

## PROGRAMME

- 17:10 **Engineering the stability of antibody constant domains**  
G. Wozniak-Knopp, J. Stadlmann, F. Rölker, University of Natural Resources and Life Sciences, Vienna/A
- 17:30 **Successful patenting of antigens, antibodies and other scaffolds**  
G. Redl, REDL Life Science Patent Attorneys, Vienna/A
- 17:50 *Poster Session II*

## FRIDAY, JUNE 28

### AFFINITY PROTEOMICS AND PROTEIN-PROTEIN INTERACTIONS IN HEALTH AND DISEASE

- 09:00 **KEYNOTE LECTURE**  
**Personalised proteomics by means of individualised protein microarrays**  
S. Syafrizayanti, S. Lueong, I.D. Hoheisel, Deutsches Krebsforschungszentrum (DKFZ), Heidelberg/D
- 09:40 **High-Throughput analysis of plasma samples and determination of changes in glycomic patterns of patients after tumor ablation**  
D. Josic, University of Rijeka/HR and Brown University, Providence, RI/USA
- 10:00 **Intrinsic thermodynamics - structure correlations of anticancer drug lead binding to target proteins**  
A. Zubriene, J. Gylte, V. Morkunaite, E. Kazlauskas, L. Baranauskienė, E. Capkauskaitė, V. Dudutiene, V. Jogaitė, V. Michailovienė, V. Petrikaite, V. Petrauskas, J. Matulienė, D. Matulis, Vilnius University/LT
- 10:20 **Encapsulation of metabolic pathways in virus-like particles mimicking cellular microcompartments**  
M. Brasch, M. Koay, J.J.L.M. Cornelissen, University of Twente, Enschede/NL
- 10:40 *Coffee break*

### BIOSENSORS

- 11:10 **Molecular detection of nucleic acids based on antibodies immobilized in paper-based microfluidic devices via carbohydrate-binding modules**  
A.M. Rosa, Instituto Superior Técnico, Lisbon/P; A.F.D. Louro, Instituto Superior Técnico, Lisbon/P and University of Lisbon/P; A.M. Azevedo, S.A.M. Martins, D.M.F. Prazeres, Instituto Superior Técnico, Lisbon/P
- 11:30 **Multiplexed label-free bio-affinity measurement using surface plasmon resonance imaging**  
E. Ly-Morin, HORIBA Jobin Yvon GmbH, Bensheim/D
- 11:50 **Antibody characterization by surface plasmon resonance - expanding horizons**  
E. Pol, R. Karlsson, GE Healthcare Bio-Sciences AB, Uppsala/S; U. Roder, GE Healthcare Europe GmbH, Freiburg/D
- 12:10 **Applications of label-free assays in biopharmaceutical development**  
H. Wünsche, Pall GmbH, Dreieich/D

## PROGRAMME

- 12:30 **Solid-phase synthesis of molecularly imprinted polymer-based nanoparticles (MIP-NPs) for protein recognition**  
S. Ambrosini, S. Beyazit, K. Haupt, B. Tse Sum Bui, University of Technology of Compiègne/F
- 12:50 *Lunch*
- 14:00 *Free time / sightseeing*
- 19:30 *Conference dinner*

## SATURDAY, JUNE 29

### DETECTING INTERACTIONS AT A NANOSCALE

- 09:00 **KEYNOTE LECTURE**  
**Watching and controlling chromatographic interactions at the nano scale**  
R. Willson, University of Houston, TX/USA; L. Kiskey, C.R. Daniels, Rice University, Houston, TX/USA; M.-V. Poongavanam, S. Dhamaane, W.-H. Chen, University of Houston, TX/USA; C. Reznik, Rice University, Houston, TX/USA; K. Kourentzi, University of Houston, TX/USA; C.F. Landes, Rice University, Houston, TX/USA
- 09:40 **Physical characterization of protein-ligand interaction and cell adhesion by acoustic wave impedance**  
G. Ferreira, University of the Algarve, Faro/P
- 10:00 **Bioaffinity-based proteoliposomes for immunosensing and cellular targeting applications**  
S.Y. Hwang, Hanyang University, Ansan/ROK; E.K. Lee, Gachon University, Seongnam/ROK
- 10:20 **Nanoscale analysis of membrane protein organization**  
K. Kläsener, M. Palache, N. Hobeika, J. Yang, M. Reth, University of Freiburg/D
- 10:40 *Coffee break*

### AFFINITY IN BIOMATERIALS AND BIOSENSORS

- 11:10 **Detection of drug-induced cell morphological alterations by acoustic wave biosensors**  
A.-C. Da-Silva, J. De-Carvalho, G.N.M. Ferreira, University of Algarve, Faro/P
- 11:30 **Stimulus-responsive biohybrid materials based on antibody-antigen interactions for the inducible release of vaccines**  
R.J. Gübeli, D. Hövermann, W. Weber, University of Freiburg/D
- 11:50 **Presentation of difference in protein-protein cytokine interactions based immune response in nanoscale, comparing healthy and cancer patients**  
N. Klehr, L. Bauer, H. Focke, B. Brüderl, J. Setter, Dr. Klehr Institut für Immunologie und Zellbiologie, München/D
- 12:10 **Application of ceramic fluorapatite-specific peptides in bioseparation**  
T. Islam, M.F. Lahore, Jacobs University of Bremen/D
- 12:30 **Closing remarks**

For online registration, more information about the venue, accommodation, the list of posters please check [www.dechema.de/affinity2013](http://www.dechema.de/affinity2013).



