

INFECTIOUS DISEASES SYMPOSIUM:

INNOVATIVE APPROACHES TO RESEARCH AND DIAGNOSTICS



5-7 SEPTEMBER 2023

BAR ILAN UNIVERSITY, RAMAT GAN, ISRAEL NANOTECHNOLOGY BUILDING 206

THE AIM OF THIS SYMPOSIUM IS TO ADDRESS CLINICAL AND
DIAGNOSTIC ISSUES REGARDING INFECTIOUS DISEASES

Dear Colleagues,

We are pleased and happy to invite you to:

Infectious Disease Symposium: Innovative Approaches to Diagnostics and Research

5–7 September 2023, Bar Ilan University, Ramat gan, Israel.

The aim of this symposium is to address clinical and diagnostic issues regarding infectious diseases.

The conference will cover early diagnosis and treatment of intrauterine infections, flaviviruses diagnosis and challenges, challenges in diagnosis of bacterial and parasitic infections, as well detecting the emergence of the next disease X. In addition, our goal is to establish a partnership plan for communication between the laboratory and clinicians on how to implement the testing in clinical practice along international evidence-based and expert opinion guidelines.

This conference is intended for laboratory directors, virologists, Internal medicine physicians, infectious diseases experts, clinical chemists, laboratory technologists, and biomedical engineers interested in learning strategies for developing and implementing high-sensitivity in vitro diagnostic tests.

National Scientific Committee

Prof. Amos Danielli (Faculty of Engineering, Bar Ilan University, Israel)

Prof. Avi Peretz (Tzafoon Medical Center & Azrieli Faculty of Medicine, Bar Ilan University, Israel)

Prof. Yonat Shemer (Ben Gurion University of the Negev, Israel)

Prof. Eli Schwartz (Sheba Medical Center & Tel Aviv University, Israel)

SYMPOSIUM TOPICS

- Flaviviruses diagnosis challenges and advances
- Intrauterine infections / Pregnancy: early diagnosis and treatment
- Systems Biology Approaches to diagnosis
- Bioterror
- Challenges in diagnosis of bacterial and Parasitic infections
- Detecting the emergence of the next disease X

MEETING ORGANISERS

Israel Society for Clinical Laboratory Sciences (ISCLS)

Bar-Ilan University (Faculty of Engineering & Azrieli Faculty of Medicine)

Israel Science Foundation (ISF)

Bar-Ilan Institute of Nanotechnology and Advanced Materials (BINA)

Israel Society of Parasitology and Tropical diseases

Israel Ministry of Science and Technology



The Azrieli
Faculty of Medicine
Bar-Ilan University



The Alexander Kofkin
Faculty of Engineering
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INFECTIOUS DISEASES SYMPOSIUM: INNOVATIVE APPROACHES TO RESEARCH AND DIAGNOSTICS

SCIENTIFIC COMMITTEE



PROF. AMOS DANIELLI
BAR ILAN UNIVERSITY



PROF. AVI PERETZ
TZAFON MEDICAL CENTER
BAR ILAN UNIVERSITY



PROF. YONAT SHERER
BEN GURION UNIVERSITY



PROF. ELI SCHWARTZ
SHEBA MEDICAL CENTER
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PROGRAM



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NANOTECHNOLOGY BUILDING 206

TUESDAY, SEPTEMBER 5, 2023

Opening and greetings

09:00-09:30 Get together and Registration
09:30-10:00 Opening and Greetings

Session 1 Part 1

Intrauterine infections/pregnancy: early diagnosis and treatment | Chair: Prof. Dana Wolf, HUJI & Hadassah Medical Center, Israel

10:00-11:20

10:00-10:30 **Congenital CMV: advances and challenges**
Dr. Marianne Leruez Ville, Necker Children's Hospital, Paris, France
10:30-10:50 **New markers of CMV infections**
Prof. Dana Wolf, HUJI & Hadassah Medical Center, Israel
10:50-11:20 **Maternal immunity**
Dr. Yariv Wine, Faculty of Life Sciences, Tel Aviv University, Israel

11:20 - 11:50 **Coffee Break and Visit the Exhibition**

Session 1 Part 2

Intrauterine infections/pregnancy: early diagnosis and treatment | Chair: Prof. Dana Wolf, HUJI & Hadassah Medical Center, Israel

11:50-12:40

11:50-12:20 **Viral hepatitis E: one health**
Prof. Thiru Velavan, University of Tübingen, Germany
12:20-12:40 **Rickettsia during pregnancy**
Dr. Yael Yagel, Ben Gurion University of the Negev, Israel

12:40 - 13:40 **Lunch and Visit the Exhibition**

Session 2

Mega-diagnostics | Chair: Dr. Yuval Geffen, Northern Laboratory (MegaLab), Maccabi Health Care Services, Israel

13:40-15:10

13:40-14:10 **Antibiotic resistance prediction model for personalized treatment of UTI**
Dr. Olga Snitser, Northern Laboratory (Megalab), Maccabi Health care Services, Israel
14:10-14:40 **Screening of infectious diseases in blood units**
Prof. Eilat Shinar, Magen David Adom, Israel
14:40-15:10 **NGS for diagnosis of infectious diseases**
Prof. Jacob Moran Gilad, Ben Gurion University of the Negev & Hadassah Medical Center, Israel

