

ISPPP 2008

September 21 - 24, 2008

Baden-Baden · Germany



28th International Symposium on the Separation of Proteins, Peptides and Polynucleotides



DECHEMA e.V.

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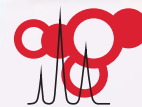
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www.dechema.de/isppp2008



DECHEMA e.V.



PROGRAMME

Members of the Scientific Committee

Klaus K. Unger	University of Mainz/D (Chairman)
Rainer Bischoff	University of Groningen/NL
Reinhard Ditz	Merck KGaA, Darmstadt/D
Milton T.W. Hearn	Monash University, Victoria/AUS
Sophia Hober	Royal Institute of Technology, Stockholm/S
Alois Jungbauer	University of Natural Resources and Applied Life Sciences, Vienna/A
Friedrich Lottspeich	MPI for Biochemistry, Munich/D
Egbert Müller	Tosoh Bioscience GmbH, Stuttgart/D
Thomas Track	DECHEMA e.V., Frankfurt am Main/D
Carsten Voß	University of Bielefeld/D

Under the Auspices of

Gesellschaft Deutscher Chemiker e.V. (GDCh)

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INVITATION

ISPPP 2008 will be the 28th symposium in this series of International Symposia on the separation of proteins, peptides and polynucleotides. The focus of the meeting is directed towards proteins and peptides, the fundamental understanding of the solute-surface interactions of these biopolymers and the development of a separation strategy and methodology from analytical scale to process scale. It provides the latest achievements in the field of bioanalysis of biopharmaceuticals, the basics of liquid phase separation methods of biopolymers in particular, the interfacing between different technologies and the hyphenation to mass spectrometry and the design of the bioprocessing chain for the isolation and purification of biopolymers.

THE STRUCTURE AND INTERACTION PLATFORM OF THE SYMPOSIUM

In order to provide maximum opportunity for exchange and discussion between the participants including exhibitors, the symposium will offer a variety of options to choose from. Four workshops on Sunday afternoon as an introduction to the scientific and practical aspects of biopolymer separation such as sample clean up and interfacing of separation methods, LC of biopolymers, multidimensional LC/MS and basics of bioprocessing will be held preceding the event.

The sessions of the symposium are grouped into five main areas:

- bioanalysis
- fundamentals
- materials
- peptides
- bioprocessing

Each session is accompanied by keynote lectures presented by renowned experts in the field.

A poster discussion will take place on Monday in the afternoon and posters will be exhibited throughout the meeting together with an exhibition where instrument suppliers will show their latest developments.

Conference specials:

- Monday late afternoon: **Separation Forum** – an open discussion corner forum will be organised between the delegates, exhibitors and lecturers to exchange ideas, experience and knowledge. A particular focus will be towards young scientists working in this field. The Separation Forum will be combined with the poster discussion.
- Tuesday morning: a **breakfast for young scientists** will be organised where younger colleagues will talk about their experience in academia and industry.
- Tuesday morning: a **special session for young scientists** up to 35 years of age will be held where eligible candidates that have been selected by the scientific committee will receive the opportunity to present their latest research results.

WHO SHOULD ATTEND ?

With the ever increasing challenge to effectively deal with preparation, separation and isolation as well as scale up issues in modern life sciences, the combination of different skills and sets of experience is more important than ever. Simulation and modelling as important tools towards the understanding and prediction of interaction phenomena need to be integrated into the practical development of new and typically complex operations. Therefore, experienced scientists from academia and practitioners from industry as well as young scientists interested in interdisciplinary discussions about the future challenges in separation science need to attend this event.

Detailed information regarding the programme can be found on the symposium website at

www.dechema.de/isppp2008

Presentations of the conference can be submitted to Elsevier for publication in the Journal of Chromatography A (www.elsevier.com/locate/chroma). The selection of papers will follow Elsevier's review procedure.

ISPPP 2008 will take place in the highly acclaimed congress center of the city of Baden-Baden/Germany. The scientific committee is looking forward to welcoming you at this premium scientific conference as the latest developments and trends are presented.

PROGRAMME AT A GLANCE

Sunday September 21, 2008		Monday September 22, 2008	
		8:50	Introduction K.K. Unger
			Bioanalysis
	<i>Chair</i>		<i>K.K. Unger</i>
		9:00	KEYNOTE LECTURE G. Hopfgartner
		9:45	A. Tschellessnig
		10:10	E. Reh
		10:35	E. Machtejevas
		11:00	Coffee Break with Exhibition and Poster Presentation
			Fundamentals
	<i>Chair</i>		<i>A. Jungbauer</i>
		11:25	S. Yamamoto
		11:50	C. Tari
		12:15	A.C.M. Dias-Cabral
		12:40	M. Ottens
13:30	Registration open	13:05	Lunch Break
14:30 – 16:00	WORKSHOP 1 Sample clean up and interfacing of LC separation methods <i>Chair: E. Machtejevas</i>		Fundamentals
	<i>Chair</i>		<i>F. Lottspeich</i>
		14:30	E. von Lieres
14:30 – 16:00	WORKSHOP 2 LC of biopolymers <i>Chair: B. Anspach</i>	14:55	KEYNOTE LECTURE S. Hober
16:00	Coffee Break	<i>Chair</i>	<i>E. Müller</i>
16:30 – 18:00	WORKSHOP 3 Multidimensional LC/MS <i>Chair: P. Schoenmakers</i>	15:40	Introduction Separation Forum
16:30 – 18:00	Workshops 4 Basics of Bioprocessing <i>Chair: A. Jungbauer</i>	16:20 – 18:00	Coffee Break Poster Discussion and Separation Forum
18:00 – 21:00	Welcome Reception Get-Together		

