CONFERENCE PROGRAMME

Sunday, 28 June 2015

16:00 ‒ 19:00  Registration with welcome buffet

Monday, 29 June 2015

9:00 ‒ 9:10  OPENING
František Rypáček
Conference Chairman and Director of the Institute

9:10 ‒ 9:25  Presentation of IUPAC
Igor Lacík (Slovakia)

LECTURE SESSION 1

Chair: Carsten Werner (Germany)
Co-Chair: Eduard Brynda (Czech Republic)

9:25 ‒ 10:15  Opening lecture OL-01
Phillip B. Messersmith (USA)
Mechanochemistry of mussel adhesive proteins and biologically inspired synthetic materials

10:15 ‒ 10:35  Oral presentation OP-01
Patrick Wilke (Germany)
Novel mussel-glue inspired saltwater adhesives

10:35 ‒ 11:00  Coffee break

LECTURE SESSION 2

Chair: Igor Lacík (Slovakia)
Co-Chair: Dana Kubies (Czech Republic)

11:00 ‒ 11:50  Keynote lecture KL-01
César Rodríguez Emmenegger (Czech Republic)
Antifouling biointerfaces via living radical polymerization and advanced ligation protocols
11:50 – 12:10  Oral presentation OP-02  
**Viktor Korzhikov** *(Russian Federation)*  
Construction of biofunctional layers on the surface of polyester-based biomaterials: Scaffolds for tissue engineering and nanoparticles for drug delivery

12:10 – 12:30  Oral presentation OP-03  
**Inga Lilge** *(Germany)*  
Covalently bio-functionalized nonfouling polymer brush films to control cell surface interactions

12:30 – 14:00  Lunch

**LECTURE SESSION 3**

*Chair: Phillip B. Messersmith (USA)*  
*Co-Chair: Vladimír Proks (Czech Republic)*

14:00 – 14:50  Keynote lecture KL-02  
**Carsten Werner** *(Germany)*  
Glycosaminoglycan-based hydrogels as cell-instructive matrices

14:50 – 15:10  Oral presentation OP-04  
**Ping Li** *(Germany)*  
Integrated three-dimensional asymmetric microenvironments for cell behavior investigations

15:10 – 15:30  Oral presentation OP-05  
**Paul M. Potzmann** *(Austria)*  
Thermoplastic polyurethane elastomers

15:30 – 16:00  Coffee break

**LECTURE SESSION 4**

*Chair: Neli Stoyanova Koseva (Bulgaria)*  
*Co-Chair: František Rypáček (Czech Republic)*

16:00 – 16:25  Special lecture SL-01  
**Michael Mannsberger** *(Austria)*  
XPS depth profiling of biosensor materials with argon cluster ions
16:25 – 16:50 Special lecture SL-02  
**Vladimír A. Stoy** *(Czech Republic)*  
Cell attachment and proliferation on surfaces of hydrophilic acrylates and methacrylates

16:50 – 17:10 Oral presentation OP-06  
**Miroslav Dudič** *(Czech Republic)*  
New hydrogel for osmotic tissue expanders (HOTEX)

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**Tuesday, 30 June 2015**

**LECTURE SESSION 5**

*Chair: Ying Yang* *(United Kingdom)*  
*Co-Chair: Eliška Mázl Chánová* *(Czech Republic)*

9:00 – 9:50 Keynote lecture KL-03  
**Paolo A. Netti** *(Italy)*  
Cell instructive materials to engineering biological tissues *in vitro*

9:50 – 10:15 Special lecture SL-03  
**Pavel A. Levkin** *(Germany)*  
Polymer surfaces with superhydrophobic-superhydrophilic micropatterns for cell applications

10:15 – 10:35 Oral presentation OP-07  
**Paul Gauss** *(Austria)*  
3D printing of biocompatible hydrogels

10:35 – 11:00  
**Coffee break**

**LECTURE SESSION 6**

*Chair: Paolo A. Netti* *(Italy)*  
*Co-Chair: Hana Studenovská* *(Czech Republic)*

11:00 – 11:50 Keynote lecture KL-04  
**Elisabetta A. Cavalcanti-Adam** *(Germany)*  
The impact of spatial cues at the single molecule level on cell adhesion and signaling
11:50 – 12:10  Oral presentation OP-08  
**Ognen Pop-Georgievski (Czech Republic)**  
Peptides on non-fouling surfaces: Controlling the cell behavior by eliciting specific cell-biomimetic surface interactions

