



# **CECE 2013**

## **10<sup>TH</sup> INTERNATIONAL INTERDISCIPLINARY MEETING ON BIOANALYSIS**

April 25-27, 2013

Pécs

HUNGARY

**PROGRAM and ABSTRACT BOOK**

## Welcome to this year's CECE

This symposium is the tenth in the series of the traditional symposia organized previously in Brno, Czech Republik, starting with only a few lectures at the Institute of Analytical Chemistry in 2004.

**This year the symposium is honoured by the opportunity to celebrate Professor Stellan Hjertén for his 85th birthday.**

The symposium visits, the third time, Pécs, which was the Cultural Capital of Europe in 2010.

Since its start it was the aim to create an interdisciplinary meeting for informal communication of scientists from different sides of bioanalytical sciences. The Symposium is now a serious member of the meetings of scientists, since it is continuously growing in research areas and number of participants, which gives great opportunity for discussions and presentations of new results in bioanalytical science.

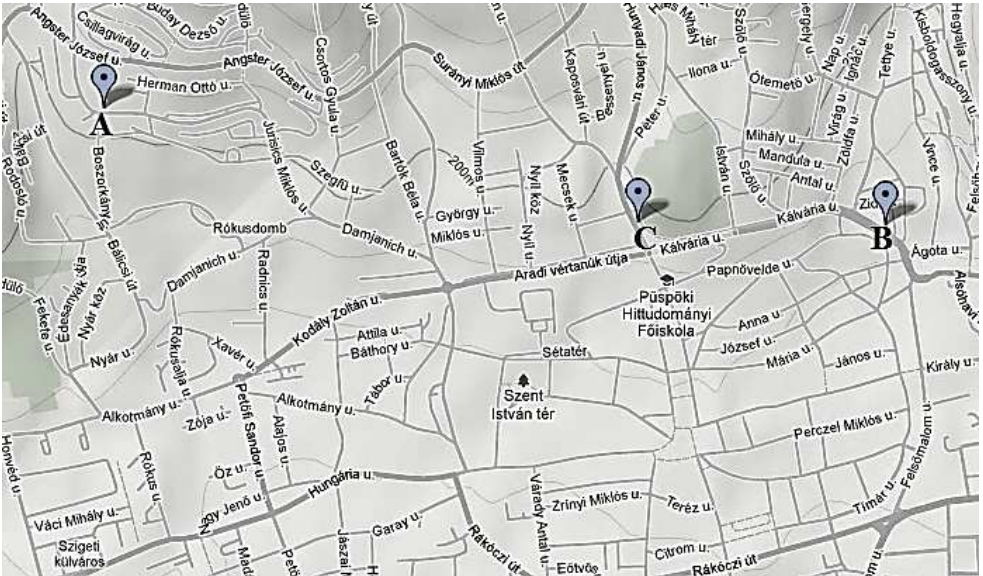
It is expected that this conference will further contribute to the exchange of ideas and will provide a forum for stimulating discussions.

The organizers want to thank you for your participation and hope that you will enjoy the scientific presentations, personal contacts and informal discussions.

<http://cece2013.pte.hu>

## Venue

The symposium will held at the  
**Regional Center of the Hungarian Academy of Sciences**  
7624 Pécs, Jurisics Miklós Street 44.



- A:** The location of the conference: Regional Center of the Hungarian Academy of Sciences
- B:** Kálvária-Rác Hotel
- C:** Bus stop: You can go from here with the bus number 32, and you have to travel to the "MTA székház" station (5<sup>th</sup> station from here).

## Accommodation

The participants are accommodated at the Kálvária-Rác Hotel (7625 Pécs, Kálvária u. 6.) and at the Regional Center of the Hungarian Academy of Sciences (7624 Pécs, Jurisics Miklós út 44).