PROGRAMME AT A GLANCE

Tuesday September 23, 2008		Wednesday September 24, 2008	
7:30	Breakfast for Young Scientists		
	Materials		Bioprocessing
<i>Chair</i>	<i>R. Ditz</i>	<i>Chair</i>	<i>J. Hubbuch</i>
9:00	KEYNOTE LECTURE C. Haynes	9:00	KEYNOTE LECTURE A. Eon-Duval
9:45	A. Franke	9:45	M. Eiberle
10:10	J. Horak	10:10	J. Grzeskowiak
10:35	K. Ralla	10:35	S. Leong
11:00	Coffee Break with Exhibition and Poster Presentation	11:00	Coffee Break with Poster Presentation
	Materials		Bioprocessing
<i>Chair</i>	<i>C. Voß</i>	<i>Chair</i>	<i>M. Hearn</i>
11:25	R. Dabre	11:25	C. Borrmann
11:50	J. Samatou	11:50	KEYNOTE LECTURE Th. Laurell
12:15	A.M. Azevedo		
12:40	N. Streitner	12:35	Closing Remarks Poster Awards
13:05	Lunch Break		
	Peptides	12:50	End of Symposium
<i>Chair</i>	<i>R. Bischoff</i>		
14:30	TANDEM KEYNOTE LECTURE R. Hodges/O. Krokhin		
15:30	C.T. Mant		
15:55	H. Schlüter		
16:20	Coffee Break		
16:40	H. Permentier		
17:05	M. Trusch		
17:30 – 18:15	KEYNOTE LECTURE Th. Hankemeier		
19:30 – 23:30	Conference Dinner		

PROGRAMME

PROGRAMME

Monday, September 22, 2008

8:50 Introduction K.K. Unger

BIOANALYSIS

Chair: K.K. Unger, University of Mainz/D

9:00 KEYNOTE LECTURE

Liquid chromatographic analysis of biopharmaceuticals in biological fluids with MALDI and ESI mass spectrometric detection

G. Hopfgartner, University of Geneva/CH

9:45 **Cation-exchange chromatography separates two isoforms of a monoclonal anti-Rh(D) (IgG) with significantly different antigen-binding properties**

T. Teo, A. Tscheliessnig, N. Wong, Y.Y. Lee, J. Chusainow, R. Philp, M.M. Lee, Bioprocessing Technology Institute, Singapore/SGP; J. Grzeskowiak, University of Natural Resources and Applied Life Sciences, Vienna/A; A. Choo, Bioprocessing Technology Institute, Singapore/SGP; A. Jungbauer, University of Natural Resources and Applied Life Sciences, Vienna/A

10:10 **Evaluation of IEC-phases for 2D-LC-MS of proteins**

E. Reh, University of Applied Sciences, Bingen/D

10:35 **Multidimensional liquid chromatography for the analysis of complex samples**

E. Machtejevas, Merck KGaA, Darmstadt/D

11:00 **Coffee Break with Exhibition and Poster Presentation**

FUNDAMENTALS

*Chair: A. Jungbauer, University of Natural Resources and Applied Life Sciences, Vienna/A*11:25 **Binding and retention mechanism of PEGylated and non-PEGylated proteins in electrostatic interaction chromatography**

M. Abe, P. Akbarzadehlaleh, Y. Nishizumi, N. Yoshimoto, S. Yamamoto, Yamaguchi University, Ube/J

11:50 **Surface energetics to assess biomass attachment onto hydrophobic interaction adsorbents in expanded beds**

R.R. Vennapusa, Jacobs University, Bremen/D; C. Tari, Izmir Institute of Technology/TR; R.B. Cabrera, H.M. Fernandez-Lahore, Jacobs University, Bremen/D

Monday, September 22, 2008

12:15 **Investigation of angiotensin I adsorption behavior in hydrophobic interaction chromatographic systems**

C.A. Nunes, A.C.M. Dias-Cabral, University of Beira Interior, Covilhã/P

12:40 **Micro-scale self interaction chromatography**

K. Deshpande, T. Ahamed, L.A.M. van der Wielen, M. Ottens, J. ter Horst, P. Jansens, Delft University of Technology/NL

13:05 **Lunch Break***Chair: F. Lottspeich, MPI for Biochemistry, Munich/D*14:30 **Fast and accurate estimation of chromatography parameters from measurement data**

E. von Lieres, J. Andersson, Research Centre Juelich GmbH/D; A. Susanto, Bayer Technology Services GmbH, Leverkusen/D; K. Treier, J. Hubbuch, University of Karlsruhe/D

