

Symposium on  
**AI and Big Data in the Life Sciences and in Medicine,  
Scientific and Philosophical Issues**

**May 29, 2024**

**Henwood-Oshry Life Sciences Teaching Laboratories Building (38)  
Auditorium  
Ben-Gurion University of the Negev**

**9.45–10.00**

Refreshments

**10.00-10.25**

Greetings: **Gabriel Lemcoff**, Ben-Gurion University of the Negev

Introductory Remarks: **Ute Deichmann**, Ben-Gurion University of the Negev

**10.25-12.15**

**Structural Biology**

10.25 **Raz Zarivach** (Chair), Ben-Gurion University of the Negev:  
Introduction

10.35 **Ora Schueler-Furman**, Hebrew University of Jerusalem: What  
Can We Learn about Protein Communication from Deep Learning  
Applications?

11.00 **Mickey Kosloff**, University of Haifa: Incorporating AI-Based  
Structure Prediction into Functional Protein Re-Design

11.25 **Sarel Fleishman**, Weizmann Institute of Science: Computational  
Design of Functional Protein Repertoires

11.50 **Nir Ben-Tal**, Tel Aviv University: Proteins with Multiple G  
Protein-Coupled Receptor Domains

**12.15-12.30**

Coffee break

**12.30-13.25**

**Keynote Lecture (Zoom)**

12.30 **Anat Ben-Zvi** (Chair), Ben-Gurion University of the Negev:  
Introduction

12.40 **Bernhard Sabel**, University of Magdeburg Medical School: Mass  
Pollution of the Permanent Scientific Record by AI-Produced Fake-  
Publications

**13.25-14.10**

Lunch

**14.10-15.35**

**AI in Basic and Applied Genomics**

14.10 **Dan Mishmar** (Chair), Ben-Gurion University of the Negev:  
Introduction

14.20 **Erez Levanon**, Bar-Ilan University: Unlocking the Potential of  
RNA Editing through Genomic Data Exploration

14.45 **Smadar Ben-Tabou de Leon**, University of Haifa: Integration of  
Genetic and Mechanical Information During Sea Urchin Larval  
Skeletogenesis

15.10 **Esti Yeger-Lotem**, Ben-Gurion University of the Negev: Genetics  
in Context: Enhancing Disease Diagnosis and Understanding via  
Interpretable Machine Learning

**15.35-15.55**

Coffee break

**15.55-17.20**

**Organismal Biology, Ecology, and Evolution**

15.55 **Ofer Ovadia** (Chair), Ben-Gurion University of the Negev:  
Introduction

16.05 **Uri Roll**, Ben-Gurion University of the Negev: Big Data and AI in  
Macroecology and Conservation

16.30 **Shai Pilosof**, Ben-Gurion University of the Negev: Predicting  
Links in Ecological Networks

16.55 **Yitzhak Pilpel**, Weizmann Institute of Science: Evolutionary  
Safety of Mutagenic Drugs

**17.20 Reception with wine and cheese (for speakers/invited guests)**