, 1974-85, all from University of Delhi), he pursued his post-doctoral career (1985-89) with Professors Robert Corriu (Univ of Montpellier, France), Ian Paterson, FRS (Cambridge Univ) and Bill Chan (McGill Univ). Prabhat is also an Adjunct Professor with Biochemistry Dept, McGill University, Affiliate Investigator, Ottawa Hospital Research Institute (OHRI) and Member, Ottawa Institute of Systems Biology. Over the years, he has won served awards and served the society through an active participation in numerous national and international committees dealing with grants, science policies, scientific societies, conferences.