14:55 KEYNOTE LECTURE

Progress in biomimetic and biospecific separations of biopolymers

S. Hober, KTH, Stockholm/S

*Chair: E. Müller, Tosoh Bioscience GmbH, Stuttgart/D*15:40 **INTRODUCTION SEPARATION FORUM**16:20- **Coffee Break**18:00 **Poster Discussion and Separation Forum**

PROGRAMME

Tuesday, September 23, 2008

7:30 **Breakfast for Young Scientists**

MATERIALS

*Chair: R. Ditz, Merck KGaA, Darmstadt/D*9:00 **KEYNOTE LECTURE****Material design for modern process development**

C. Haynes, University of British Columbia, Vancouver/CND

9:45 **Design of novel preparative cation-exchange resins for the downstream processing of monoclonal antibodies**

A. Franke, N. Forrer, ETH Zurich/CH; H. Thomas, ETH Zurich/CH and Merck KGaA, Darmstadt/D; A. Butté, ETH Zurich/CH; M. Jöhnck, M. Schulte, Merck KGaA, Darmstadt/D; M. Morbidelli, ETH Zurich/CH

10:10 **Application of novel affinity-based anion-exchange-type (AIEX) materials and novel peptido-mimetic affinity material (B14) for the purification of monoclonal antibodies (mAb) from cell supernatant**

J. Horak, University of Vienna/A; S. Williams, S. Burton, ProMetic Biosciences Ltd., Cambridge/UK; W. Lindner, University of Vienna/A

10:35 **Adsorption and separation of proteins with smectitic clay minerals**

K. Ralla, R. Riechers, University of Hanover/D; U. Sohling, Süd-Chemie AG, Moosburg/D; C. Kasper, T. Scheper, University of Hanover/D

11:00 **Coffee Break with Exhibition and Poster Presentation***Chair: C. Voß, University of Bielefeld/D*11:25 **Preparative separation of peptide mixture on a column containing a mixed-mode reversed-phase/weak-anion exchange material**

R. Dabre, A. Schwämmle, Merck KGaA, Darmstadt/D; M. Lämmerhofer, W. Lindner, University of Vienna/A

11:50 **Liquid-liquid equilibrium of quaternary aqueous two-phase systems: experiments and modelling**

J.A. Samatou, A.E. Wentink, A. Górak, Dortmund University of Technology/D

12:15 **An alternative process for the purification of therapeutic antibodies comprising aqueous two-phase extraction**

A.M. Azevedo, P.A.J. Rosa, I.F. Ferreira, M.R. Aires-Barros, Instituto Superior Técnico, Lisbon/P

12:40 **Plasmid purification by reverse micellar two-phase systems: development of an extraction step and process integration**

N. Streitner, C. Voß, E. Flaschel, Bielefeld University/D

13:05 **Lunch Break**

PROGRAMME

Tuesday, September 23, 2008

PEPTIDES

*Chair: R. Bischoff, University of Groningen/NL*14:30 **TANDEM KEYNOTE LECTURE****Improving prediction of peptide retention times in RP-HPLC**

R. Hodges, University of Colorado at Denver and Health Sciences Center, Aurora, CO/USA

Peptide retention prediction in RP-HPLC: impact on LC-MS and LC-MS/MS analyses in proteomics

O. Krokhn, Manitoba Centre for Proteomics and System Biology, Winnipeg, Manitoba/CDN

15:30 **The use of de novo designed synthetic peptide mixtures to design new reversed-phase materials with unique selectivities for peptide separations**

C.T. Mant, University of Colorado at Denver and Health Sciences Center, Aurora, CO/USA; T. Farkas, Phenomenex Inc., Torrance, CA/USA; R.S. Hodges, University of Colorado at Denver and Health Sciences Center, Aurora, CO/USA

15:55 **Application of displacement chromatography for the analysis of a membrane proteome**

H. Schlüter, M. Trusch, D. Hildebrand, A. Schulz, Charité, Berlin/D; A. Bertsch, O. Kohlbacher, University of Tübingen/D; A. Böhlick, S. Bachmann, Charité, Berlin/D

16:20 **Coffee Break with Exhibition and Poster Presentation**16:40 **Electrochemical oxidation and cleavage of peptides and proteins**

H. Permentier, J. Roeser, A. Bruins, R. Bischoff, University of Groningen/NL

17:05 **From degradomes towards disease-associated proteases**

M. Trusch, H. Schlüter, Charité, Berlin/D; V. Frochoux, M. Linscheid, Humboldt Universität zu Berlin/D; O. Schulz-Trieglaff, R. Knut, Freie Universität Berlin/D; E. Machtejevas, Merck KGaA, Darmstadt/D; K. Unger, University of Mainz/D

17:30- **KEYNOTE LECTURE**18:15 **Selectivity and efficiency in biopolymer separations**
Th. Hankemeier, Leiden University/NL19:30- **Conference Dinner** (see page 23)
23:30

