



ICRS 2025 CONFERENCE

7-9 September, 2025
ENJOY HOTEL | Dead Sea

The 14th
meeting
of the
Israel
Controlled
Release
Society

Sunday, September 7th, 2025

13:00-14:00		Registration & Light lunch, Exhibition & Poster set-up
14:00-14:10		Welcome and opening remarks
		Prof. Ayelet David , <i>ICRS President, Ben-Gurion University of the Negev</i>
14:10-14:30		The Evolution of the Israeli Chapter of the Controlled Release Society
		Prof. Abraham Rubinstein , <i>The Hebrew University of Jerusalem</i>
14:30-15:15		Cellular Hitchhiking and Backpacking for Therapeutic Applications
		Prof. Samir Mitragotri , <i>John A. Paulson School of Engineering & Applied Sciences, Wyss Institute, Harvard University, USA [plenary speaker]</i>
15:15-17:45	▶	Session 1 Advances in Targeted and Controlled Drug Delivery <i>Chairs : Prof. Ronit Satchi-Fainaro & Ofri Vizenblit</i>
15:15-15:35		Brain-Targeted Nanoparticles for Treating Parkinson's Disease
		Prof. Avi Schroeder , <i>Technion - Israel Institute of Technology</i>
15:35-15:55		Injectable Polymers for Local Delivery of Drugs
		Prof. Avi Domb , <i>The Hebrew University of Jerusalem</i>
15:55-16:25		Coffee break & Exhibition & Poster set-up
16:25-16:45		Q-Starch Carrier for Dermal Applications
		Prof. Yosi (Joseph) Kost , <i>Ben-Gurion University of the Negev</i>
16:45-17:05		Engineering Crystals and Polymers for Controlled Drug Delivery and Long-term Therapies: From Concept to Applications
		Dr. Shady Farah , <i>Technion - Israel Institute of Technology</i>
17:05-17:25		Nanoparticle Immunoimaging Reveals Metabolic Dysfunction Fueling CCR2-Dependent Inflammation in Infarcted Hearts"
		Dr. Katrien Vandoorne , <i>Technion- Israel Institute of Technology</i>
17:25-17:45		Noval Local Drug Delivery: From Platform Idea to a Successful Phase III Trial
		Ms. Dalit Fellous Hazan , <i>PolyPid Optimized Therapeutics</i>
17:45-18:05		Micron-Size Liposomes are Superior Drug-Products for Treatment of Local Pathologies Exemplified for Local Pain, Bone Modulation and Osteoarthritis
		Prof. Chezy (Yechezkel) Barenholz , <i>The Hebrew University of Jerusalem</i>

18:05–18:55	► Flash talks Block 1 (3 min talk + 2 min Q&A optional) <i>Chair : Dr. Zvi Yaari</i>
18:05–18:10	Targeted Liposomes for Systemic Radiotherapy: Precision Delivery to Liver Metastases PhD. Chen Tzror-Azankot , <i>Bar-Ilan University</i>
18:10–18:15	Enzyme and Protein Modulated Cascade Mesophase Transitions of Polymeric Formulations PhD. Keerthana Mulamukkil , <i>Tel Aviv University</i>
18:15–18:20	DC-Targeted Nanoparticles Enhance Antitumor Immunity by Antigen Presentation Boost & PD-L1 Blockade PhD. Marie Ruetter , <i>Ben-Gurion University of the Negev</i>
18:20–18:25	Engineering Liposomes with Selectively Enriched Membrane Proteins for Targeted Delivery. PhD. Sivan Arber Raviv , <i>Technion – Israel Institute of Technology</i>
18:25–18:30	Nano-Ghosts: A Targeted Drug Delivery Platform for Cardiac Repair after Myocardial Infraction PhD. Anastasia Brandis , <i>Technion – Israel Institute of Technology</i>
18:30–18:35	Patient-Derived 3D Metastatic Melanoma Models for Target Discovery and Personalized Therapy MSc. Anshika Katyal , <i>Tel Aviv University</i>
18:35–18:40	Radiation-Guided Dual-Drug Nanoparticles Boost PARP Inhibitor Efficacy in BRCA1-Deficient Tumors PhD. Giuseppe Longobardi , <i>Tel Aviv University</i>
18:40–18:45	Soluble Mechanical Signaling as a Novel Regulator of Tumor Spheroid Mechanics PhD. Katerina Tischenko , <i>The Hebrew University of Jerusalem</i>
18:45–18:50	Size-Dependent Distribution and Retention of Biomimetic Nanoparticles in the Central Nervous System MSc. Anat Lyubin Haimov , <i>Technion – Israel Institute of Technology</i>
18:50–18:55	Bioinspired 4D-Printed Hydrogel Bioadhesives for Rapid, Trauma-free Tissue Repair and Potential Drug Delivery PhD. Qi Wu , <i>Technion-Israel Institute of Technology</i>
18:55–19:50	► Poster Session 1
20:00	Dinner at the Hotel Restaurant
21:00	Evening Social Program

