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SERIES 102

Subash Chandra Gupta  
2025-07-07

### Series - 102

Date and Time - 7 July 2025 (Monday) (12:00 IST | 3:30 PM JST)  
Venue - Zoom  
Speaker - Subash Chandra Gupta  
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### Model systems in biomedical research

Model systems are foundational tools in biomedical research, enabling us to dissect complex biological processes and disease mechanisms in a controlled and reproducible manner. This lecture will introduce the concept of model systems, emphasizing their relevance across molecular, cellular, and organismal levels. The lecture will explore how diverse model systems—from immortalized cell lines and primary cultures to animal models such as *Drosophila melanogaster*, zebrafish, and mice—contribute to our understanding of human biology. Special focus will be given to inflammatory pathways, which are central to a wide range of human diseases including cancer, infections, autoimmune disorders, and metabolic syndromes. Key examples will include the use of murine models to study the inflammatory pathways, and human cell lines to study disease mechanisms. The lecture will also address the limitations of each model, ethical considerations, and how emerging alternatives such as organoids and *in silico* approaches are enhancing translational relevance. The session aims to provide students from diverse life science backgrounds a broad yet insightful understanding of how model systems drive innovation in biomedical research, especially in decoding inflammatory responses and identifying potential therapeutic targets.

Participants-30  
Thanks Everyone !



- RW Renu WADHWA (Host, me)
- DS Dr. Subash C Gupta, AIIMS Gu...
- A Aiswarya
- A Ajai
- AM Anamika Mishra
- A( Anjali (DOBES)
- Anjana@ IIT Guwahati
- AG Anushka Garhwal
- AB Aswani B. S
- AL Avinash Lama
- AK Aviral Kumar
- BN Bharathwaj N
- CN Chikashi Nakamura
- d dechen
- DP Dr. Priyanka Sow
- FM Fayaz Malik
- H Harinivelayudham
- Hemanth NOOTHALAPATI
- KH Kazumi Hirano
- Lakmal Gonawala
- M MUKESH KUMAR
- N Namrata
- o ochishitomoyo
- PH P.K Hashim\_iPhone
- P Pampita
- S' Shanuja's iPad
- SG Sosmitha Girisa\_IITG
- SK Sunil KAUL (AIST-Japan)
- U Upasana
- VR Vishwa R