PROGRAMME

Wednesday, September 24, 2008

BIOPROCESSING

Chair: J. Hubbuch, Research Center Juelich GmbH/D

- 9:00 **KEYNOTE LECTURE**
Alternative purification process applicable for monoclonals
A. Eon-Duval, Laboratoires Serono S.A., Fenil-sur-Corsier/CH
- 9:45 **Manufacturing of single-chain Fv fragments (scFv): influence of domain arrangement on refolding characteristics**
M. Eiberle, H. Hohenblum, Boehringer Ingelheim Austria, Vienna/A; A. Jungbauer, University of Natural Resources and Applied Life Sciences, Vienna/A; M. Berkemeyer, Boehringer Ingelheim Austria, Vienna/A
- 10:10 **Use of 2-D DIGE to facilitate downstream process development of therapeutic proteins**
J. Grzeskowiak, University of Natural Resources and Applied Life Sciences, Vienna/A; A. Tscheliessnig, P.C. Toh, J. Chusainow, Y.Y. Lee, N. Wong, Bioprocessing Technology Institute, Singapore/SGP; A. Jungbauer, University of Natural Resources and Applied Life Sciences, Vienna/A and Bioprocessing Technology Institute, Singapore/SGP
- 10:35 **Integrated column refolding and purification of a complex biopharmaceutical protein**
Y. Chen, S. Leong, Nanyang Technological University, Singapore/SGP
- 11:00 **Coffee Break with Poster Presentation**
Chair: M. Hearn, Monash University, Victoria/AUS
- 11:25 **Design of hydrophobic interaction chromatography**
C. Borrmann, Clausthal University of Technology/D; S. Sommerfeld, M. Lohrmann, Bayer Technology Services GmbH, Leverkusen/D; J. Strube, Clausthal University of Technology/D
- 11:50 **KEYNOTE LECTURE**
Miniaturization and mass spectrometry
Th. Laurell, Lund University/S
- 12:35 **Closing Remarks, Poster Awards**
- 12:50 **End of the Symposium**

POSTER PROGRAMME

Posters must be mounted on the assigned boards by 11:00 on Monday, 22 September, 2008 at the latest.

Authors are requested to be present at their posters during the Poster Discussion and Separation Forum on **Monday, September 22, 2008, from 16:20 until 18:00.**

Posters can also be viewed and discussed during the coffee breaks.

BIOANALYSIS OF BIOPHARMACEUTICALS

- Development of RP-HPLC method for the analysis of lenograstim (rHuG-CSF) and induced oxidized forms**
J. Tonic-Ribarska, S. Trajkovic-Jolevska, K. Brezovska, A. Dimitrovska, University „Ss Cyril and Methodius“, Skopje/MK
- Age related variations in the activity of salivary lysozyme**
A. Rezaee, Guilan University of Medical Sciences, Rasht/IR; R. Sariri, University of Guilan, Rasht/IR; A. Erfani, Iran University of Medical Sciences, Tehran/IR
- Use of chromatographic techniques to improve mass spectral analysis for identification and quantitative analysis of peptides and glycopeptides**
S. Harden, Waters AG, Baden-Daettwil/CH; T. Wheat, B. Gillece-Castro, D. Diehl, Waters Corporation, Milford, MA/USA
- Identification of insulin in illicit drugs by capillary electrophoresis**
V. Piette, Scientific Institute of Public Health, Bruxelles/B

SELECTIVITY AND EFFICIENCY IN BIOPOLYMERS SEPARATIONS

- Study of RNA-protein interaction in MAP kinase signaling by affinity capillary electrophoresis with a carboxylated capillary**
A. Taga, Kinki University, Osaka/J; A. Sato, K. Suzuki, GL Sciences Inc., Fukushima/J; S. Kodama, Toyama Institute of Health/J; R. Sato, S. Ishiwata, R. Sugiura, Kinki University, Osaka/J

POSTER PROGRAMME

- 6 **Pseudo-affinity capture of cell culture derived influenza virus particles by sulphated cellulose membranes – an economic tool for vaccine production**
L. Opitz, N. Solf, U. Reichl, M.W. Wolff, MPI for Dynamics of Complex Technical Systems, Magdeburg/D
- 7 **Characterization of novel high binding capacity IEC resins and applications**
H. Moriyama, Y. Kubo, Y. Yasuda, K. Muranaka, Tosoh Corporation, Shunan Yamaguchi/J
- 8 **Comparison of the capabilities of UPLC, HPLC and CGE for the analysis of nucleic acids and other large molecules**
D. Innamorati, J. Carmody, Avatar Pharmaceutical Services, Inc., Marlborough, MA/USA
- 10 **Novel non-porous ion exchangers for biochromatography**
K. Muranaka, M. Shimada, Y. Kubo, K. Araki, S. Sato, H. Moriyama, Y. Yasuda, K. Nakamura, Tosoh Corporation, Shunan/J
- 11 **Plasma protein adsorption to poly(ethylene oxide) self-assembled surfaces: a surface plasmon resonance study**
Y. Chang, W.L. Chu, Chung Yuan University, Chung Li/RC; W.Y. Chen, A. Higuchi, National Central University, Chung Li/RC
- 12 **Confocal laser scanning microscopy: pore accessibility determination with single adsorbent particles**
F. Dimer, University of Karlsruhe/D; E. Knieps-Grünhagen, Research Center Juelich GmbH/D; J. Hubbuch, University of Karlsruhe/D
- 13 **Regulation of sorption selectivity of antibiotics on heteroreticular polymeric sorbents**
O.A. Pisarev, I.V. Polyakova, Russian Academy of Sciences, St. Petersburg/RUS
- 14 **Equilibrium and kinetics of erythromycin sorption on imprinted polymer beads**
O.A. Pisarev, N.M. Ezhova, I.S. Garkushina, Russian Academy of Sciences, St. Petersburg/RUS
- 15 **Behavior of HSA on a strong cation exchange resin: experiments and simulation of a bimodal binding mechanism**
A. Franke, A. Butté, M. Morbidelli, ETH Zurich/CH
- 16 **Generation of enriched-allergen fractions from latex gloves**
M. Peixinho, N.M. Fernandes, C.T. Tomaz, University of Beira Interior, Covilhã/P