## Program schedule

April 24, 2013 - Wednesday		Arrival
April 25, 2013 - Thursday	14:00	Doctoral forum for young researchers
April 26, 2013 - Friday	8:30	Opening Ceremony
	9:00	Lectures
	12:50	Lunch
	14:00	Poster-discussion
	15:00	Lectures
	18:00	Trip to Villánykövesd - Symposium dinner
April 27, 2013 - Saturday	9:00	Lectures
	14:20	Closing the symposium
	14:30	Lunch
	15:30	Sightseeing - Pécs
April 28, 2013		Departure

### Opening hours of the registration desk

April 25, 2013: 12:00-16:00

April 26, 2013: 8:00-12:00

### Social program

The symposium dinner will take place in **Blum Pince** at Villánykövesd on Friday.

On Saturday after the lectures you can participate in a Guided Tour in Pécs.

**April 25, Thursday**

**Forum of Doctoral School of Chemistry**

- 14:00–14:15 *Nándor Lambert\*, Attila Felinger*  
**DF-01** **Comparison of overall mass-transfer coefficients of Supercritical Fluid Chromatography and Liquid Chromatography**
- 14:15–14:20 Discussion
- 14:20–14:35 *Csaba Szmolnik\*, Wolfgang Lindner, Attila Felinger*  
**DF-02** **Investigation of the retention phenomena of Mefloquine enantiomers: effect of the eluent composition**
- 14:35–14:40 Discussion
- 14:40–14:55 *Annamária Sepsey\*, Ivett Bacskay, Attila Felinger*  
**DF-03** **Modeling Wide Pore size distributions in Size Exclusion Chromatography**
- 14:55–15:00 Discussion
- 15:00–15:15 *Anikó Kőnig-Péter\*, Tímea Pernyeszi*  
**DF-04** **Comparison of biosorption processes by bacterial and alga cells**
- 15:15–15:20 Discussion
- 15:20–15:35 *László Kiss, Zsuzsanna Óri\*, Lívía Nagy, Géza Nagy*  
**DF-05** **Modified, layer coated amperometric sensor for measuring in natural, porous matrices**
- 15:35–15:40 Discussion
- 15:40–15:55 **Coffee break**
- 15:55–16:10 *Péter Szabó\*, János Kovács, László Kocsis*  
**DF-06** **Preliminary results for the stable isotope composition of Late Pliocene environment in fossil *Stephanorhinus* sp. and *Mammut* sp.**
- 16:10–16:15 Discussion

- 16:15–16:30  
**DF-07** *Paweł Pomastowski\*, M. Sprynskyy, M. Gawin, W. Piekoszewski, B. Buszewski*  
**A study of zinc-binding to casein in lights of potential medical application**
- 16:30–16:35 Discussion
- 16:35–16:50  
**DF-08** *Li Xu\*, György Csekő, Tamás Kégl, Attila K. Horváth*  
**Kinetics and mechanism of the pentathionate-iodine reaction**
- 16:50–16:55 Discussion
- 16:55–17:10  
**DF-09** *Viktor Sándor\*, Dalma Scheffer, Ferenc Kilar, Béla Kocsis, Ágnes Dörnyei, Anikó Kilar*  
**Electrophoretic and mass spectrometric analysis of bacterial endotoxins**
- 17:10–17:15 Discussion

## April 26, Friday

- 8:30-9:00            **Opening Ceremony**  
**Greetings to Professor Stellan Hjertén**
- Session I**            *Chairman: Ferenc Kilár*  
9:00-9:25            *Stellan Hjertén\*, Liao, J. L., Wang, Y.*  
**L-01**                Uppsala University, Uppsala, Sweden  
**The artificial counterpart of the native protein antibody**  
9:25-9:35            Discussion
- 9:35-10:00          *Johan Roeraade\*, Patrik Ek and Johan Jacksén*  
**L-02**                KTH - Royal Institute of Technology, Stockholm, Sweden  
**Ideas, trials and progress in the analysis of low-abundant biomolecules**  
10:00-10:10        Discussion
- 10:10                **Coffee Break**
- Session II**          *Chairman: Ákos Végvári*  
10:30-10:55        *Gabriel Peltre\*, H. Senechal, P. Poncet*  
**L-03**                Hopital Trousseau, Biochemistry Lab, Paris France  
**Diversity of allergens and of the antibodies raised to them, a challenge for bioanalytical methods**  
10:55-11:05        Discussion
- 11:05-11:30        *František Foret\*, Petra Jusková, Pavel Podešva*  
**L-04**                Institute of Analytical Chemistry, AS CR, Brno, Czech Republic  
**Thin metal layers in bioanalysis**  
11:30-11:40        Discussion
- 11:40-12:05        *C. Ibáñez, A. Valdés, V. García-Cañas, C. Simó, Alejandro Cifuentes\**  
**L-05**                Laboratory of Foodomics, CIAL (CSIC), Madrid, Spain  
**A metabolomic study of the antiproliferative effect of carnolic acid against human colon cancer cells**  
12:05-12:15        Discussion
- 12:15-12:40        *Ferenc Kilár\*, Anikó Kilár, Viktor Sándor, Lilla Makszin, Ágnes Dörnyei, Béla Kocsis*  
**L-06**                University of Pécs, Pécs, Hungary  
**Lipopolysaccharidomics – A complex approach**  
12:40-12:50        Discussion

