

האקדמיה הלאומית הישראלית למדעים והחברה המלכותית הבריטית
מתכבדות להזמין אתכם לכינוס משותף בנושא

The Israel Academy of Sciences and Humanities and the Royal Society
cordially invite you to a Joint Conference on

Structural Biology: The Molecular Fabric of Life

שני-שלישי, כ"ט-ל' בשבט תש"ף
Monday–Tuesday, February 24–25, 2020

Steering Committee:

Richard Henderson, Nathan Nelson, Venki Ramakrishnan, Joel Sussman

Program

Monday, February 24, 2020

Chairperson: Nathan Nelson, Tel Aviv University

08:30 **Gathering**

09:00 **Welcome**

Nili Cohen, President, Israel Academy of Sciences and Humanities
Venki Ramakrishnan, President, The Royal Society
H.E. Ambassador Neil Wigan OBE, British Ambassador to Israel

09:15 **Keynote Lecture**

Ada Yonath, Weizmann Institute of Science
Origin of Life, Next Generation Eco Friendly Antibiotics, and a
Connection between Pathogenicity & Evolution

SESSION I

Protein Machines on the Membrane

10:00 **Gabriel Waksman**, Birkbeck, University of London
Mechanism of a Protein Polymerisation Machine at the
Bacterial Membrane

10:45 **Break**

SESSION II

From Protein Fibrils to Debilitating Diseases

11:15 **Sheena Radford**, University of Leeds
Seeing Amyloid: Beautiful Structures, Toxic Mechanisms

12:00 **Meytal Landau**, Technion – Israel Institute of Technology
Protein Fibrils in Infectious and Aggregation Diseases

12:45 **Yarden Opatowsky**, Bar-Ilan University
They Repel and Degrade: Novel Structural Insights in
Neuronal Degeneration

13:30 **Lunch**

Chairperson: Richard Henderson, MRC Laboratory of
Molecular Biology

SESSION III

Biomacromolecular Assemblies

14:45 **Carol Robinson**, University of Oxford
Macromolecular Assemblies in the Gas Phase

15:30 **Michal Sharon**, Weizmann Institute of Science
Insights into a New Regulatory Family of the Core Proteasome

16:15 **Ehud Gazit**, Tel Aviv University
Peptide and Metabolite Self-Assembly: Physiology, Pathology,
and Nanotechnology

17:00 **Break**

17:30 **Keynote Lecture**

Roger Kornberg, Stanford University
The Molecular Basis of Eukaryotic Gene Transcription

Tuesday, February 25, 2020

Chairperson: Joel L. Sussman, Weizmann Institute of Science

08:30 **Gathering**

SESSION IV

**Biology as a Data Science and Its Impact on
Protein Evolution**

09:00 **M. Madan Babu**, MRC Laboratory of Molecular Biology, Cambridge
Data Science Approaches to Biological Systems

09:45 **Dan Tawfik**, Weizmann Institute of Science
Protein Evolution – From So Simple a Beginning

10:30 **Sarel Fleishman**, Weizmann Institute of Science
Evolution-Guided Atomistic Design of New and Improved
Protein Activities

11:15 **Break**

SESSION V

Mechanism and Regulation in Biological Systems

11:45 **Gideon Davies**, University of York
Mechanistic and Cellular Insight into Medically-Relevant
Glycosidases: Conformations, Itineraries and Destinations

12:30 **Xiaodong Zhang**, Imperial College London
Mechanisms of Bacterial Transcription Initiation and Regulation

13:15 **Lunch**

Chairperson: Venki Ramakrishnan, President, The Royal Society

SESSION VI

Lipids, Membranes and Replication

14:15 **Peter Rosenthal**, Francis Crick Institute
Imaging Lipid-Enveloped Virus Assembly and Entry

15:00 **Etana Padan**, The Hebrew University of Jerusalem
The Nanomachine, NhaA Na⁺/H⁺ Antiporter

15:45 **David Barford**, MRC Laboratory of Molecular Biology, Cambridge
Molecular Basis for Regulation of the Anaphase-Promoting
Complex by the Spindle Assembly Checkpoint

16:30 **Break**

SESSION VII

From 3D Structure to Coating of the Intestine

17:00 **Deborah Fass**, Weizmann Institute of Science
Gut Reaction: Disulfide Bonding in the Protective Mucin Coating
of the Intestine

17:45 **Keynote Lecture**

Richard Henderson, MRC Laboratory of Molecular Biology
Future Prospects for Cryo EM

18:30 **Closing Remarks**

Venki Ramakrishnan, President, The Royal Society
Nathan Nelson, Tel Aviv University

The conference will take place at
The Israel Academy of Sciences and Humanities,
Albert Einstein Square, 43 Jabotinsky St.,
Jerusalem

הרשמה
Registration

הכינוס יתקיים
באקדמיה הלאומית הישראלית למדעים,
כיכר אלברט איינשטיין, רחוב ז'בוטינסקי 43,
ירושלים

ההרצאות תתקיימנה בשפה האנגלית | The lectures will be in English

הכניסה ללא תשלום על בסיס מקום פנוי | מספר המקומות מוגבל, הכניסה בהרשמה מראש | חניה ציבורית ברחובות הסמוכים לאקדמיה.

Places are limited. Please register in advance | Admission is free of charge | Paid public parking is available in the streets adjacent to the Academy.