Monday, September 8th, 2025

08:30–09:00		Coffee, Exhibition & Poster set-up
09:00–10:20	▶	Session 2 Nanomedicines, Artificial intelligence and Predictive models Chairs : Dr. Assaf Zinger & Yulia Chulanova Sponsored by  ROYAL SOCIETY OF CHEMISTRY
09:00–09:20		Decoding Tumor–Host Interactions: Engineering the Future of Personalized Oncology Prof. Ronit Satchi-Fainaro, Tel Aviv University
09:20–09:40		Biomechanical Aspects in Nano–Therapy and Diagnostics in Cancer Prof. Ofra Benny, The Hebrew University of Jerusalem
09:40–10:00		Data vs. Hypothesis Driven Drug Cocktail Design in Nanomedicine for Solid Tumors Prof. Yosi Shamay, Technion – Israel Institute of Technology
10:00–10:20		Cheminformatics and Machine Learning–Driven Optimization of Drug Delivery Systems Prof. Alexander Tropsha, Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, USA
10:20–10:40		Decoding Delivery: Machine Learning–Driven Optimization of Targeting via Barcoded Nanoparticles Ronen Eavri, Barcode Diagnostics
10:40–11:05		Coffee break & Exhibition & Poster set-up
11:05–12:45	▶	Session 3 Theranostics, Imaging, and Nanomaterials Chairs : Prof. Ofra Benny & Ron Kleiner
11:05–11:25		Theranostic NanoGhost: Paving the Way from the Bench to the Clinic Prof. Marcelle Machluf, Technion – Israel Institute of Technology
11:25–11:45		Developing Optical Nanosensors for Biomedical Applications Dr. Zvi Yaari, The Hebrew University of Jerusalem
11:45–12:05		Guiding Drugs with Sound: New Frontiers in Noninvasive Delivery Prof. Tali Ilovitsh, Tel-Aviv University
12:05–12:25		Desorption Electrospray Ionization Mass Spectrometry Imaging in Drug Delivery Dr. Katy Margulis, The Hebrew University of Jerusalem
12:25–12:45		Controlling Cell Functionality via Thermal Stimulation Using Magnetic Nano–Composites Dr. Dekel Rosenfeld, Tel-Aviv University
12:45		Group Photo 
12:45–13:35		Lunch break & Exhibition & Poster set-up
13:35–14:20		From Lemons to Lemonade: Innovative Therapeutic Delivery Strategies Prof. Molly Shoichet, Chemical Engineering & Applied Chemistry, Donnelly Centre, University of Toronto, Canada [plenary speaker]