12:50	<b>Lunch</b>
14:00–15:00	<b>Poster discussion</b> <i>The authors are requested to be present at their posters during the Poster discussion.</i>
<b>Session III</b>	<b>Chairman:</b> Stellan Hjertén
15:00–15:25	<i>Ákos Végvári*</i>
<b>L-07</b>	Clinical Protein Science & Imaging, Dept. of Measurement Technology and Industrial Electrical Engineering, Lund University, Lund, Sweden
15:25–15:35	<b>Drug localization in tissue sections by MALDI-MS imaging</b> Discussion
15:35–16:00	<i>Melinda Rezeli*</i>
<b>L-08</b>	Clinical Protein Science & Imaging, Lund University, Lund, Sweden
16:00–16:10	<b>Quantitative proteomics applied to biobanking material</b> Discussion
16:10–16:35	<i>Mantas Stankevičius, Ieva Akuneca, Tomas Drevinskas, Vilma Kaškonienė, Rūta Mickienė, Kristina Bimbiraitė-Survilienė, Gražina Juodeikienė, Dalia Cizeikienė, Elena Bartkienė, Ona Ragažinskienė, Audrius Maruška*</i>
<b>L-09</b>	Department of biochemistry and biotechnologies, Vytautas Magnus University, Kaunas, Lithuania
16:35–16:45	<b>Increased biological value and safer food product development using solid state fermentation of plant material with bacteriocins-producing lactic acid bacteria: comparative phytochemical analysis of fermented and non-fermented samples</b> Discussion
16:45–17:10	<i>Kjell-Ove Eriksson*, E. Heldin, E. Hallgren, J. Shanagar, S. Grönlund, H. Tunes, M. Xavier, L. Vilela</i>
<b>L-10</b>	GE Healthcare Bio-Sciences AB, Uppsala, Sweden
17:10–17:20	<b>Development of intermediate purification step in insulin process using a high throughput approach</b> Discussion
18:00	<b>Trip to Villánykövesd - Symposium Dinner</b>



## April 27, Saturday

- Session IV**  
9:00–9:25  
**L-11**  
9:25–9:35  
9:35–10:00  
**L-12**  
10:00–10:10  
11:10–11:35  
**L-13**  
10:35–10:45  
10:45–11:05  
**L-14**  
11:05–11:15  
11:15–11:30  
**Coffee Break**  
**Session V**  
11:30–11:55  
**L-15**  
11:55–12:05
- Chairman:* Attila Felinger  
*Karel Kleparnik\**  
Institute of Analytical Chemistry - Academy of Sciences of  
Czech Republic, Brno, Czech Republic  
**Single cell analysis: State of the art**  
Discussion
- Marianthi Kafentzi, Yasmina Mekmouche, Eloïne Npetgat,  
Viviane Robert, Pierre Rousselot Pailley, Ludovic Schneider,  
Jalila Simaan, Thierry Tron\**  
Aix-Marseille Université, Marseille, France  
**Engineering laccases: in search for new biocatalysts**  
Discussion
- Róbert Berkecz, Zoltán Szabó, Zoltán Kele, Tamás Janáky\**  
University of Szeged, Szeged, Hungary  
**Identification peptides against Alzheimer's disease: a  
proteomic approach**  
Discussion
- Szőkefalvi-Nagy\*, Zoltán, I. Kovács*  
Institute for Particle and Nuclear Physics, MTA Wigner  
Research Centre for Physics, Budapest, Hungary  
**Elemental analysis of protein by ion beam bombardment**  
Discussion
- Chairman:* František Foret  
*Attila Felinger\**  
Department of Analytical and Environmental Chemistry,  
University of Pécs, Pécs, Hungary  
**Molecular approaches for the investigation of mass transfer  
phenomena in chromatography**  
Discussion

