



**Israeli Chapter of the
Controlled Release Society**

**10th Annual Conference
of the ICRS**

14-16.9.16 | Hacienda Forestview Hotel, Maalot Tarshiha, Western Galilee, ISRAEL

**של מצוינות
במחקר ותרגום**

20 *years*
שנה

*of excellent research
and translation*

ICRS 2016

September 14-16th, 2016

Hacienda Forestview Hotel

Maalot, Israel



Wednesday September 14, 2016

12:30 - 14:00 REGISTRATION AND POSTERS SETUP

13:00 LUNCH

14:00 - 14:10 WELCOME AND INTRODUCTORY REMARKS

Dan Peer, ICRS President

14:10 - 16:10 SESSION 1

NANOMEDICINES IN CANCER TREATMENT

Chairpersons: **Rimona Margalit** (TAU) and **Marcelle Machluf** (Technion)

14:10 - 14:50 KEYNOTE PRESENTATION

Philip S. Low (Purdue University, USA) -

Ligand-Targeted Imaging and Therapeutic Agents for Multiple Human Diseases

14:50 - 15:10 **Ronit Satchi-Fainaro** (TAU) –

Novel Cancer Model-based Identification of Molecular Targets for the Rational Design of Precision Nanomedicines

15:10 - 15:30 **Ayelet David** (BGU) -

Assessing the Anti-Cancer and Anti-Inflammatory Activities of e-Selectin-Targeted Polymer-Drug Conjugates in Mouse Relevant Models

15:30 - 15:50 **Marcelle Machluf** (Technion)

Nano-Ghosts: Paving the Road for Targeted Cancer Nanotherapies

15:50 - 16:10 **Alberto Gabizon** (Shaare Zedek, HUJI) –

Liposome –based Delivery of Chemotherapeutics in Cancer

16:10 - 16:30 COFFEE BREAK

16:30 - 18:30 SESSION 2

CLINICAL ONCOLOGY- CHALLENGES AND OPPORTUNITIES

Chairpersons: **Alberto Gabizon** (Shaare Zedek, HUJI) and **Pia Raanani** (Rabin Medical Center)

16:30 - 16:50 **Gal Markel** (Sheba Medical Center, Tel Hashomer) –

Immuno-oncology Innovations from an Academic Hospital

16:50 - 17:10 **Pia Raanani** - (Rabin Medical Center) –

Vascular Toxicity Associated with Tyrosine Kinase Inhibitors in CML –
A Fly in the Ointment

17:10 - 17:30 **Zvi Cohen** (Sheba Medical Center, Tel Hashomer) –

Harnessing Nanomedicine as a New Approach for GMB Treatment

17:30 - 17:50 **Gideon Bachar** (Rabin Medical Center) –

Future Challenges in Head and Neck Cancer

17:50 - 18:10 **Tally Levy** - (Wolfson Medical Center) –

Epithelial Ovarian Cancer: Difficulties and Future Perspectives

18:10 - 18:30 **Eliahu Gez** (Tel Aviv Soraski Medical center) –

New Treatment Options in Metastatic Bladder Cancer

18:30 - 18:40: Bio-Break

18:40 - 19:25 **Short presentations** (15 x 3 min) of selected Posters from Submitted Abstracts

Chairperson: **Itai Benhar**



Inbar Schlachet

Protoporphyrin ix modification of chitosan-g-oligo(NiPAAm) polymeric micelles for improved micellization and permeability characterization in vitro

Alexandra Bukchin

"Sugarized" polymeric micelles for physical stabilization and improved performance of hydrophobic drugs

Netanel Korin

Shear-activated nano-medicine for targeted drug delivery

Maya Bar-Zeev

β -Casein nanovehicles for oral delivery of chemotherapeutic combinations to overcome multidrug resistance in gastric cancer

Zvi Yaari

Theranostic barcoded nanoparticles for personalized cancer medicine

Assaf Zinger

Pancreatic ductal adenocarcinoma nano-diggers

Alexander Andriyanov

Therapeutic efficacy of combined pegylated liposomal doxorubicin and radiofrequency ablation: comparing single and combined therapy on young and old mice

Patricia Ohana

A multidrug formulation of pegylated liposomes with co-encapsulated alendronate, doxorubicin, and mitomycin-c lipid –based prodrug for chemo-immunotherapy of cancer

Mirjam M. Nordling-David

Liposomal drug delivery using convection enhanced delivery

Daniel Rosenblum

Preferential uptake of MCL exosomes by B-Lymphocytes

David Kirmayer

Guided bone regeneration with mesenchymal stem cells (MSC)-loaded and medicated ammoniomethacrylate membranes in radial critical bone defect model

Keren Turjeman

Long-term treatment with liposome-based steroidal nano-drugs is superior to steroids "as is", in therapeutic efficacy and reduced osteoporosis in duchenne muscular dystrophy mouse model

