



Department of Chemistry

SPECIAL SEMINAR

Gopakumar Gopalakrishnan, Ph. D.



Research Chair of Excellence at
UNIVERSITÉ PARIS-SUD, France

Chemistry and Neuroscience

Dr. Gopakumar had his **MSc** in Physical Chemistry from School of Chemical Science, Mahatma Gandhi University and completed his **PhD** from the prestigious École Poly technique Fédérale de Lausanne (EPFL), Switzerland. He was then a Post-doctoral fellow at McGill University, Canada. Currently he holds a Research Chair of Excellence position at University of Paris-sud, France.

He is a recipient of several awards including European Union's FP-7 Co-Funded Research Grant for Independent Research, Neurochemistry International Fellowship-Sicily, Italy, NeuroEngineering Post-doctoral Fellowship – McGill University, Industrial Research Fellowship – Olivetti SA and NRP-47 Grant from Swiss National Science Foundation

He has several very high impact publications to his credit and he is a reviewer for several high impact international journals.

Date: Friday, 20 November 2015 at 11:00 AM

Venue: Chemistry Seminar Hall

Abstract

The human nervous system is composed of the central nervous system (CNS) - consisting of the brain and spinal cord (SC)- as well as the peripheral nervous system (PNS) and autonomic nervous system, which consist of all the spinal and cranial nerves that connect the CNS to the sensory and effector organs (muscles and glands). Together, these allow us to experience, process and interact with our environment. Consequently, injuries or dysfunction of the nervous system (as in trauma, stroke or certain neurodegenerative diseases) can result in devastating disabilities and losses for the affected person. Another devastating condition that puzzles the neuroscience community for decades is chronic pain. In some cases, even after the cause of pain is eliminated, the unpleasant sensation remains. Current pain treatments include highly potent analgesics such as codeine and morphine that cause unwanted side effects and dependency. In this talk, I will present some innovative and novel chemical biology/ biophysical chemistry approaches to tackle the unmet health issues related to human brain. In this talk he will focus on the use of lipid membranes and lipid conjugation of therapeutic agents to circumvent the current roadblocks in the treatment of neurological disorders.