- 12:05–12:30  
**L-16** *Alberto Cavazzini\**, *Nicola Marchetti*, *Luisa Pasti*, *Francesco Gasparrini*  
University of Ferrara, Department of Chemistry and  
Pharmaceutical Sciences, Ferrara, Italy  
**New insights into the retention mechanisms on straight-  
chain perfluorinated stationary phase for HPLC**
- 12:30–12:40 Discussion
- 12:40–13:05  
**L-17** *Andrea Nagy*, *Attila Gáspár\**  
Department of Inorganic and Analytical Chemistry, University  
of Debrecen, Debrecen, Hungary  
**Designing and preparation of multiple chromatographic  
packings in microchip**
- 13:05–13:15 Discussion
- 13:15–13:40  
**L-18** *Ana Fernandez-la-Villa\**, *Vanesa Bertrand-Serrador*, *Diego F. Pozo-Ayuso*, *Mario Castaño-Alvarez*  
Severo Ochoa Building, Asturias, Spain  
**Fast and reliable urine analysis using a portable platform  
based on microfluidic electrophoresis chip with  
electrochemical detection**
- 13:40–13:50 Discussion
- 13:50–14:10  
**L-19** *Alexander Jönsson*, *Loreta Bllaci*, *Sven Kjellström*, *Sandra Lemos*, *Lena Eliasson*, *James R. Friend*, *Leslie Y. Yeo*, *Staffan Nilsson\**  
Pure & Applied Biochemistry LTH, Lund University, Sweden  
**Open chip SAW-MALDI MS sample handling**
- 14:10–14:20 Discussion
- 14:20 **Closing the Symposium**
- 14:30 **Lunch**
- 15:30 **Guided Tour in Pécs**

## Posters

- P-01** *Ivett Bacskay\*, Annamária Sepsey, Attila Felinger*  
**Experimental validation of the molecular theory of size-exclusion chromatography with wide pore size distribution**
- P-02** *Endre Bartó\*, Ibolya Prauda, Ferenc Kilár, Attila Felinger, Ibolya Kiss*  
**Application of cavitand derivatives on high performance liquid chromatography**
- P-03** *Andrea Nagy\*, Attila Gáspár*  
**Fabrication of microchips with multichannel systems**
- P-04** *Melinda András\*, Brigitta Törzsök, Álmos Klekner, Attila Gáspár*  
**Determination of temozolomide in serum and brain tumor with micellar electrokinetic capillary chromatography**
- P-05** *V. Juhász, E. Beéry, Z. Nagy, A. Bui, É. Molnár\*, A. Csorba, Z. Timár, J.K. Zolnerciks, R. Magnan, Sz. Czvik, M. Jani, P. Krajcsi*  
**Determination of the OAT1, OAT3 and BCRP substrate chlorothiazide by LC-MS/MS**
- P-06** *Éva Pósfai\*, Imelda Marton, Balázs Kotosz, Márta Széll, Zsuzsanna László, Zita Borbényi*  
**Identification of MPL-W515L mutation in thrombopoietin receptor - could be „MPL-W515L mutation an additional vascular risk factor” in woman diagnosed with essential thrombocythemia**
- P-07** *Viktor Farkas\*, Ferenc Kilár, Borbála Boros, Attila Felinger, Tímea Pernyeszi*  
**Influence of culture parameters on phenol biosorption by lyophilized mycelial pellets of phanerochaete chrysosporium**
- P-08** *Lívía Nagy, Daniel Filotás\*, Melinda Boros, Erika Pintér, Géza Nagy*  
**Development and investigation of subcutaneous hydrogen sulfide (H<sub>2</sub>S) absorption using micro biosensor**

