

The Next Generation: AI for Biomedical Science

November 2nd 2026

Location: IMBA Lecture Hall

Organizers: Michael Bronstein, Georg Winter

Program

9:00 – 9:10 | Opening Remarks AITHYRA Directors

Session 1: Structural Biology and Generative Molecular Modeling

9:10 – 9:45 | Janani Durairaj, UNIL

"Context-aware deep learning for protein structure, interaction, and design"

9:45 – 10:20 | Marta Skreta, University of Toronto

"On the selectivity of generative models in structure-based drug design"

Session 2: Protein Design and Genomic Language Models

10:50 – 11:25 | Kieran Didi, University of Oxford

"What we can and cannot learn from general genAI: universal molecular design with Proteina models"

11:25 – 12:00 | Ernest Mordret, Institut Pasteur

"Genomic oracles: AI for functional discovery in microbiology"

Session 3: Single-Cell Representations and Spatial Biology

13:30 – 14:05 | Zoe Piran, Genentech

"Tracing by visual reasoning"

14:05 – 14:40 | Gokul Gowri, MIT

"Learning the dynamics of developmental trees"

14:40 – 15:15 | Johann Wenckstern, EPFL

"Virtual tissues: from atlas to foundation model for spatial proteomics"