14:20–16:00	▶ Session 4 Biomaterials, Bioinspired Therapeutics and Next-Generation Immuno-Therapies <i>Chairs : Prof. Yosi Shamay & Marie Ruetter</i>
14:20–14:40	Our Body Knows Best: Unlocking the Secrets of Self-Targeting Therapies Dr. Assaf Zinger , <i>Technion – Israel Institute of Technology</i>
14:40–15:00	Advanced Materials for Tissue Engineering Prof. Tal Dvir , <i>Tel-Aviv University</i>
15:00–15:20	Bioinspired Functional Materials Dr. Gali Fichman , <i>The Hebrew University of Jerusalem</i>
15:20–15:40	Structural Modifications of the TNF α Inhibitor Enbrel Effect on its Therapeutic Efficacy in a Mouse Model of Rheumatoid Arthritis Prof. Itay Benhar , <i>Tel-Aviv University</i>
15:40–16:00	Bioactive Reinforcing Bioink for Hybrid Bioprinting of Implantable Tissues Prof. Shulamit Levenberg , <i>Technion – Israel Institute of Technology</i>
16:00–16:30	Coffee break & Exhibition & Poster set-up ICRS President Election
16:30–18:00	Patents and Innovations in Controlled Release Drug Delivery Workshop Dr. Eyal Bressler Topics: Patents 101 in Controlled Release Reading Patents – Hands-On Writing Patents – Practical Tips Patents in R&D, Startups and Pharma
18:00–18:50	▶ Flash talks Block 2 (3 min talk + 2 min Q&A optional) <i>Chair : Prof. Boaz Mizrahi</i>
18:00–18:05	Genome Editing Using Targeted Lipid Nanoparticles for Mantle Cell Lymphoma Therapy PhD. Lior Stotsky , <i>Tel Aviv University</i>
18:05–18:10	Brain-targeted mRNA-LNPs with Improved Neuronal Specificity Validated by AI PhD. Haim Kadosh , <i>Technion – Israel Institute of Technology</i>
18:10–18:15	CRISPR/Cas9 Genome Editing Using Lipid Nanoparticles for Hepatocellular Carcinoma Therapy PhD. Dor Breier , <i>Tel Aviv University</i>
18:15–18:20	High-Throughput 3D Microscopy Reveals Symmetric Spheroid-Fibroblast Organization PhD. Maytal Avrashami , <i>Technion – Israel Institute of Technology</i>
18:20–18:25	Long-Acting Liposomal Bupivacaine for Post-Operative Pain Relief PhD. Keren Turjeman , <i>The Hebrew University of Jerusalem</i>
18:25–18:30	3D Printing of Personalized Catheters with Smart pH-Responsive Coating for Improved Functionality for Long-Term Therapy Delivery Dr. Nagham Moallem Safuri , <i>Technion-Israel Institute of Technology</i>
18:30–18:35	DC-Targeted Nanovaccine Boosts Immunity and Efficacy of SoC and KRAS-Targeted Therapies in PDAC MSc. Ron Kleiner , <i>Tel Aviv University</i>
18:35–18:40	MILKOSOMES – Breast Milk Biomimetic Nano Particles as a Versatile, Non-Invasive, Oral Drug Delivery PhD. Si Naftaly Kiros , <i>Technion – Israel Institute of Technology</i>
18:40–18:45	Double layer and Dual Drug Loaded Microneedle Patch for Comprehensive Skin Therapy MSc. Gali Cohen , <i>Technion – Israel Institute of Technology</i>
18:45–18:50	Living Materials Approach for In-Situ Bio-Polymers Production Using Bacteria in Microneedles PhD. Caroline Hali Alperovitz , <i>Technion – Israel Institute of Technology</i>
18:50–19:40	▶ Poster Session 2

19:40–20:40

Dinner at the Hotel Restaurant

20:45

Awards & Dancing



Tuesday, September 9th, 2025

08:30–09:15

Coffee Exhibition & poster set- up | Committee Meeting

09:15–10:00

Polyoxazolines for Micelles and Beyond
Prof. Alexander (Sasha) Kabanov, *Center for Nanotechnology in Drug Delivery, University of North Carolina, Chapel Hill, USA* [plenary speaker]

10:00–10:45

Round table: Bioconvergence in Health Care
Topic: Leveraging omics-based profiling, AI, and advanced diagnostics to tailor treatments to individual patients
Panel Members: **Prof. Ofra Benny**, *The Hebrew University of Jerusalem*, **Prof. Ronit Satchi-Fainaro**, *Tel Aviv University*, **Prof. Avi Schroeder**, *Technion – Israel Institute of Technology*, **Prof. Yosi Shamay**, *Technion – Israel Institute of Technology*, **Dr. Ayelet Ofarim**, *Arad-Ophir, CAS*, **Dr. Dalia Rivenzon-Segal**, *Reinhold Cohn Group*

10:45–11:15

Coffee break & Exhibition & Poster set-up

11:15–12:55

Session 5 | Drug/Polymer Interactions, Controlled Cell Functionality and Medical Devices
Chairs : Prof. Avi Schroeder & Maytal Avrashami

11:15–11:35

Polymeric Transformers: from Smart Fibers to Microneedles
Prof. Roey Amir, *Tel-Aviv University*

11:35–11:55

Living Delivery System for the Treatment of Skin Infections
Prof. Boaz Mizrahi, *Technion – Israel Institute of Technology*

11:55–12:15

Versatile Biodegradable Microneedle Arrays for Local and Systemic Drug Delivery
Prof. Aiman Abu Ammar, *Azrieli College of Engineering Jerusalem*

12:15–12:35

Engineering Protein-Based Soft Actuators for Dynamic and Autonomous Catch-and-Release in Gastric and Intestinal Environments
Dr. Luai Khoury, *Technion – Israel Institute of Technology*

12:35–12:55

Nano-Algae for Drug Delivery and Cancer Therapy Purposes
Dr. Aharon (Roni) Azagury, *Ariel University*

13:00

Closing Remarks
Prof. Ayelet David, *ICRS President*

13:20

Light lunch



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