

RNA Metabolism and Neurodegenerative Diseases

Department of Chemistry, University of Delhi

Overview:

Neurodegenerative diseases, such as Alzheimer's disease, impose an immense social and financial burden on our societies. The emerging concepts of the role that RNA binding proteins (RBPs) play in disease mechanisms is changing the manner in which we conceptualize these diseases. The process of liquid-liquid phase separation, membrane-less organelles and stress granule formation provide valuable models for understanding disease mechanisms and designing novel therapeutic approaches to disease.

Objectives:

- This course will provide the basic understanding of neurodegenerative diseases, focusing on Alzheimer's disease and ALS.
- Participants will then learn about the biophysics of phase separation, role of RBPs in regulating RNA metabolism, and how dysfunction of these processes might lead to neurodegenerative diseases.
- Participants will also learn about the therapeutic approaches undertaken for these diseases.
- Participants will also go through a mock process of commercializing ideas (creating biotech companies). This would involve identifying the concept, planning the company, pitching the company idea to a VC, preparing the studies for clinical trials and running through clinical trials.

Duration and Venue	April 2 – 7, 2018, Department of Chemistry, University of Delhi
Modules	<p>Day 1: Neurodegenerative disease: Pathology, Presentation and Mechanisms</p> <p>Day 2: Liquid-Liquid Phase Separation and stress granules</p> <p>Day 3: RNA metabolism: Concepts and fundamentals</p> <p>Day 4: RNA binding proteins and disease</p> <p>Day 5: Therapeutic approaches: SMA, antisense oligonucleotides, small molecules and other experimental approaches</p> <p>Day 6: Written Examination</p>
You can Attend if	Students at all levels (BSc/MSc/MBBS/MD/PhD) or Researchers/ faculty from academic and medical institutions including R&D laboratories.

Fees	<p>The participation fees for the course is: Student Participants: Rs 2500 Faculty/ Researchers Participants: Rs 5000 Industry Participants: Rs 10000</p> <p>The participants will be provided with accommodation on payment basis and the detail will be informed by e-mail to the shortlisted candidates. Number of participants for the course will be limited to forty.</p>
Mode of Registration	<p>STEP 1: One-time web-registration at GIAN portal (http://www.gian.iitkgp.ac.in/GREGN/index) through a non-refundable payment of Rs. 500/- (one-time). [A copy of enrolment form to be sent to course coordinator]. The last date of enrolment is February 16, 2018.</p> <p>STEP 2: Course Registration</p> <p>The shortlisted candidates will be informed by email. They need to make full payment of the course registration fee either by NEFT, or by sending a demand draft in favour of “Registrar, University of Delhi” payable at Delhi before the last date of registration. Email the copy of demand draft and registration form to the course coordinator.</p> <p>For any query, please contact at: uma.dhawan@bcas.du.ac.in</p>

Foreign Faculty



Professor Benjamin Wolozin, received his M.D., Ph.D. from the Albert Einstein College of Medicine. He is currently a professor of Pharmacology, Neurology and the Program in Neuroscience at Boston University School of Medicine. He is also co-founder and Chief Scientific Officer of Aquinnah Pharmaceuticals Inc., a biotechnology company developing novel therapeutics to treat Alzheimer’s disease and Amyotrophic Lateral Sclerosis.

Dr. Wolozin has published over 150 papers, including publications in Science, Nature and PNAS. He has received numerous awards through his career including election as a fellow of the AAAS, the Spivack Distinguished Scholar in Neuroscience Award (BU), the Zenith Award (Alzheimer Association), Collaborator of the Year (BU Evans Center), Fellow of the Society for Skeptical Inquiry, Teacher of the year (Loyola University), A.E. Bennett Award (Soc. For Biological Psychiatry), Commissioned Officer Commendation Award (PHS), Donald B. Lindsley Award (Soc. For Neuroscience), Medical Scientist Training Fellowship, NSF Fellowship (declined), Hawk Prize for Biochemical Research (Wesleyan), Departmental Honors and Magna Cum Laude Latin honors (Wesleyan University).

Course Co-ordinators

Prof. Ramesh Chandra
Department of Chemistry
University of Delhi

Dr. Uma Dhawan
Department of Biomedical Science
BCAS, University of Delhi