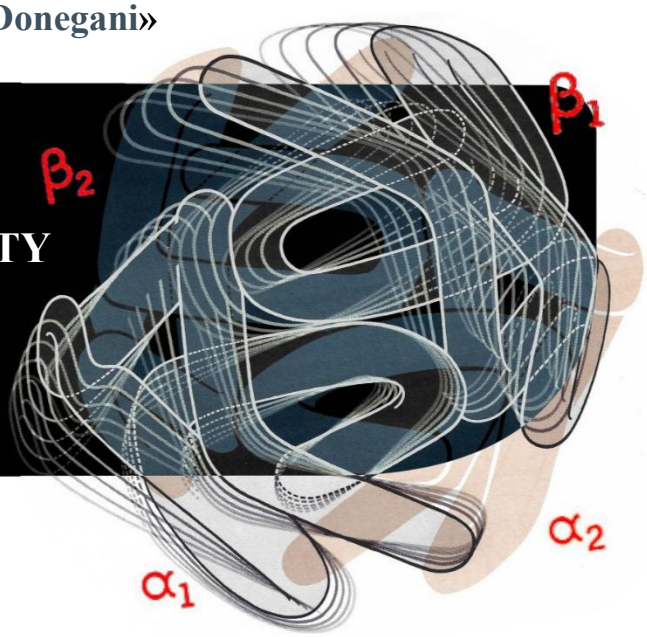
Accademia Nazionale dei Lincei

Fondazione «Guido Donegani»



PROTEIN DYNAMICS, COMPLEXITY AND FUNCTIONAL CONTROL

A Conference dedicated to the memory of Professor Martin Karplus (1930-2024)

Rome (IT) - 24 November 2026

Palazzo Corsini, Via della Lungara 10

Proteins are dynamic molecular systems whose function emerges from the interplay of structure, fluctuations and conformational transitions. This symposium, inspired by the pioneering work of Martin Karplus, will bring together experimentalists and theoreticians to discuss recent advances in protein dynamics, energy landscapes and functional regulation. Bridging physics, chemistry, biophysics and biomedicine, the meeting will explore how molecular dynamics and complexity shape biological function from individual proteins to large supramolecular assemblies and cellular systems

Scientific Organizing Committee

M. Brunori
E. Carafoli
J-P. Changeux
W.A. Eaton
A. Fersht
S. Gianni

Invited Participants

Lucia BANCI - *University of Florence, Sesto Fiorentino, Italy*
Maurizio BRUNORI - *Linceo, Sapienza University of Rome, Rome, Italy*
Ernesto CARAFOLI - *Linceo, University of Padua, Padua, Italy*
Marco CECCHINI - *University of Strasbourg, Strasbourg, France*
Jean-Pierre CHANGEUX - *Linceo, Institut Pasteur, Paris, France*
William A. EATON - *Linceo, National Institutes of Health, Bethesda, MD, USA*
Sir Alan R. FERSHT - *Linceo, MRC Laboratory of Molecular Biology, Cambridge, UK*
Stefano GIANNI - *Sapienza University of Rome, Rome, Italy*
Steven McKNIGHT - *University of Texas Southwestern Medical Center, Dallas, TX, USA*
Roland NETZ - *Freie Universtät Berlin, Berlin, Germany*
Giorgio PARISI - *Linceo, Sapienza University of Rome, Rome, Italy*
Sir John E. WALKER - *Linceo, MRC Mitochondrial Biology Unit, Univ. of Cambridge, UK*
Kurt WÜTHRICH - *Linceo, ETH Zürich, Zürich, Switzerland*

Info

convegni@lincei.it

Participation to the Conference is free. **Registration** is compulsory:
https://www.lincei.it/it/manifestazioni/protein-dynamics

PROGRAMME

09:30 ***WELLCOME by President R. Antonelli and Vice-President C. Doglioni***

09:50 ***CHAIR -* Sir Alan R. FERSHT (UK):** *General outlook.*

10:10 **Kurt WÜTHRICH (CH):** *Allosteric mediation of intramolecular dynamics in GPCR transmembrane signaling.*

11:00 **Lucia BANCI (I):** *Cellular structural biology*

11:40 ***COFFEE BREAK***

12:00 **Jean-Pierre CHANGEUX (F)** and **Marco CECCHINI (F):** *Allosteric mechanisms of synaptic transmission at atomic resolution: from early functional data to present day molecular dynamics*

13:00 ***LUNCH BREAK***

14:15 **CHAIR - Ernesto CARAFOLI (I)**

14:15 **Stefano GIANNI (I):** *Transient misfolding and dynamic communication in multidomain proteins*

14:55 **Roland NETZ (D):** *Conformational dynamics, memory effects and internal friction in fast folding proteins*

15:35 ***COFFEE BREAK***

15:50 **Maurizio BRUNORI (I):** *Elogio dell'imperfezione: a role for packing defects*

16:20 **Steven McKNIGHT (USA):** *How do protein domains of low sequence complexity assist in the dynamics of cell morphology?*

17:00 **Giorgio PARISI (I):** *Complexity and Biological Organization*

END OF MEETING