The seminar series addresses the Research and Development (R&D) process of new therapeutics in the pharmaceutical industry and challenges it faces today. Prior to commercialization, new drugs must undergo series of steps ranging from basic laboratory research to clinical studies. Chemists involvement in this process is vitally important for orchestrated development of new targeted drugs. This seminar series not only provides understanding of drug-development process but also offer broader outlook of research opportunities available to Chemists in Sri Lanka.

The advancement in genomics, proteomics and computational power has enabled scientists to have a better understanding of diseases at the molecular level. Due to increased understanding and knowledge on the diseases, the task of discovering and developing safe and effective drugs has been made easy. Based on the understanding of the underlying cause of a disease, pharmaceutical researchers select a “target” for a potential new medicine.

Many scientists turn to nature to find interesting compounds for fighting diseases. A promising molecule (a “lead compound”) that is isolated from natural products or by other means could become a drug. The “lead compound,” may act on its target to alter the disease course. After successful long years of animal and clinical testing (Phases 1 through 3) the lead compound can ultimately become a new medicine. Out of several thousands of compounds discovered as lead compounds only a very few compounds will enter the research and development (R&D) pipeline and ultimately enter into the market as an effective drug to treat a disease. The success of a compound to ultimately end up as a drug requires not only highly sophisticated technologies and complex project management but the best scientific minds of Researchers from government, academia and industry.

**Symposium Aims**

(i) To familiarize the researchers and students with current approaches of drug designing

(ii) To expose methods in successful design of efficient, specific target molecules

(iii) Expose the participants to the legal framework in collaborating in the drug design program with foreign countries (dealing with pure compounds and crude extracts or plant material)

(iv) Panel discussion to guide the students about the graduate studies in USA

**For Whom**

Scientists / Research fellows (National Laboratories, Universities & other R&D institutions) / Graduate / Post graduate students in Biological / Chemical / Medical Sciences.

**Date**

Jan 08, 2012 from 8:00 a.m. – 6:30 p.m.
**Venue**
Adamantine Hall  
College of Chemical Sciences  
Institute of Chemistry Ceylon  
341/22, Kotte Road, Welikada, Rajagiriya, Sri Lanka  
Tel: +94 11 2863154, +94 11 4615230  
Fax/Tel: +94 11 2861653, +94 11 2861231

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**Registration Fee**  
Members: Rs. 1000 (early bird), Rs. 1250 (normal), Rs. 1500 (on site)  
Students: Rs. 500 (early bird), Rs. 750 (normal), Rs. 1000 (on site)  
Non members: Rs. 1500 (early bird), Rs. 1750 (normal), Rs. 2000 (on site)

*Registration Fee includes lectures/presentation, handouts, stationary, lunch and tea.*

*Fee is to be paid through bank draft drawn in favor of*

College of Chemical Sciences - Symposium  
Registration form along with the fee should reach:  
College of Chemical Sciences  
Institute of Chemistry Ceylon  
on or before 6th Jan 2012

**Speaker List**

- **Kevin Schug, Ph.D., University of Texas Arlington, USA;** "Flow Injection Analysis - Mass Spectrometry for Investigation of Noncovalent Interactions" [Web-based Seminar]

- **Frank Foss, Ph.D., University of Texas Arlington, USA;** "Bioorganic Approaches to the Discovery and Interrogation of Therapeutic Targets" [Web-based Seminar]

- **Brad Pierce, Ph.D., University of Texas Arlington, USA;** "Single Turnover of Substrate-bound Ferric Cysteine Dioxygenase (CDO) with Superoxide Anion: Enzymatic Reactivation, Product Formation, and a Transient Intermediate" [Web-based Seminar]

- **Roshan Perera, Ph.D., University of Texas Arlington, USA;** "Proteins as Next-generation Drugs"

- **Luo Yuan, Ph.D., UT Southwestern Medical Center, USA;** "Selective Aβ42-binding Peptoids - Aggregation Inhibitors and Detection Ligands for Aβ42" [Web-based Seminar]

- **Pavan Lingala, Pfizer, USA;** "US Drug Discovery Opportunities for Sri Lankan Students" [Web-based Seminar]

- **Mahinda Wickramarathne, Ph.D., University of Peradeniya, Sri Lanka;** "Trends in Drug Discovery (in Sri Lanka)"

- **Nirmali Wickramarathne, Ph.D., Sabaragamuwa University, Sri Lanka;** "Challengers in Drug Discovery program in Sri Lanka"

- **Sirimal Premakumara, Ph.D., Industrial Technology Institute, Sri Lanka;** Drugs & Drug Leads of Sri Lankan Origin & Some Potential Biota for Molecular Medicine & Drug Research"

- **Candida Perera, Ph.D., Cornerstone Pharma, USA;** "Frontiers in Cancer Drug Discovery & Development - from Bench to the Market"

- **Anura Danthanayarana, Ph.D., Formerly at Alcon Labs, USA;** "Strategies in Drug Design"

- **S. Sotheeswaran, Ph.D., Institute of Chemistry Ceylon, Sri Lanka;** "Rise and Fall of the Antidepressant Drug Called KAVA(Piper methysticum)"

**Organized by**

**Institute of Chemistry Ceylon**

**University of Texas Arlington**

**Alumni Association of Graduate Chemists - I. Chem. C.**