POSTER PROGRAMME

- 17 **Creation of L-lysine molecularly imprinted sorbents**
I. Polyakova, N. Ezhova, O. Pisarev, Russian Academy of Sciences, St. Petersburg/RUS
- 18 **Cloning, expression and purification of GABA transporter 1(GAT1)**
J. Hu, W. Reutter, H. Fan, Charité Berlin/D
- 19 **RP-HPLC peptide retention prediction algorithms for proteomics: how many models do we need?**
M. Harder, V. Spicer, K.G. Standing, J.A. Wilkins, O.V. Krokhin, University of Manitoba, Winnipeg/CDN
- BIOPROCESSING INCL. PROCESS DEVELOPMENT**
- 20 **Isolation, purification and kinetic properties of fish's (*Abramis ballerus*) blood serum cholinesterase**
V. Tonkopii, Russian Academy of Sciences, St. Petersburg/RUS
- 21 **Capturing of cell culture derived vaccinia virus by heparin-affinity chromatography**
M.W. Wolff, MPI for Dynamics of Complex Technical Systems, Magdeburg/D; C. Venzke, University of Magdeburg/D; S. Lehmann, MPI for Dynamics of Complex Technical Systems, Magdeburg/D; S. Post Hansen, R. Djurup, Bavarian Nordic, Kvistgard/DK; R. Faber, Sartorius AG, Göttingen/D; U. Reichl, MPI for Dynamics of Complex Technical Systems, Magdeburg/D
- 22 **Hydrophobic interactions of structurally similar proteins on pH-HIC mixed-mode media**
K. Becker, L. Bülow, Lund University/S
- 23 **Purification of hemagglutinin from viral and host cell membranes**
T. Kröber, S. Lehmann, N. Solf, MPI for Dynamics of Complex Technical Systems, Magdeburg/D; U. Reichl, MPI for Dynamics of Complex Technical Systems and University of Magdeburg/D; M.W. Wolff, MPI for Dynamics of Complex Technical Systems, Magdeburg/D
- 24 **Detection of tear lysozyme in menstrual period by HPLC & FPLC**
V. Jafarian, Islamic Azad University, Zanjan/IR; R. Sariri, F. Pournajafizadeh, H. Ghafouri, University of Guilan, Rasht/IR
- 25 **Evaluating two-dimensional gel electrophoresis as a predictive tool for protein separation during ion-exchange chromatography**
R.B. Cabrera, P. Zhelyazkova, L. Galvis, H.M. Fernandez-Lahore, Jacobs University, Bremen/D

- 26 **Purification process for monoclonal antibodies without protein a chromatography**
M. Iten, M. Tschuor, I. König, Zurich University of Applied Sciences, Wädenswil/CH; L. Jacob, A. Stein, Merck KGaA, Darmstadt/D; C. Zaborosch, Zurich University of Applied Sciences, Wädenswil/CH
- 27 **Spherical controlled pore glass beads for affinity chromatography**
L. Britsch, G. Bienhaus, VitraBio GmbH, Steinach/D
- 29 **Optimisation of temperature induced aqueous two-phase extraction of human antibodies**
I. Ferreira, A.M. Azevedo, P.A. Rosa, M.R. Aires-Barros, Instituto Superior Técnico, Lisboa/P
- 30 **Cation-exchange adsorption of the two major whey proteins**
M.H. El-Sayed, H.A. Chase, University of Cambridge/UK
- 31 **Optimization and scale-up of chromatography steps using a mixed-mode and a novel ion exchange sorbent**
V. Brochier, T. Robin, V. Ravault, A. Schapman, PALL BioSeptra, Cergy Saint Christophe/F
- 32 **The European integrated project AIMS – a comprehensive approach for optimised down-stream processing**
A. Górak, TU Dortmund/D
- 33 **Development of an automated high throughput screening method for optimization of inclusion body protein refolding**
A. Berg, J. Hubbuch, University of Karlsruhe/D
- 34 **Chromatographic and spectroscopic studies of new polymeric reversed phase silica gel**
T. Satou, H. Miyahara, M. Inoue, AGC Si-Tech Co. Ltd., Kitakyusyu/J
- 35 **Prediction of diffusion coefficients of plasmids**
D.M.F. Prazeres, Instituto Superior Técnico, Lisboa/P
- 36 **Purification of plasmid DNA vectors by hydrophobic interaction chromatography using sodium citrate in the mobile phase**
D.M.F. Prazeres, J.A.L. Santos, S.S. Freitas, Instituto Superior Técnico, Lisboa/P
- 37 **Adaptive signal segmentation as basis for new peak integration algorithms**
T. Ragg, M. Granzow, quantiom bioinformatics GmbH & Co. KG, Weingarten/D