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NANOTECHNOLOGY BUILDING 206

WEDNESDAY, SEPTEMBER 6, 2023

09:00-09:30 Get together and Registration

Session 3
Part 1

Flaviviruses - diagnosis challenges and advances | Chair: Prof. Eli Schwartz, Sheba Medical Center & Tel Aviv University, Israel
09:30-11:00

09:30-10:00 **Dealing with Flaviviruses diagnosis in Endemic countries: a lesson from Vietnam**

Prof. Trung Nguyen Vu, Pasteur Institute of Ho Chi Minh City, Vietnam

10:00-10:30 **Comparison of RT PCR and rapid test for acute dengue fever in a diagnostic laboratory**

Dr. Le Thi Hoi, Hanoi Medical University, Vietnam

10:30-11:00 **Rapid and highly sensitive diagnosis of Zika, Dengue, and West-Nile viruses infection using Magnetic Modulation Biosensing technology**

Prof. Amos Danielli, Bar Ilan University, Israel

11:00 - 11:30 Coffee Break and Visit the Exhibition

Session 3
Part 2

Flaviviruses - diagnosis challenges and advances | Chair: Prof. Eli Schwartz, Sheba Medical Center & Tel Aviv University, Israel
11:30-13:00

11:30-12:00 **Zika in pregnant women**

Prof. David Baud, University Hospital, Lausanne, Switzerland

12:00-12:20 **Zika diagnosis in Israel**

Prof. Eli Schwartz, Sheba Medical Center & Tel Aviv University, Israel

12:20-12:40 **Design and generation of flavivirus antigens to explore conformational antibody response**

Dr. Alexander Rouvinski, The Hebrew University of Jerusalem, Israel

12:40 - 13:00 **Monitoring EBV-associated lymphoma tumor progression based on a novel herpes virus with methylation assay**

Prof. Meir Shamay, Bar Ilan University, Israel

13:00 - 14:00 Lunch and Visit the Exhibition

Session 4

Diagnostics in general | Chair: Prof. Avi Peretz, Tzafon Medical Center & Bar Ilan University, Israel
14:00-15:50

14:00-14:30 **Pearls and pitfalls of rapid diagnostic tests for infectious diseases**

Prof. Michael Libman, McGill Centre for Viral Diseases, Montréal, Canada

14:30-14:50 **Molecular stool testing- could this be a new era?**

Prof. Eli Schwartz, Sheba Medical Center & Tel Aviv University, Israel

14:50-15:10 **Application of Molecular Diagnostics of STD in the community**

Prof. Avi Peretz, Tzafon Medical Center & Bar Ilan University, Israel

15:10-15:30 **Undiagnosed helminthic infection, the story of Strongyloides**

Dr. Tamar Grossman, Parasitology Reference Laboratory, Public Health Laboratories – Jerusalem (PHL-J), Public Health Services (PHS), Ministry of Health (MOH), Israel

15:30-15:50 **Emerging fungal infections**

Prof. Ronen Ben Ami, Tel Aviv Sourasky Medical Center, Israel

NANOTECHNOLOGY BUILDING 206

THURSDAY, SEPTEMBER 7, 2023

09:00-09:30 Get together and Registration

The Future is Here | Chair: Prof. Galia Rahav, Sheba Medical Center, Israel

09:30-11:20

09:30-10:00 **Cell-based Biosensors that can compute**

Prof. Ramez Daniel, Technion Israel Institute Of Technology, Israel

10:00-10:20 **Management of newly arise outbreaks**

Prof. Gili Regev, Sheba Medical Center, Israel

10:20-10:40 **Saliva-based diagnosis of respiratory diseases**

Dr. Michael Margulis, Bar Ilan University, Israel

10:40-11:00 **Rapid and highly sensitive antimicrobial susceptibility tests directly from positive blood cultures**



Dr. Merav Strauss, Emek Medical Center, Israel

11:00-11:20 **Diagnostics and bioterrorism**

Dr. Ofir Schuster, Israel Institute for Biological Research, Israel

11:20 - 11:50 **Coffee Break and Visit the Exhibition**

Industry talks | Chair: Prof. Yonat Shemer, Ben Gurion University of the Negev, Israel

11:50-13:50

11:50-12:15 **Natlab: Disruptive point of care platform for infectious diseases syndromic multiplex diagnostics, using novel isothermal molecular process**



Dr. Eran Zahavy, ADOR DIAGNOSTICS

12:15-12:40 **Empowering Timely Decisions: Rapid Diagnostics for Improved Sepsis Management**



Dr. Adit Naor, Ilex Medical

12:40-13:05 **Adenovirus and Rotavirus Detection in Fecal Samples: A Comparative Analysis of Methods**



Dr. Racheli Karyo, Clalit Health Services Central laboratory

13:05-13:30 **Microbial identification with FT-IR strain subtyping Hospital hygiene**



Dr. Carolyn G.J. Moonen, Aziza El-Bouyahyaoui, LAPIDOT MEDICAL

13:30-13:50 **Closing remarks**

Prof. Yonat Shemer, Ben Gurion University of the Negev, Israel

13:50 - 14:50 **Lunch and Visit the Exhibition**