

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)

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 osteogenesis 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: Mirosława 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