- 38 **High throughput downstream process development: optimization of a cation exchange chromatography step**
K. Treier, P. Diederich, A. Siudak, S. Hansen, University of Karlsruhe/D; E. von Lieres, Research Center Juelich GmbH/D; J. Hubbuch, University of Karlsruhe/D
- 39 **A simple method for the one-step preparation of pure neokytorphin, an antibacterial peptide from total porcine haemoglobin peptic hydrolysate by conventional low pressure chromatography**
D. Vercaigne-Marko, N. Nedjar-Arroume, IUT, Villeneuve d'Ascq/F; I. Vintila, A. Lina, University of Iasi/RO; D. Guillochon, IUT, Villeneuve d'Ascq/F
- 40 **Continuous separation of recombinant streptokinase using HIC-gradient-simulated-moving-bed chromatography**
P. Sivakumar, J. Guhan, Indian Institute of Technology (Madras), Chennai/IND; L.C. Keßler, A. Seidel-Morgenstern, MPI for Dynamics of Complex Technical Systems, Magdeburg/D; U. Rinas, Helmholtz Centre for Infection Research, Braunschweig/D
- 41 **Plasmid DNA purification by phenyl boronate affinity chromatography**
A.G. Gomes, A.M. Azevedo, M.R. Aires-Barros, D.M.F. Prazeres, Instituto Superior Técnico, Lisbon/P
- 42 **Importance of non-electrostatic effects for the elution behaviour of proteins in isocratic, step and gradient elutions**
K.-M. Behrens, M. Urmann, C. Frech, Mannheim University of Applied Sciences/D
- 43 **Evaluation of a multi-modal high salt binding ion exchange material for the direct capture of antibodies**
E. Todorova, Mannheim University of Applied Sciences/D; H. Graalfs, Merck KGaA, Darmstadt/D; C. Frech, Mannheim University of Applied Sciences/D
- 44 **Design and engineering of continuous precipitation of an IgM using a stirred tank reactor with coupled diafiltration**
A. Tscheliessnig, D. Ong, S. Pan, A. Choo, Bioprocessing Technology Institute, Singapore/SGP; A. Jungbauer, University of Natural Resources and Applied Life Sciences, Vienna/A
- 45 **Structural-morphologic and biological characteristics of hybrid selenium containing nanostructures of hybrid selenium containing nanostructures**
S. Valueva, L. Borovikova, Russian Academy of Sciences, St. Petersburg/RUS

LAST MINUTE POSTERS**Last Minute Posters**

It is still possible to submit "Last Minute Posters" (size of poster: width 85 cm, length 120 cm). The deadline for registration is **August 22, 2008**. Those who are interested in presenting a poster are requested to submit a one page abstract via internet at www.dechema.de/isppp2008.

The abstract should be typed single-spaced (12 pt Arial font or equivalent, 2.5 cm margins, page size A4) and should include the title, authors, their affiliations and addresses. The submitted file should not exceed 200 kb. You will find a template on the website how to prepare your abstract. The posters will be announced in the "Last Minute Information" of the symposium.

**EXHIBITION / ACKNOWLEDGEMENT****Exhibition**

Embedded into the scientific programme, companies are invited to present their products and services in the fields of separation, analysis and characterisation of biochemical products. For detailed information please contact the conference secretariat via Email: geiling@dechema.de.

The following companies have already registered:

Alltech Grom GmbH, Rottenburg/D

Elsevier BV, Amsterdam/NL

GE Healthcare, Uppsala/S

Groupe Novasep SAS, Pompey/F

Springer, Heidelberg/D

Tosoh Bioscience GmbH, Stuttgart/D

TSI GmbH, Aachen/D

YMC Europe GmbH, Dinslaken/D

qantiom bioinformatics GmbH & Co.KG, Weingarten/D

Serva Electrophoresis GmbH, Heidelberg/D

Acknowledgement

The organisers convey their sincere thanks for financial support to



Agilent Technologies

Agilent Technologies,
Waldbronn/D



Profos AG,
Regensburg/D



TOSOH BIOSCIENCE

Tosoh Bioscience GmbH,
Stuttgart/D



TRUST. SCIENCE. INNOVATION.

TSI GmbH,
Aachen/D

Workshops

Four scientific workshops on various aspects of separation technologies will be held on the Sunday preceding the symposium:

parallel on Sunday, September 21, 2008 14:30 – 16:00

WORKSHOP 1**Sample clean up and interfacing of LC separation methods**

Chair: Egidijus Machtejevas, Merck KGaA, Darmstadt/D

WORKSHOP 2**LC of biopolymers**

Chair: Birger Anspach, HAW – Hamburg University of Applied Sciences/D

parallel on Sunday, September 21, 2008 16:30 – 18:00

WORKSHOP 3**Multidimensional LC/MS**

Chair: Peter Schoenmakers, University of Amsterdam/NL

WORKSHOP 4**Basics of Bioprocessing**

Chair: Alois Jungbauer, University of Natural Resources and Applied Life Sciences, Vienna/A

For attending the workshops registration is necessary. As the number of participants is limited, please register early to avoid disappointment.

