10TH PRAGUE – WEIZMANN
SUMMER SCHOOL

Drug Discovery and Development from Basic Research to Clinical Trials

PRAGUE, CZECH REPUBLIC, 2 – 6 SEPTEMBER, 2024

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PROGRAMME

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CBT

Monday, September 2

07:30 – 10:00 Registration

10:00 – 10:30 Opening

Martin Fusek (Director of IOCB Tech),
Jan Konvalinka (Director of IOCB Prague),
Milan Pospíšil (Rector of UCT Prague),
David Honys (Council Member of the Czech Academy of Science)

10:30 – 11:10 Petra Ménová, UCT Prague, Czech Republic

How are new drugs born?

11:10 – 11:50 Deborah Fass, Weizmann Institute of Science, Rehovot, Israel

Structures of mucin glycoproteins inspire molecular methods for modulating mucosal functions

11:50 – 12:30 Milan Vrábel, IOCB Prague, Czech Republic

Chemical engineering of cell surfaces for cancer immunotherapy

12:30 – 13:50 Lunch

13:50 – 14:30 Marek Šťastný, Medical Department, Bristol – Myers Squibb, Czech Republic

Cancer immunotherapies based on anti – PD1: clinical perspectives and challenges

14:30 – 15:10 Stella Vukelic, AbbVie, Ludwigshafen, Germany

Molecular obesity – An addiction in drug discovery?

15:10 – 15:50 Jitka Riedl, Bicycle Therapeutics, Cambridge, UK

Attacking from all angles: EphA2 targeting Bicycle® peptides for precision guided cancer therapy via multiple approaches

15:50 – 16:20 Coffee break

16:20 – 17:00 David Margulies, Weizmann Institute of Science, Rehovot, Israel

Detecting proteins and protein – inhibitor interactions with 'turn – on' fluorescent molecular probes: design principles and applications in medical diagnosis, cell imaging and drug discovery

17:00 – 17:40 Andrea Brancale, UCT Prague, Czech Republic

Kick – start new drug design projects using computer – aided drug design

19:00 Welcome party

Tuesday, September 3

08:30 – 09:00 Registration

09:00 – 09:40 Peter H. Seeberger, Max Planck Institute of Colloids and Interfaces, Potsdam, Germany
Freie Universität, Berlin, Germany

Synthetic glycans as basis for vaccines, therapeutic antibodies and diagnostics

09:40 – 10:20 Christoph Rademacher, University of Vienna, Austria

Cell – specific targeted delivery of therapeutics

10:20 – 10:50 Coffee break

10:50 – 11:30 Frank Wagner, Charité, Berlin, Germany

Focus on early clinical trials

11:30 – 12:10 Oliviana Calin – Eller, E. Blum & Co. AG, Zurich, Switzerland

Patents: Why? What? How?

12:10 – 12:50 Valery Khrizanovsky, Weizmann Institute of Science, Rehovot, Israel

Senescent cells in aging and age – related disease: the good, the bad and the ugly

12:50 – 14:10 Lunch

14:10 – 15:40 Spin – offs: roundtable discussion

Panelists: Oliviana Calin – Eller, Valery Khrizanovsky, Christoph Rademacher, David Stíbal, Frank Wagner
Host: Aleš Vlk

15:50 – 17:30 Poster session + refreshments

Wednesday, September 4

08:30 – 09:00 Registration

09:00 – 09:40 Stephan Bachmann, F. Hoffmann – La Roche Ltd., Basel, Switzerland

Catalysis as key technology for the synthesis and scale – up of APIs and their intermediates

09:40 – 10:20 Camille Correia, Merck Electronics KGaA, Darmstadt, Germany

Modular continuous automation for laboratories and production

10:20 – 10:50 Coffee break

10:50 – 11:30 Martina Benešová – Schäfer, German Cancer Research Center, Heidelberg, Germany

Pharmaceutical radiochemistry in modern nuclear medicine

11:30 – 12:10 Sima Lev, Weizmann Institute of Science, Rehovot, Israel

Triple – negative breast cancer: heterogeneity and targeted therapy

12:10 – 12:50 Kateřina Vávrová, Faculty of Pharmacy Hradec Kralove, Charles University, Czech Republic

Ceramides in the skin: extraordinary lipids for an extraordinary barrier

12:50 – 14:00 Lunch

14:00 – 18:00 Prague City Tour (registration necessary at the registration desk)

18:00 Concert at Carolinum followed by a dinner

Thursday, September 5

08:30 – 09:00 Registration

09:00 – 09:40 Jan Konvalinka, IOCB Prague, Czech Republic

Chemical – biology tools in drug development

09:40 – 10:20 Daniela Angst, Novartis, Basel, Switzerland

Remibrutinib, a covalent BTK inhibitor with best – in – class selectivity: discovery and clinical results

10:20 – 10:50 Coffee break

10:50 – 11:30 Henry Maun, Genentech, South San Francisco, USA

From bench to bedside: Understanding mechanisms of inhibitory anti-tryptase antibodies for the treatment of asthma

11:30 – 12:10 Graciela Andrei, Rega Institute for Medical Research, KU Leuven, Belgium

Herpesvirus drug – resistance: challenges and opportunities

12:10 – 13:30 Lunch

13:30 – 14:10 Gideon Schreiber, Weizmann Institute of Science, Rehovot, Israel

Reversing protonation of weakly basic drugs greatly enhances intracellular diffusion and decreases lysosomal sequestration

14:10 – 14:50 Yosef Yarden, Weizmann Institute of Science, Rehovot, Israel

Overcoming resistance of lung cancer to tyrosine kinase inhibitors

14:50 – 15:30 Richard Clarkson, Cardiff University, UK

Targeting cells responsible for metastatic disease

15:30 – 18:00 Excursions: UCT Brewery, IOCB labs (registration necessary at the registration desk)

