11th International Conference Drug Delivery Systems

Nanotechnology for Healthcare: Progress in Recombinant Vaccines, Molecular Adjuvants, Modern Drug Delivery Systems and Cell Therapy

5th to 7th June 2018, Masaryk University Conference Centre, Jesuit College, Telč, Czech Republic

Organising Committee:

- **Chairman: Jaroslav Turánek** (Veterinary Research Institute, Brno, Czech Republic) turanek@vri.cz
- **Andrew D. Miller** (Veterinary Research Institute, Brno, Czech Republic) miller@vri.cz
- **Milan Raška** (Palacky University, Olomouc, Czech Republic) raskamil@uab.edu
- **Šárka Němečková** (Institute of Haematology and Blood Transfusion, Prague, Czech Republic) sarka.nemeckova@uhkt.cz
- **Daniel Scherman** (Université Paris Descartes, Paris, France) daniel.scherman@parisdescartes.fr
- **Jan Kříž** (Institute of Clinical and Experimental Medicine, Prague, Czech Republic) jkri@ikem.cz
- **Aleš Hampl** (Masaryk University, International Clinical Research Center, St. Anne´s University Hospital Brno, Czech Republic) ahampl@med.muni.cz

Contact person regarding organisation of the conference:

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Meeting is organised in within the OP VVV project FIT

in collaboration with OP VVV project CEREBIT, Immunopharmacotherapy and Czech Society for Gene and Cell Therapy

Programme:

Updated program is possible find here www.vri.cz/cz/dds

Monday 4th June 2018

SAB meeting – only for SAB members

Tuesday 5th June 2018

Tuesday's session is dedicated to Prof. MUDr. Milan Hašek, DrSc. (October 4, 1925 – November 14, 1984) Czech biologist, physician and immunologist based in the Institute of Experimental Biology and Genetics of the Czechoslovak Academy of Sciences where he was a director 1961 – 1970.
In 1953, he discovered a mechanism of acquired immunological tolerance – fetal parabiosis against foreign tissues, independently of Sir P. Medawar, who was awarded the Nobel Prize in 1960 with his colleagues. Later, Hašek dealt with transplantation and tumor immunity and mechanisms of viral oncogenesis.

Recombinant vaccines and therapeutics based on RNA

- **Chairmen:** Daniel Scherman and Milan Raška

8:00 **Breakfast**

8:15 – 9:00 **Registration**

Morning session

9:00 – 9:30 **Katalin Kariko** (U Penn, USA & BioNTech, Mainz, Germany) – title tbd

9:30 – 10:00 **Patrick Arbuthnot** (Witts University, Johannesburg, RSA) – title tbd

10:00 – 10:30 **Daniel Scherman** (Université Paris Descartes, Paris, France)
New nanoparticles for in vivo imaging

10:30 – 11:00 **Coffee Break**

11:00 – 11:20 **Nicole Meisner–Kober** (Novartis, Basel, Switzerland) – title tbd

11:20 – 11:40 **Heinrich Haas** (BioNTech, Mainz, Germany) – title tbd

11:40 – 12:00 **Jeffrey Ulmer** (GSK, Washington D. C., USA)
Synthetic vaccines to facilitate a rapid response to newly emerging infectious diseases

12:00 –13:00 **Lunch**

Afternoon session

13:00 – 13:20 **Jaroslav Turánek** (Veterinary Research Institute, Czech Republic***)***
Progress in sublingual immunisation

13:20 – 13:40 **Milan Raška** (University of Palacky, Olomouc) – title tbd

13:40 – 14:00 **Nigel Temperton** (University of Kent, Medway, UK) – title tbd

14:00 – 14:30 **Coffee break**

14:30 – 14:50 **Petr Malý** (Biocev, Prague, Czech Republic) – title tbd

14:50 – 17:00 Round table discussion

Social events

19:00 – 20:00 Concert of classical music in the church of St. Jacob

(Members of Stamitz Quartet with guests Prof. Karel Plocek – viola and and Prof. Václav Kunt – flute)

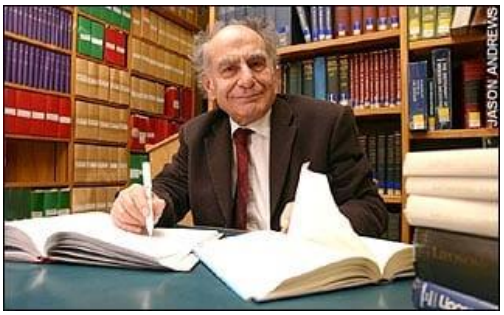
- Josef Kekula – violin
- Karel Plocek – viola
- Petr Hejný – violoncello
- Václav Knut – flute

Repertoir
Pavel Vranický – kvartety č.5 a 6 pro flétnu a smyčce
W.A.Mozart – kvartet pro flétnu a smyčce (výběr)
J.M.Sperger – trio pro housle, violu a violoncello
The musical works of Vranický and Sperger are done in modern premieres.