Ticket: 50 EUR per workshop for regular participants and 25 EUR for students (only in combination with a regular conference ticket).

Monday, September 22, 2008

16:20 – 18:00

Separation Forum

The last Separation Forum within the scope of an ISPPP Meeting was held at the 1989 Copenhagen Meeting and addressed subjects considered interesting to discuss between the participants. This set up resulted in a stimulated array of discussions well beyond expectations, and after a long intermission we want to give this forum another try.

The committee has suggested some topics for consideration by the participants, however all topics deemed interesting for discussion are highly welcome, and will happily be picked up by the moderator teams under the headline:

HPLC in life sciences – potentials for major contributions in the next decade?!

The separation community today is often confronted with fundamental questions such as:

Is HPLC a mature technology or can we expect dramatic new developments?

Do we exploit HPLC to the full extent or is there still something hidden waiting to be discovered?

To discuss these issues in depth an open dialog is required between delegates, lecturers, exhibitors and experts.

Suggested starting topics & discussion moderators:

1. Perspectives of detection and identification: single molecule detection? (R. Bischoff & G. Rozing)
 - Technological evolution or quantum leaps?
 - Anything beyond MS on the horizon?
2. Miniaturisation and parallelisation: what are the limits? (Th. Laurell & S. Hober)
 - Sensitivity vs. reproducibility and ruggedness
 - Suitable for process analytics?
3. Future of column chromatography: hunt for million of theoretical plates? (K.K. Unger, R. Ditz)
 - Efficiency without selectivity, does it make sense?
 - On-line sample handling and multidimensional approaches – can proteomics succeed without?

SPECIAL EVENTS

4. Competitive (or better complementary) technologies – process chromatography and beyond
(A. Jungbauer, J. Hubbuch)
- Is current process technology fit for the future?
 - Impact of disposable technologies?

Will we see one, many or a combination of new approaches? These and other issues will be discussed in an informal atmosphere.

Monday, September 22, 2008

16:20 – 18:00

Poster Discussion

Visit the posters and talk to the exhibitors and to your colleagues. All participants are invited to the poster session which will take place in the foyer of the lecture hall among the poster walls and exhibition stands allowing active discussion. The poster session is integrated in the Separation Forum.

Tuesday, September 23, 2008

7:30 – 8:45

Breakfast for Young Scientists

This early morning event enables a limited number of students to get in contact with experts from science and industry in an informal atmosphere. Besides the discussions of presentations, posters and at the exhibition during the conference, the breakfast provides an opportunity to discuss the current situation and future perspectives in research and industry. In addition this meeting offers you a chance to extend your network and to exchange ideas and experience with other students.

Tuesday, September 23, 2008

9:00 – 13:05

Session for Young Scientists

A special session for young scientists up to 35 years of age will be held where eligible candidates that have been selected by the scientific committee will receive the opportunity to present their latest research results.

SOCIAL EVENTS

Sunday, September 21, 2008

18:00 – 21:00

Welcome Reception – Get-Together

To welcome the symposium participants an informal gathering will take place at the “Kongresshaus Baden-Baden”. Drinks and snacks will be served by invitation of the organiser.

Ticket: free of charge, please register

Tuesday, September 23, 2008

19:30 – 23:30

Conference Dinner – a perfect blend of culinary delights and entertainment

The Baden-Baden casino is one of the oldest and most traditional in all Europe. Today, the white ball is still rolling in the famed, sumptuous rooms that casino lessee Edouard Bénazet had designed by interior decorators from Paris. And today, some 200 years later, the Baden-Baden casino still numbers among the world's most beautiful.

Enjoy a combination for a splendid evening combining fine dining and gaming. The prize includes an exquisite three-course menu including drinks, free admission to the casino including jetons worth € 5 and an introduction how to play Roulette.



Ticket: Cost per person: € 67 (incl. VAT), please register

Meeting Time: 19:30

Meeting Place: Entrance of the Spielbank Baden-Baden, Kaiserallee 1, in the Kurhaus, 76530 Baden-Baden

Important information for attendance!:

- 1) Suitable clothing is required, i.e. dinner jacket and tie for men. Good jeans are acceptable in Baden-Baden. If you are not suitably dressed, you can borrow a jacket and tie at the ticket-taking checkers desk for a small fee.
- 2) In accordance with the gaming rules of Casino Baden-Baden, admission to the casino without a valid passport or personal ID card is unfortunately not possible. A driver's license is not an officially recognised proof of identity.
- 3) Even if you are not playing, you can only be admitted if you are 21 or older.

GENERAL INFORMATION

The City of Baden-Baden

Did you know that

... the largest percentage of millionaires in Germany live in Baden-Baden?

... the multi-award winning Lichtentaler Allee, a protected landscaped park that has played a major part in the town's history, celebrated its 350th birthday in 2005? This world famous "green oasis" stretches for over 3km through the heart of the town. 40 hectares with over 300 varieties of trees and shrubs.

... the Romans were the first to build baths in Baden-Baden over 2000 years ago? Their ruins can still be visited today under the Friedrichsbad (which houses the Roman-Irish baths).

... the only remaining German dwelling of the grand composer Brahms is to be found in Baden-Baden? Johannes Brahms lived from 1865 to 1874 in the Brahmshaus. Today, it is a memorial to Brahms and open to the general public.