Friday, September 6

08:30 – 09:00 Registration

09:00 – 09:40 Pavlína Řezáčová, IOCB Prague, Czech Republic

Structure – assisted design of enzyme inhibitors

09:40 – 10:20 Igor Ulitsky, Weizmann Institute of Science, Rehovot, Israel

Therapeutic targeting of RNA molecules

10:20 – 10:50 Coffee break

10:50 – 11:30 Jitka Palich Fučíková, Sotio Biotech Department of Immunology, 2nd Medical school, Charles University, Czech Republic

The role of immune system in cancer therapy

11:30 – 12:10 Menachem Rubinstein, Weizmann Institute of Science, Rehovot, Israel

Directing viral vectors to specific cell types for oncolytic virotherapy and in vivo gene therapy

12:10 – 13:30 Lunch

13:30 – 14:10 Jan Skácel, IOCB Prague, Czech Republic

A postgraduate student's perspective on drug discovery in academia: Development of PNP inhibitors

14:10 – 14:50 Kvido Stříšovský, IOCB Prague, Czech Republic

The elusive mechanisms of unexpected regulators of inflammatory and growth factor signalling

14:50 – 15:00 Closing, Best Poster Award

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LIST OF POSTERS, PRAGUE SUMMER SCHOOL 2024

	Family name	First name	Poster Title
P01	Adegeye	Ayomipo	A HIGH THROUGHPUT DIRECT-TO-BIOLOGY SCREENING PLATFORM FOR LRRK2 DEGRADERS
P02	Albini	Francesca	PEPTIDE FUNCTIONALIZATION OF NATURAL POLYSACCHARIDES FOR THE DEVELOPEMENT OF WOUND DRESSINGS
P03	Bach	Kathrin	SHARPENING THE POTENCY AND SELECTIVITY OF A-KETOAMIDE INHIBITORS TO TARGET RHOMBOID PROTEASES
P04	Barati	Vahid	DELIVERY OF HETEROCYCLIC DRUGS, ACIDS, PHENOLS, AND THIOLS VIA SELF–IMMOLATIVE LINKERS
P05	Boyraz	İlayda	THE INTERACTION OF CHICORIC ACID WITH CANCER – RELATED MOLECULAR TARGETS: AN EVALUATION OF IN SILICO ANALYSES
P06	Chatterjee	Rishita	UNTANGLING THE RELATIONS BETWEEN P53, PD-L1 AND AMPHIREGULIN, MIGHT OFFER COMBINATION THERAPY FOR EPITHELIAL OVARIAN CANCER
P07	Chavan	Rohit	SYNTHESIS OF ARYLFUCOSIDES AS DC-SIGN INHIBITORS
P08	Cherniakova	Marharyta	NEW MENTHOL-BASED (DEEP) EUTECTIC SOLVENTS AND THEIR EXTRACTION PROPERTIES TOWARDS METAL IONS
P09	Daněk	Ondřej	SYNTHESIS OF M2-SELECTIVE MUSCARINIC RECEPTOR AGONISTS FOR THE DEVELOPEMENT OF NEW ANALGESICS
P10	Dejmek	Milan	CYCLIC DINUCLEOTIDES WITH A VINYLPHOSPHONATE LINKAGE IN STING-MEDIATED CANCER IMMUNOTHERAPY
P11	Dohnálek	Jan	RHOMBOID PROTEASE RHBDL2 IS A SUPPRESSOR OF EGFR SIGNALING IN HUMAN KERATINOCYTES.
P12	Durydivka	Oleh	HEXAHYDROCANNABINOL (HHC) AND Δ9-TETRAHYDROCANNABINOL (Δ9-THC) DRIVEN ACTIVATION OF CANNABINOID RECEPTOR 1
P13	Faldynová	Hana	AI-NAVIGATED SOLUBILITY PREDICTION FOR DESIGN OF THERAPEUTIC PROTEINS
P14	Fomitskaia	Polina	SYNTHESIS OF AZA AND DISULFIDE DERIVATIVES: TARGETING LOW DIFFUSION RATES
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P19	Herzog	Ella	ENHANCING TREG DEPLETING IMMUNOTHERAPY
P20	Huino	Bruno	PROTEIN DISCRIMINATION USING A PATTERN-GENERATING FLUORESCENT MOLECULAR PROBE
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P25	Kocek	Hugo	DISCOVERY OF HIGHLY POTENT SARS-COV-2 NSP14 METHYLTRANS-FERASE INHIBITORS BASED ON ADENOSINE 5'-CARBOXAMIDES
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P37	Petrová	Eliška	IMIQUIMOD NANOSYSTEMS FOR ADVANCED DERMAL DELIVERY
P38	Ramírez-Cortés	Fabricio	SYNTHESIS OF ARYL MANNOSIDES FOR HETEROMULTIVALENT DC-SIGN-SPECIFIC TARGETING
P39	Sedlák	David	UNIQUE AND COMMON AGONISTS ACTIVATE THE INSECT JUVENILE HORMONE RECEPTOR AND THE HUMAN AHR
P40	Schulig	Lukas	ARBITRARILY FLEXIBLE PROTEIN-PROTEIN DOCKING USING HYBRID SOLVENT REPLICA EXCHANGE SIMULATIONS.
P41	Šimková	Adéla	HIGH-THROUGHPUT SAR REFINEMENT OF FIBROBLAST ACTIVATION PROTEIN INHIBITORS
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P46	Švormová	Barbora	DYNAMICS OF INSULIN ON INSULIN RECEPTOR
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