Gesellschaft für Chemische Technik und Biotechnologie e.V.

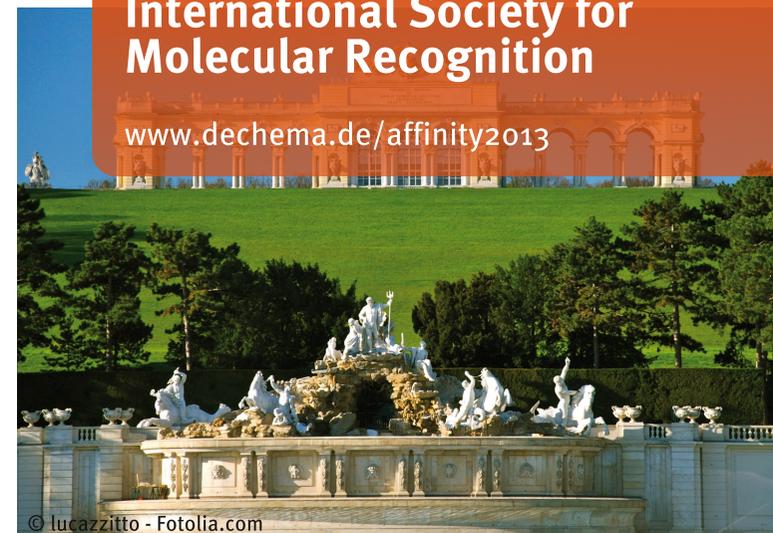
## PROGRAMME

June 26-29, 2013  
Austria Trend Parkhotel Schönbrunn, Vienna

# Affinity 2013

# 20<sup>th</sup> Biennial Meeting of the International Society for Molecular Recognition

[www.dechema.de/affinity2013](http://www.dechema.de/affinity2013)



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## INVITATION

### AFFINITY 2013 - 20<sup>TH</sup> BIENNIAL MEETING OF THE INTERNATIONAL SOCIETY FOR MOLECULAR RECOGNITION

On behalf of the International Society of Molecular Recognition and the European Society of Biochemical Engineering Science I want to invite you to Affinity 2013. This is a meeting with a long tradition, where scientists and engineers from academia and industry meet to exchange knowledge in the field of affinity technology, molecular recognition and its application in industry for health and disease, bioprocessing and biosensing.

The programme covers fundamentals and applications and will bridge the gap between fundamental science and engineering.

Parkhotel Schönbrunn combines tradition with modernity. It has been recently completely renovated and the beautiful architecture has kept while brand new conference faculties have been installed. The hotel is 3 min away from a "U-Bahn" station and the city center can be easily accessed.

I warmly welcome you to Vienna to participate in an exciting and high level scientific conference and to enjoy the beautiful City of Vienna in early summer.

Alois Jungbauer  
Chairman of the Scientific Committee  
Affinity 2013

## PROGRAMME

### WEDNESDAY, JUNE 26

#### AFFINITY TECHNOLOGIES FOR ANTIBODY PROCESSING

- 13:00 **OPENING**
- 13:20 **KEYNOTE LECTURE**  
**Engineering bispecificity into a small protein domain**  
S. Hober, KTH - Royal Institute of Technology, Stockholm/S
- 14:00 **MAb aggregate and MAb fragment separation by a tryptophan based cationic mixed mode resin**  
E. Müller, J. Vajda, TOSOH Bioscience GmbH, Stuttgart/D
- 14:20 **Discovery and development of universal Fc binders for antibody purification**  
M. Arnold, H. Bittermann, T. Neumann, Graffinity Pharmaceuticals GmbH, Heidelberg/D
- 14:40 *Coffee break*
- 15:10 **KEYNOTE LECTURE**  
**The role of affinity in the rational selection and mathematical modelling of the chromatographic purification of proteins**  
L.A. Asenjo, G. Sandoval, B.A. Andrews, University of Chile, Santiago/RCH

## PROGRAMME

- 15:50 **A novel terpyridine-immobilized affinity adsorbent for antibody purification**  
C. Lin, P. Florio, E.M. Campi, C. Zhang, D. Fredericks, K. Saito, W.R. Jackson, M.T.W. Hearn, Monash University, Melbourne/AUS
- 16:10 **CaptureSelect ligand technology; unique platform for detection and purification of antibodies, antibody fragments and therapeutic proteins**  
F. Detmers, H. Adams, BAC BV, Leiden/NL
- 16:30 **pH transients in protein A affinity chromatography: experimental effects and modelling**  
R. Hahn, L. Brückl, University of Natural Resources and Applied Life Sciences, Vienna/A
- 16:50 **Molecular modeling of the interaction of protein L with antibodies**  
M. Paloni, C. Cavallotti, Politecnico di Milano/I
- 17:10 *Postersession I*
- 18:00 *Welcome Reception*

