

## **GIF-Leibniz Young Scientists' Meeting**

### **„Post Corona: Smart photonic and molecular technologies to combat infectious diseases“**

21 – 23 June 2022

Kibbutz Ma'ale HaHamisha, Israel

Yearim Hotel, Room *Arava 2*

#### Scientific Committee

Prof. Dror Fixler, Bar Ilan University

Prof. Ohad Gal-Mor, Sheba Medical Center

Prof. Jürgen Popp, Leibniz Institute of Photonic Technology

Prof. Ulrich Schaible, Research Center Borstel – Leibniz Lung Center

#### Tuesday, 21 June

09:00 -09:15 Opening remarks

*Chair morning program 21 June: Prof. Ulrich Schaible*

09:15 – 10:15

- Prof. Moti Segev, Technion  
Keynote: Topological Insulator Lasers: exploring the unknown, and taking it from a quantum simulator to real technology

10:15 – 10:45 Coffee break

10:45 – 12:15

- Dr. Anat Florentin, Hebrew University  
Molecular genetics, cell biology and organelle physiology in malaria parasites
- Jessica Ojong, Research Center Borstel  
Iron-driven host-microbiota coadaptation: an influence in Mycobacterium tuberculosis infection?
- Dr. Matthias Hauptmann, Research Center Borstel, Leibniz Lung Center  
Antibiotic therapy and alterations in human microbiota compositions

12:15 – 12:30 Bio break

12:30 – 13:00 Prof. Ulrich Schaible, Research Center Borstel, Leibniz Lung Center

13:00 – 14:30 Networking Lunch

*Chair afternoon program 21 June: Prof. Jürgen Popp*

14:30 – 15:30

- Shahar Tel Paz, Bar Ilan University  
An adherent-invasive E. Coli from a Crohn's disease (CD) patient drives CD- like inflammation in mice carrying the T300A mutation in Atg16l1
- Felix Goerdeler, Max Planck Institute of Colloids  
Targeting protozoan parasites and cancer cells with nanobodies

15:30 – 16:00 Coffee break

16:00 – 17:00

- Yizhaq Engelberg, Technion  
Functional super molecular structures of self-assembled proteins
- Sindy Burgold-Voigt, Leibniz Institute of Photonic Technology, Jena  
A new antigen-based microarray platform for screening and detection of human IgG antibodies against SARS-CoV-2

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**19:00 Evening event** [Room Shaked Hall 2-3]

- Reception with greetings by Prof. Matthias Kleiner, President of Leibniz Association and Dr. Eric Zimmerman, GIF Director
- Fingerfood dinner

## Wednesday, 22 June

08:30 – 09:30: Networking breakfast

*Chair morning program 22 June: Prof. Dror Fixler*

09:30 – 11:00

- Dr. Daniela Taeuber, Leibniz Institute of Photonic Technology, Jena  
F-actin re-arrangement in the context of polymicrobial infection and therapy revealed by 2D polarization resolved fluorescence microscopy
- Dr. Ronny Foerster, Leibniz Institute of Photonic Technology  
Tracking of individual SARS-CoV-2 inside hollow core fibers
- Dr. Karina Weber, Leibniz Institute of Photonic Technology, Jena  
Innovative sample preparation strategies for success molecular and optical detection of infectious diseases

11:00 – 11:30 Coffee break

11:30 – 12:00 Prof. Jürgen Popp, Leibniz Institute of Photonic Technology

12:00 – 13:30 Lunch break

*Chair afternoon program 22 June: Prof. Dror Fixler*

13:30 – 14:30

- Rivka Shem-Tov, Sheba Medical Center/TAU  
Differences in motility regulation between typhoidal and nontyphoidal salmonella
- Dr. Dana Cialla-May, Leibniz Institute of Photonic Technology, Jena  
Metallic nanostructured sensor surfaces in bio- and medical analytics

14:30 – 15:00 Coffee break

15:00 – 16:00

- Dr. Rakefet Ben-Yishay, Sheba Medical Center  
Human airway organoids derived from diverse lung diseases as a model for infection pathogenesis
- Dr. Assaf Ben-Moshe, Bar Ilan University  
Emerging topics related to the interactions between chiral biomolecules and inorganic nanoparticles

16:00 – 16:30 Prof. Dror Fixler, Bar Ilan University

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**18:30: Departure for Culinary Tour “Best of the Jewish Kitchen” at Machne Yehuda Market, Jerusalem** (duration of the tour without travel time: ~ 2 hrs.)

## **Thursday, 23 June**

Chair morning program 23 June: Prof. Dror Fixler

09:00 – 09:15 Reconnect

09:15 – 10:15

- Prof. Matthias Merker, Research Center Borstel  
Keynote: Transcontinental spread and evolution of multidrug resistant *Mycobacterium tuberculosis* strains. On the cusp of a post-antibiotic era?

10:15 – 10:30 Coffee break

10:30 – 11:30

- Dr. Yotam Bar-On, Technion  
Dissecting SARS-CoV-2 intra-host evolution
- Dr. Sundar Hengoju, Leibniz Institute for Natural Product Research and Infection Biology – Hans Knöll Institute (HKI)  
Establishment of microfluidic platform for rapid analysis of microorganisms

11:30 – 12:00 Concluding remarks

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[12:45: Shuttle to airport for participants scheduled on afternoon flights]