Gadi Slor

Dual stimuli-responsive polymeric micelles as a modular platform for controlled delivery

Neta Zilony

Long-term controlled delivery of nerve growth factor using porous silicon nanostructures

20:30 DINNER

21:30 COCKTAIL RECEPTION, POSTER SESSION AND MORE



Thursday September 15, 2016

07:00-08:30: Breakfast

08:45 - 09:45 SESSION 3

ADVANCED MOLECULAR IMAGING

Chairpersons: **Ilan Tsarfaty (TAU) and Avi Domb (HUJI)**

08:45 – 09:25 KEYNOTE PRESENTATION

Alan Packard (Boston Children's Hospital and Harvard Medical School
Boston, MA, USA) –

PET Imaging: From Pico to Nano

09:25 – 09:45 Jason Dearling (Boston Children's Hospital and Harvard Medical School)

The Role of Molecular Imaging in the Detection and Targeted Therapy of IBD

09:50 - 11:30 SESSION 4

INNOVATIVE DELIVERY VEHICLES

Chairpersons: **Smadar Cohen (BGU) and Avi Schroeder (Technion)**

09:50 - 10:30 KEYNOTE PRESENTATION

Alexander Kabanov (University of North Carolina, Chapel Hill, NC, USA) –
Very High Capacity Polymeric Micelles for Drug Delivery

10:30 - 10:50 Avi Domb (HUJI) -

Polypeptides derived from mono-saccharides

10:50 - 11:10 Itai Benhar (TAU) Lipidated Single-chain Antibodies –
a Platform for Targeted Therapeutics

11:10 - 11:30 Yossi Kost (BGU) -

Targeted Delivery of Therapeutics with Ultrasound

11:30 - 11:50 COFFEE BREAK

11:50-13:10 SESSION 5

FROM GENE SILENCING TO GENE EDITING

Chairperson: **Dan Peer (TAU)**

11:50 - 12:10 Shulamit Michaeli (BIU) –

Nano Drug Designed for Cancer Therapy is a Potential Anti-Leishmania Drug

12:10 - 12:30 Mark Behlke (IDT) –

Improved Casper Editing Using Chemically- modified CRRNA: TRACRRNA Complexes

12:30 - 12:50 Amoz Shemi (Silenseed) –

RNAi and Tumor Microenvironment: Pre Clinical and clinical Evidence

12:50 - 13:10 Ido Wolf (Tel Aviv Souraski Medical Center) –

NGS: from bed to bench

13:10 - 13:40 SESSION 6

NEW COMMERCIAL TECHNOLOGIES (COMPANIES SESSION)

Chairperson: **Avri Rubinstein (HUJI)**

13:10 - 13:20 Dana Wasserman (Dr. Golik)

13:20 - 13:30 David Merkel (Merkel Technologies)

13:30 - 13:40 Ayelet Ofarim (Arad-Ophir) –

New Tool for Searching and Comparing Analytical Methods

13:40 - 15:00: LUNCH AND POSTER VIEWING

15:00 - 17:20 SESSION 7

THERANOSTICS, DELIVERY SCIENCE AND TISSUE ENGINEERING

Chairpersons: **Doron Shabat** (TAU) and **Shulamit Levenberg** (Technion)

15:00 - 15:20 **Doron Shabat** (TAU) –

Turn-on Chemiluminescence Probes with Color Modulation

15:20 - 15:40 **Ofra Benny** (HUJI) –

A Rational design Approach for Nanomedicine in Cancer

15:40 - 16:00 **Roy Amir** (TAU) –

Self Reporting Micellar Nanocarriers

16:00 - 16:20 **Avri Rubinstein** (HUJI) –

Design Considerations in the Assembly of Targetable Charged Polyacrylamide and its Biological Performance

16:20 - 16:40 **Simon Benita** (HUJI) –

Solid Nano-in Nanoparticles for Potential Delivery of Hydrophilic Macromolecules

16:40 - 17:00 **Shulamit Levenberg** (Technion) –

Inducing Vascularization of Engineered Tissues in Vitro and in Vivo

17:00 - 17:20 **Tal Dvir** (TAU) –

Engineering Hearts and Other Body Parts

17:20 - 17:40 COFFEE BREAK

17:40 - 18:25 SESSION 8

DISCUSSION PANEL: Translation: from Academia to Industry

Moderator: **Muhammad Safadi** (Teva Pharmaceuticals Ltd.)