12:10 – 12:30  Oral presentation OP-09  
**Maria Meißler (Germany)**  
Enzyme-triggered bioconjugate adhesion using proteolytically cleavable peptide domains

12:30 – 14:00  Lunch

**LECTURE SESSION 7**

*Chair: Elisabetta A. Cavalcanti-Adam (Germany)*  
*Co-Chair: Štěpán Popelka (Czech Republic)*

14:00 – 14:50  Keynote lecture KL-05  
**Ying Yang (United Kingdom)**  
Mediation of cellular activities by the chemical and topographic properties of the substrates

14:50 – 15:10  Oral presentation OP-10  
**Eliška Mázl Chánová (Czech Republic)**  
The effect of surface distribution and character of biomimetic motif on bone tissue formation

15:10 – 15:30  Oral presentation OP-11  
**Lanxin Lyu (United Kingdom)**  
Effects of surface treatment on osteogenisis and vasculization

15:30 – 16:00  Coffee break

16:00 – 17:30  **Poster Session: Posters P-01 – P-31**
Wednesday, 1 July 2015

LECTURE SESSION 8

Chair: Miroslawa El Fray (Poland)
Co-Chair: Milan Houska (Czech Republic)

9:00 – 9:50   Keynote lecture KL-06
Xuesi Chen (People’s Republic of China)
Preparation and biomedical applications of injectable polypeptide hydrogels

9:50 – 10:15  Special lecture SL-04
Neli Stoyanova Koseva (Bulgaria)
Biocompatibility and surface modification of drug polymer nanocarriers

10:15 – 10:35 Oral presentation OP-12
Flavia Laffleur (Austria)
Mucoadhesive biomaterials in drug delivery

10:35 – 11:00  Coffee break

LECTURE SESSION 9

Chair: Xuesi Chen (People’s Republic of China)
Co-Chair: Marta M. Kumorek (Czech Republic)

11:00 – 11:50  Keynote lecture KL-07
Igor Lacík (Slovakia)
Microcapsules for immunoprotection of transplanted islets of Langerhans

11:50 – 12:10  Oral presentation OP-13
Anne Mari Rokstad (Norway)
The complement C3 deposition depends on the alginate microspheres composition and determines the cytokine profile
12:10 – 12:30  Oral presentation OP-14  
**Stergios Pispas** (*Greece*)  
Complexation of lysozyme with block polyelectrolyte micelles adsorbed on solid surfaces

12:30 – 14:00  
*Lunch*

14:00 – 16:30  
Social programme (Guided tour in Prague)

18:30 – 21:30  
Conference dinner

**Thursday, 2 July 2015**

**LECTURE SESSION 10**

*Chair: Duncan Sutherland* (*Denmark*)  
*Co-Chair: Ognen Pop-Georgievski* (*Czech Republic*)

9:00 – 9:50  
Keynote lecture KL-08  
**Hans Peter Wendel** (*Germany*)  
Improving the compatibility of vascular medical devices by XNA-based surface functionalizations

9:50 – 10:15  
Special lecture SL-05  
**Mirosława El Fray** (*Poland*)  
Catechol-modified chitosan/graphene nanocomposites for biosensing applications

10:15 – 10:35  
Oral presentation OP-15  
**Tomáš Riedel** (*Czech Republic*)  
Detection of antibodies against hepatitis in clinical serum and saliva samples

10:35 – 11:00  
*Coffee break*
LECTURE SESSION 11

Chair: Hans Peter Wendel (Germany)
Co-Chair: Tomáš Riedel (Czech Republic)

11:00 – 11:50  Keynote lecture KL-09
Duncan Sutherland (Denmark)
Protein nanopatterns for the study of cellular adhesion complexes

11:50 – 12:10  Oral presentation OP-16
Anastasiia Hubina (Russian Federation)
Self-assembly of spin-labeled poly(amino acid)-based block copolymers

12:10 – 12:30  Oral presentation OP-17
Fatima Hassouna (Czech Republic)
Tunable and durable toughening of polylactide materials via reactive extrusion

12:30 – 12:40  Closing of the Meeting, FAREWELL

12:40 – 14:00  Lunch