



# A Celebration of Structural Biology

April 14, 2023

Hybrid-mode • Via Zoom and at the Academy of Sciences of Lisbon

Structural Biology is a scientific field that has revolutionized our understanding of the mechanisms of action of biological macromolecules, including proteins, nucleic acids and polysaccharides. The birth of structural biology can be traced back to the work of John Kendrew and Max Perutz, who used X-ray crystallography to determine the structures of myoglobin (an oxygen-binding protein found in muscle tissue) and hemoglobin (the protein responsible for oxygen transport, present in red blood cells). Their pioneering work in the late 1950s earned them the 1962 Chemistry Nobel Prize and laid the foundation for the field of structural biology. Over the last decades, this field has seen tremendous growth as new technologies and methods emerged. In particular, the past decade has brought remarkable advances in approaches alternative to the historical methods of X-ray crystallography and nuclear magnetic resonance, expanding our capability to study previously intractable molecules and explore the shapes and interactions of molecules in unprecedented detail. Structural Biology has a profound impact on many areas of science and medicine. It has helped us to understand the molecular basis of diseases and provided a solid experimental foundation for the development of new drugs and therapies.

- 15:00-15:30**     **Pedro M. Matias** [ITQB, NOVA]  
*Protein Structural Biology: a 70 year-long journey*
- 15:30-16:00**     **João M. Cabral** [i3S, UPorto]  
*Structural Biology of Potassium Transporters*
- 16:00-16:30**     **Ana Messias** [Helmholtz Munich, Germany]  
*NMR Spectroscopy of Proteins: Structure, Dynamics and Interactions*
- 16:30-17:20**     **Filippo Mancía** [Columbia Univ, USA]  
*Structural Basis of Lipopolysaccharide Biosynthesis*

Organization | Maria Salomé Pais • Helena Santos • Nuno Borges • Ana Esteves