Panel Members: **Chezy Barenholz**, **Simon Benita**, **Dan Peer**, **Pini Orbach**

(**Arkin Holdings**), **Yoram Sela** (**Sela Pharma**), **Adi Elkeles** (**Ramot, TAU**),

18:25 - 19:10 Short presentations (15 x 3 min) of selected posters from submitted abstracts

Chairperson: **David Stepensky** (BGU)

Amit Ranjan Maity

The role of surface density of peptidic targeting residues on nuclear targeting of quantum dots

Nir Hananya

Turn-on chemiluminescence probes with color modulation for sensing and imaging: practical synthetic pathway for dioxetane-fluorophore conjugates

Marina Buzhor

Spectrally active smart micellar nanocarriers

Dina Hashoul

Novel peptide CCAT1 and K-ras nucleic acid with specific illumination at the far-red spectrum

Noa Cohen Anavy

Nano-ghosts for selective drug delivery across the blood-brain barrier for the treatment of neuroinflammatory disorders

Orli Binyamin

Brain targeting of pomegranate seed oil (PSO) nanodroplets for the treatment of neurodegenerative conditions

Michal Marcus

NGF-conjugated iron oxide nanoparticles promote neuronal differentiation and neurite outgrowth



Nitsa Buaron

The effect of ultrasound on modified pectic galactan/DNA complexes distribution through an in vivo 9L gliosarcoma tumor model

Paula Ofek

Restoring the oncosuppressor activity of microRNA-34a in glioblastoma using a polyglycerol-based polyplex

Sabina Pozzi

Systemic delivery of siRNA by aminated poly (α) glutamate for the treatment of solid tumors

Eliz Lewis

Elucidating the cellular uptake mechanism and intracellular path of quaternized starch based nanoparticles for siRNA delivery

Jacopo Oieni

Treating osteoarthritis with RNA interference therapy targeted by nanoghosts

Srinivas Ramishetti

The architecture of RNAi therapeutics impacts the gene silencing efficacy in primary lymphocytes

Olga Tsoref

E-selectin-targeted novel nano polymers stabilize atherosclerotic plaque and improve cardiac remodeling

Osnat Cohen-Rosenboim

Targeting e-selectin impairs cardiac function after myocardial infarction

19:10 - 20:00 POSTER VIEWING

20:30 GALA DINNER

Presentation of the ICRS Prize for Outstanding Achievements in Controlled Release

Presentation of the 2016 Best Poster Awards

20 YEARS of Excellence in Controlled Release research and translation - recognition event for Founders and Presidents.



Friday –September 16, 2016

07:00 - 08:45: **Breakfast**

08:00 - 08:30 **ADMINISTRATIVE SESSION:** General Assembly and election of ICRS President

Check-out at 08:30 am

08:30 -11:00 SESSION 9

ADVANCED DELIVERY STRATEGIES

Chairpersons: **Ronit Satchi-Fainaro** (TAU) **and Rosa Azhari** (Braude)

08:30 - 09:00: **Marina Dobrovolskaia** (NCL/NCL/ NIH)

Immunological Properties of Nanotechnology-Based Complex Drug Formulations: Achievements, Disappointments and Lessons Learned from Preclinical Characterization

09:00 - 09:40 **KEYNOTE PRESENTATION**

Patrick Couvreur (Paris-Sud University, Paris, France) –
Nanotechnologies for the Treatment of Severe Diseases

09:40 - 10:00 **Smadar Cohen** (BGU)–

Engineering Affinity Controlled Delivery Systems

10:00 - 10:20 **Vered Karavani** (TAU)–

Biomimetic Glyco-nanoparticles Vaccine for Cancer Immunotherapy

10:20 - 10:40 **David Stepensky** (BGU) –

Drug Delivery to Specific Intracellular Organelles Using Subcellularly-Targeted Nano-Drug Delivery Systems

10:40 - 11:00 **Avi Schroeder** (Technion) –

Personalized Cancer Nanomedicine

11:00 - 11:30 COFFEE BREAK

11:30 - 12:30 SESSION 10

ADVANCED FORMULATIONS FOR TARGETING INFLAMMATION

Chairperson: **Galia Blum** (HUJI) **and Ayelet David** (BGU)

11:30 - 11:50 **Rimona Margalit** (TAU) –

Treatment of Respiratory Damage in Mice by Aerosols of Anti-oxidant and Anti-inflammatory Drugs Formulated in Lipid-based Particles

11:50 - 12:10 **Yehonatan Leor** (Sheba Medical Center) –

Targeting Myeloid Cells in Acute and Chronic Cardiovascular Diseases

12:10 - 12:30 **Galia Blum** (HUJI) –

Protease Sensitive Nano Particles for CT Imaging and Targeted Drug Release

12:30 -13:10 SESSION 11

Chairperson: **Yechezkel Barenholz** (HUJI)

KEYNOTE PRESENTATION

12:30 - 13:10 **Kinam Park** (Purdue Center for Drug Discovery, USA)

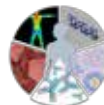
Drug Delivery Systems: Achieving Accelerated Evolution

13:10 - 13:20 **Concluding Remarks**

Dan Peer, ICRC President



Tel Aviv University
FTA: Nanomedicine for Personalized Theranostics



Alex Grass Center for Drug Design and Synthesis of Novel Therapeutics
The Institute for Drug Research
The Hebrew University of Jerusalem

המרכז לרפואה החדשה