### THURSDAY, JUNE 27

#### KINETICS AND THERMODYNAMICS OF BIOMOLECULAR INTERACTIONS

- 09:00 **KEYNOTE LECTURE**  
**Binding thermodynamics of aptamers studies by ITC and it's molecular engineering applications**  
W. Chen, C. Tasi, National Central University, Jhongli/RC
- 09:40 **Analysis of biorecognition of proteins in multi-mode chromatography in terms of retention and binding site**  
T. Tokunaga, N. Yoshimoto, S. Yamamoto, Yamaguchi University, Ube/J
- 10:00 **Design, synthesis and assessment of a de novo affinity adsorbent for the purification of recombinant human erythropoietin**  
G. El Khoury, B. Khogeer, Y. Wang, D. Wang, S.I. Jacob, C.R. Lowe, University of Cambridge/UK
- 10:20 **Adsorption of proteins and peptides with polymer controlled permeation to affinity chelating and ion exchange binding sites**  
R. Guzman, University of Arizona, Tucson, AZ/USA;  
O. Gonzalez-Ortega, University of St Luis Potosi/MEX;  
P. Jerker, Uppsala University/S
- 10:40 *Coffee break*

#### AFFINITY INTERACTIONS IN HEALTH AND DISEASE

- 11:10 **A unique mode of interaction of the TiO<sub>2</sub>-binding protein DLDH with oxide surfaces - structure, function and medical applications**  
G. Fleminger, Tel Aviv University/IL
- 11:30 **Angiotensin converting enzyme 2: species-specific activation of the alternative renin-angiotensin-system**  
M. Schuster, Apeiron-Biologics AG, Vienna/A

## PROGRAMME

- 11:50 **Affitins as potent specific inhibitors of glycosidases**  
A. Correa, Institut Pasteur, Paris/F and Institut Pasteur de Montevideo/ROU; S. Pacheco, Institut Pasteur, Paris/F and University of Nantes/F; A. Mechaly, Institut Pasteur, Paris/F; G. Obal, Institut Pasteur de Montevideo/ROU; G. Béhar, B. Mouratou, University of Nantes/F; P. Oppezzo, Institut Pasteur de Montevideo/F; P. Alzari, Institut Pasteur, Paris/F; F. Pecorari, University of Nantes/F
- 12:10 **Design and selection of armadillo repeat proteins: a novel technology for modular peptide recognition**  
C. Reichen, G. Varadamsetty, D. Tremmel, University of Zurich/CH; F. Parmeggiani, University of Washington, Seattle, WA/USA; A. Honegger, University of Zurich/CH; S. Fleishmann, Weizmann Institute of Science, Rehovot/IL; T. Zhou, University of Zurich/CH; D. Baker, University of Washington, Seattle, WA/USA; C. Madhurantakam, P.R. Mittl, M.G. Grütter, A. Plückthun, University of Zurich/CH
- 12:30 **Human Pin1 WW domain stability and affinity studies: an *in silico* and an experimental approach**  
A.M.G.C. Dias, R.J.F. Branco, New University of Lisbon, Caparica/P; O. Iranzo, New University of Lisbon, Oeiras/P; A.C.A. Roque, New University of Lisbon, Caparica/P
- 12:50 *Lunch*

#### AFFINITY TECHNOLOGIES FOR BIOPROCESSING AND BIOPHARMACEUTICALS DEVELOPMENT

- 14:00 **KEYNOTE LECTURE**  
**Aqueous two-phase systems for bioprocessing integration**  
M.R. Aires-Barros, A.M. Azevedo, Instituto Superior Técnico, Lisbon/P
- 14:40 **Understanding molecular recognition mechanisms in histidine ligand affinity chromatography of proteins**  
K. Karkra, R.R. Prasanna, V. Sabareesh, M.A. Vijayalakshmi, VIT University, Vellore/IND
- 15:00 **Affinity aqueous two-phase systems: in route to stem cell separation**  
M. Gonzalez, M. Rito-Palomares, Tecnológico de Monterrey/MEX
- 15:20 **Scale up of membrane affinity chromatography processes**  
C. Boi, University of Bologna/I; S. Dimartino, University of Canterbury, Christchurch/NZ; G.C. Sarti, University of Bologna/I
- 15:40 *Coffee break*
- 16:10 **YIA - Young Investigator Award**  
Kindly supported by   
**Journal of Molecular Recognition**  
travel bursaries for young scientists  
Kindly supported by 
- AFFINITY TECHNOLOGIES FOR ANTIBODY DISCOVERY**
- 16:50 **Beyond natural antibodies: the power of in vitro antibody generation**  
S. Dübel, TU Braunschweig/D