Wednesday 6th June 2018

Wednesday's session is dedicated to **Prof. Gregory Gregoriadis (*1934),** who pioneered the field of liposomes as carriers of antigens and opened the door to the development of lipid–based vaccines



Delivery systems and bioanalytical technologies

Chairman: Jaroslav Turánek (Veterinary Research Institut, Czech Republic)

8:00 **Breakfast**

Morning session

9:00 – 9:20 **Jimmy Bell** (University of Westminster, London, UK) – title tbd

9:20 – 9:40 **Yuhong Xu** (Zhejiang University, Hangzhou, PRC) – title tbd

9:40 – 10:00 **Spencer Shorte** (Institu Pasteur Korea, Seoul, Korea)– title tbd

10:00 – 10:30 **Coffee Break**

10:30 – 10:50 **Lei Fu** (Shanghai JiaoTong University, Shanghai, PRC) – title tbd

11:10 – 11:30 **Sihyun Ham** (SookMyung Women´s University, Seoul, Korea) – title tbd

11:30 – 11:50 **Eva Filová** (Institute of Experimental Medicine, Prague, Czech Republic)
Managing the release of growth factors from fibrin matrices and pericardium for the promotion of recelularisation of decellularized vessels and pericardium and sirolimus drug from the perivascular mesh

11:50 –13:00 **Lunch**

Afternoon session

13:00 – 13:20 **Josef Mašek** (Veterinary Research Institute, Brno, Czech Republic)
Delievery systems for oromucosal drug and vaccine administration

13:20 – 13:40 **Petr Skládal** (Masaryk University, Brno, Czech Republic) –
SPR–technology

13:40 – 14:00 **Jan Vávra** (JPK Instruments) –
Optical laser tweezer and its use

14:00 – 14:30 **Coffee break**

New technologies, instrumentation and methods for recombinant vaccines and therapeutics based on RNA

14:30 – 14:50 **Representative from Accela company** (NanoTemper Technologies and Accela)
Thermophoresis: Instrumentation and application for characterisation of recombinant proteins

14:50 – 15:10 **Jens Waldeck** (Bruker BioSpin MRI GmbH, Berlin, Germany)
Optical/μCT imaging can get you in vivo insights in cancer detection, treatment and cure

15:00 – 17:00 Round table discussion

Social events

19:30 **Gala Dinner – barbecue** and jazz and dance (Jazz Band „U Zdi“)

Thursday 7th June 2018

"*heart heals the heart, lung heals lung, spleen heals spleen; like cures like*" – Paracelsus

The birth of modern day cell therapy occurred in 1931 in Switzerland. Prof. Dr Paul Niehans (1882–1971) a Swiss physician, who got famous for inventing and developing cellular therapy, a method by which he has successfully treated thousands of patients. His renown grew through his treatment of Pope Pius XII.

Organizers: Jaroslav Turánek, Šárka Němečková, Jan Kříž

- **Czech Society for Gene and Cell Therapies (CSGCT) – special symposium**

Cell Therapies

Chairman: Šárka Němečková, Alan Parker

8:00 Breakfast

Morning session

9:00 – 9:20 **Alan Parker** (University of Cardiff, Cardiff, UK) – title tbd

9:20 – 9:40 **Šárka Němečková** (Institute of Haematology and Blood Transfusion, Prague)
Multivirus-specific T cells for adoptive transfer

9:40 – 10:00 **Daniel Scherman** (Université Paris Descartes, Paris, France)
Improved plasmid platform for cell and gene therapy – applications to CAR-T cells

10:00 – 10:30 Coffee Break

10:30 – 10:50 **Pavel Otáhal** (Institute of Haematology and Blood Transfusion, Prague, Czech Republic)
CAR T cells

11:10 – 11:30 **Jan Kříž** – (Institute for Clinical and Experimental Medicine, Prague, Czech Republic) – title tbd

11:30 – 11:50 **Michal Dubský** – (Institute for Clinical and Experimental Medicine, Prague, Czech Republic)
Characteristics of endothelial precursor cells in diabetes and peripheral arterial disease – their therapeutic potential

11:50 – 12:10 **Robert Bém** (Institute for Clinical and Experimental Medicine, Prague, Czech Republic)
Cell therapy in the treatment of diabetic foot – clinical view

12:10 – 13:00 Lunch

Afternoon session

13:00 – 13:20 **Aleš Hampl** (Masaryk University, International Clinical Research Center, St. Anne´s University Hospital, Brno, Czech Republic)
Early lung epithelial progenitors originating from human pluripotent stem cells

13:20 – 13:40 **Irena Krontorád Koutná** (International Clinical Research Center (FNUSA-ICRC), Masaryk University, Brno, Czech Republic)
Qualification of the clinical grade hiPSC production

13:40 – 14:00 **Irena Vacková** (Institute of Experimental Medicine CAS, Prague, Czech Republic)
Comparison of umbilical cord derived MSCs to bone marrow and adipose tissue derived MSCs and characterization of their secretoms

14:00 – 14:20 **Hana Španielová** (Charles University, Prague, Czech Republic)
Polyomavirus-based gene and drug delivery systems

EUROPEAN UNION
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Operational Programme Research,
Development and Education

MINISTRY OF EDUCATION,
YOUTH AND SPORTS

OP VVV Project FIT
Pharmacology, Immunotherapy, nanoToxicology

Project FIT started on 1st January 2017 and is an OPVVV Project of the Czech Ministry of Education, Youth & Sports (MEYS, MŠMT in Czech) with financial support from the European Union.

The aim of this project is to build a sustainable world–class Nanotechnology for Healthcare Centre by:

- forging a top team of scientists and support staff
- installing a world–class infrastructure appropriate to our agreed scientific goals
- achieving a thorough internationalization of research efforts and staff

Our Nanotechnology for Healthcare Centre has a main scientific focus on the design and creation of recombinant vaccines, molecular adjuvants and modern vaccination/drug delivery systems We are also committed to the clinical and commercial development of research outputs whenever possible.

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