... the cleanest drinking water in Germany can be found running from the house-hold taps and from the numerous springs in Baden-Baden?



© Images: Siddhartha Finner

GENERAL INFORMATION

Conference Venue

The Conference will be held at:

Kongresshaus Baden-Baden
Augustaplatz 10
76530 Baden-Baden

For details please visit www.kongresshaus.de

Conference Office ISPPP 2008

DECHEMA e.V.

Attn.: Ms. Heike Geiling

Theodor-Heuss-Allee 25

D-60486 Frankfurt am Main

Phone: ++49 (0)69/7564-280

Fax: ++49 (0)69/7564-176

Email: geiling@dechema.de

Internet: www.dechema.de/isppp2008

During the conference, from Sunday, September 21, 2008

Kongresshaus Baden Baden, Augustaplatz 10,
76530 Baden-Baden

Phone: ++49 (0)162 4141-136

Office hours

Sunday	September 21, 2008	13:00 – 21:00
Monday	September 22, 2008	8:00 – 18:30
Tuesday	September 23, 2008	8:00 – 18:30
Wednesday	September 24, 2008	8:00 – 13:00

Registration

Please complete the appropriate sections of the registration form provided at: www.dechema.de/isppp2008 and return it to DECHEMA e.V. Please use a separate copy for each participant. Online registration is also possible.

Confirmation of registration and the invoice will be sent after receipt of the registration form. Conference ticket, list of participants, book of abstracts and name tag will be available at the Conference Office in Baden-Baden. In general there is no registration deadline as long as free capacity is available. Please note: registrations made after **August 22, 2008** are not guaranteed to appear in the list of participants.

GENERAL INFORMATION

Registration Fees for ISPPP

For participants from industry*	
DECHEMA members and EFC/EFCE passport holders**	530 EUR
Non-members	545 EUR
For participants from universities*	
DECHEMA members and EFC/EFCE passport holders**	380 EUR
Non-members	395 EUR
For students***/pensioners*	
DECHEMA members and EFC/EFCE passport holders**	140 EUR
Non-members	155 EUR

* No VAT requested according to § 4.22UstG

** as well as members of Gesellschaft Deutscher Chemiker

*** proof of status required

The fee includes book of abstracts, list of participants and beverages during the coffee breaks, but no lunch.

Remittance of Fees

Fees should be remitted on receipt of the invoice in favour of DECHEMA e.V., stating the invoice number, the name of the participant and the keyword ISPPP2008, to one of the DECHEMA accounts as stated on the invoice. Payment by credit card is also possible (see registration form).

Cancellation and Refunds

30 EUR for administrative costs will be charged for cancellations received by **August 22, 2008**. Thereafter 80% of the registration fee will be invoiced; however the book of abstracts will be mailed. Only written cancellations will be accepted.

Lunch

Lunch will be available at the Kongresshaus Baden-Baden or at the restaurants and pubs locally. Participants are expected to pay for their own lunch.

GENERAL INFORMATION

Proceedings

Presentations of the conference can be submitted to Elsevier for publication in the Journal of Chromatography A (www.elsevier.com/locate/chroma). The selection of papers will follow Elsevier's review procedure.

Visa Formalities

Participants from a number of countries may need an entry visa for Germany. It is recommended to apply for a visa well in advance of the symposium. If a formal invitation letter is needed please contact the Conference Office at DECHEMA e.V. in good time.

Insurance

The organisers cannot accept responsibility for loss or damage to the private property of participants and accompanying persons which may occur either during or arising from the symposium. Participants should therefore take whatever steps they consider necessary regarding insurance.

Accommodation

Reservation of accommodation for participants to ISPPP 2008 in several hotels and prize categories can be made by

Baden-Baden Kur & Tourismus GmbH
Ms. Adelheid Ey
Solmsstrasse 1
76530 Baden-Baden

Phone: +49 (0) 7221 275 271
Fax: +49 (0) 7221 275 260
Email: Ey@Baden-Baden.com

For detailed information about accommodation please contact Ms. Ey under the address given above.

Due to the fact that Baden-Baden attracts many visitors we highly recommend to book your accommodation at your earliest convenience.

GENERAL INFORMATION

How to get to Kongresshaus Baden-Baden

By car:

Distances in km:

Stuttgart 110 km, Frankfurt am Main 170 km, Strasbourg/France 55 km

Parking space is available at the congress center basement garage (450 spaces), liable to charges.

By plane:

Baden Airport 15 km; for details please visit: www.airport.badenairpark.de

Furthermore Baden-Baden can be reached by other International Airports like Stuttgart, Frankfurt am Main, Strasbourg/France, Basel/Switzerland or Zurich/Switzerland

By train:

Journey time to ICE railway station Baden-Baden from: Freiburg 45 min., Frankfurt am Main 1:26 h, Stuttgart 1:07 h, Munich 3:37 h

Distance railway station Baden-Baden to the congress center: 10 min. by taxi (5 km, ca. 16 EUR) or bus no. 201 (2 EUR), station Augustaplatz

Information concerning traveling with Deutsche Bahn can be found under www.deutschebahn.de

GENERAL INFORMATION