- P-09** *Krisztina Honfi\*, Ferenc Kilár, Tímea Pernyeszi*  
**Biodegradation and adsorption properties of candida tropicalis cells in aqueous solutions**
- P-10** *István Ilisz\*, Dénes Zádori, Péter Klivényi, István Szatmári, Ferenc Fülöp, József Toldi, László Vécsei, Antal Péter*  
**Development and application of LCMS and LC-FLD methods for the analysis of kynurenic acid and a novel kynurenic acid analog in mouse serum**
- P-11** *Tamás Jakó\*, Zsolt Wagner, Tamás Tábi, Gergely Zachar, András Csillag, Éva Szökő*  
**Analyzing glutamate and aspartate enantiomers in brain tissue samples by CE-LIF**
- P-12** *Zoltán Kele\*, Györgyi Váradi, Gábor Tóth*  
**Strategy for identification of disulfide bridges in a cysteine rich protein**
- P-13** *Tamás Kiss\*, Lilla Makszin, Ágnes Blaskó, Victor U. Weiss, Ferenc Kilár*  
**Zone electrophoresis on microchip for biomolecules**
- P-14** *Ibolya Kiss\*, Nándor Lambert, Ferenc Kilár, Attila Felinger*  
**Retention and mass-transfer properties of insulin on superficially porous and totally porous reversed phases in HPLC**
- P-15** *M. Stankevičius\*, A. Maruška, T. Drevinskas, M. Kazlauskas, N.Tiso, J.Mikašauskaitė, I.Akuneca, V.Bartkuvienė, O.Kornyšova, K.Barčauskaitė, V.Snieškienė, A.Stankevičienė, O.Ragažinskienė, D.Levišauskas*  
**Screening of used wooden railway sleepers chemical composition by means of gas chromatography – mass spectrometry**
- P-16** *Krisztina Németh\*, Celesztina Nagy-Domonkos, Jayapal Reddy Mallareddy, Virág Sarnyaia, Géza Tóth, Julianna Szemán, László Jicsinszky, Lajos Szenté, Antal Péter and Júlia Visy*  
**Stereoselective analysis of amino acids and endomorphin analogue tetrapeptides by capillary electrophoresis**

- P-17** *Paweł Pomastowski\*, B. Buszewski, K. Hryniewicz, M. Gawin, W. Piekoszewski*  
**Determination of selected bacterial proteins from 2-D SDS-PAGE by using MALDI-TOF-MS**
- P-18** *Emőke Szerdahelyi\*, András Nagy, Eszter Korompai, Éva Gelencsér*  
**Determination of meat originated imidazole dipeptides by CZE**
- P-19** *Tea Perkov\*, Jasmina Rokov Plavec, Lilla Makszin, Ferenc Kilár*  
**Microchip capillary electrophoresis in expression profiling of circulating tumor cells from cancer patients**
- P-20** *Ieva Akuneca, Mantas Stankevičius, Tomas Drevinskas\*, Audrius Maruška, Ona Ragažinskienė, Vitalis Briedis, Kristina Ramanauskienė, Ada Stelmakienė, Rasa Ugenskienė*  
**Phytochemical analysis and classification according to growth sites in Lithuania of *Chamerion angustifolium* L. Using chromatographic and related techniques**
- P-21** *Zoltán Pápai, Ágnes Bóna, Gábor Maász, János Schmidt, Éva Jámbor, Róbert Ohmacht, László Márk\**  
**Investigation of trans-resveratrol and stilbene derivative TDPA in hungarian wines using HPLC-MS**
- P-22** *Zoltán Pápai*  
**LC-MS analysis of dopamine metabolites in brain**
- P-23** *Pavel Podesva; Frantisek Foret*  
**Thin metal films in resistivity-based chemical sensing**