

## ISPPP NEWLETTER vol. 2, 2007

ISPPP IN ITS 27<sup>TH</sup> YEAR See [www.isppp.org](http://www.isppp.org) for further details

The ISPPP (International Symposium on the separation of Proteins, Peptides and Polynucleotides) conference will celebrate it's 27<sup>th</sup> meeting in Orlando, Florida October 21-24, 2007. Further details of the conference are given on the conference web page at [www.isppp.org](http://www.isppp.org) – **The program is ready for your viewing on the ISPPP web site.**

This conference began in 1980. The intention of the founders was to discuss and promote bioanalytical separation science that was leading-edge in nature. This subject matter has continued with emphasis on separations used in biotechnology and biomedical and bioanalytical chemistry. In recent years mass spectrometry along with other detection methodologies has been included in the program. ISPPP focuses on subjects such as bioprocessing, biomarkers and other separations methodology where bioseparation science and fundamental science meet.

ISPPP has taken place in the United States at a number of locations such as Philadelphia, Washington D. C., Boston, Baltimore and several locations in Florida among others. On odd-numbered years the conference takes place in the United States. On even-numbered years the conference is held in Europe.

Please join us for ISPPP 2007 in Orlando, Florida. Flights are inexpensive and there is still time to register. We have been told the weather will be spectacular!

Best Regards,

Mark Schure and Joe Destefano, Co-Chairmen ISPPP 2007

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### **Professor Klaus Unger to Receive the ISPPP 2007 Lifetime Achievement Award**



It is with great pleasure that the ISPPP 2007 committee honors Professor Klaus Unger with the ISPPP 2007 Lifetime Achievement award. Professor Unger has had a long and distinguished career and continues to influence and publish leading edge research in the separation of biomolecules. Some of the honors with which Professor Unger has been bestowed demonstrate his extensive commitment and presence in bioseparation science:

- Pregl Medal of the Osterreichische Gesellschaft fur Analytische Chemie Vienna (1991)

The Pregl medal is awarded at irregular intervals to outstanding researchers working in the field of analytical chemistry. The medal is named after the Austrian Nobel Prize Laureate Fritz Pregl, who was professor of chemistry in Graz. Pregl, whose work generated enormous progress in metabolic, hormone and enzyme research, received the Nobel Prize in 1923 for his work on the microanalysis of organic substances.

Some other awards which recognize Professor Unger's contributions include:

- A. J. P. Martin award in Chromatography of the Chromatographic Society, London (1983)
- Humboldt Research Award, Riksbankens Jubileumsfond, Stockholm (1983)
- American Chemical Society award in chromatography (1985)
- Distinguished lecturer in the Frontiers of Chemical Research Program at the Texas A&M, College Station, Nov. 1995
- Honorary Doctorate: Kaunas University of Technology, Kaunas, Lithuania, October 1999.
- Japan Society for the Promotion of Science Fellowship, March 2000.
- Honorary Doctorate: University of Ioannina, Ioannina, Greece 2002.
- F. C. Donders chair at the Faculty of Pharmaceutical Sciences, Utrecht University, Utrecht, The Netherlands, May 2004.

Professor Unger has published over 400 papers in peer-reviewed journals, and has received over 55 patents on chromatographic materials and on inorganic catalysis. He has authored or co-authored 15 monographs and has been co-editor of 17 symposium proceedings. Professor Unger was chairman and organizer of HPLC 1993 in Hamburg, Germany. He has mentored 125 (!) PhD students in his long and distinguished career as Professor of Chemistry

His interests include the tailored synthesis of porous and nonporous silicas; nanoparticle technology, chemical surface functionalization, molecular imprinting of polymers, analytical and preparative HPLC, high-throughput separations, and multidimensional chromatography of proteins.

Please join us at ISPPP 2007 for this memorable event.

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### **ISPPP Golf**

The traditional ISPPP Golf Outing is planned for Sunday, October 21, 2007 in Orlando, Florida. The tee times begin early - we will leave the hotel at around 7:30 a.m. and the earliest you could expect to return to the conference venue would be 2:00 pm. The golf event will conflict with the conference short courses that are also held on this day, so choices must be made. If you are interested in participating in this golf event, you should contact Joe DeStefano at [joedestefano@advanced-materials-tech.com](mailto:joedestefano@advanced-materials-tech.com)

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## **Column Technology: UPLC, Pellicular Packings, Monoliths**

There have been few times in the history of HPLC that have seen the level of activity in packing materials that has taken place in the last few years. These advances in new column technologies with respect to their applications in bioanalysis will be explored at ISPPP 2007 as there are many talks in this area. Hear the experts discuss new advances in these columns technologies for biomolecules and how they compare with other technologies. Discussions will include both analytical and preparative applications.

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## **Biotech Process Technology**

Antibody-based systems form the basis for a number of separation strategies and these approaches are covered at ISPPP in a number of talks. We expect to see more separation-based technology evolving from antibody-based separation systems. Don't miss these talks!

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## **Biomarkers**

The search for protein-based biomarkers continues. Hear the latest developments in these areas where separation science has the lead because of the ability to cut through the complexity barrier and look for species present that may indicate a disease state. A significant number of researchers incorporate mass spectrometry into the biomarker search and discover strategy; a number of these developments are highlighted at ISPPP 2007 and these developments are focused on making mass spectrometry more accessible to separation scientists.

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## **Short courses at ISPPP 2007**

There are 4 great short courses being featured this year in the ISPPP 2007 conference. Please see their complete description at the [www.isppp.org](http://www.isppp.org) website.

### **Short Course # 1: [Monolithic Columns: How to Make and Use Them](#)**

**9:00 AM through Noon, October 21, 2007**

**Presented by Prof. Frantisek Svec, University of California, Berkeley, CA, USA**

### **Short Course # 2: [Mass Spectrometry in Glycomics and Glycoproteomics](#)**

**9:00 AM through noon, October 21, 2007**

**Presented by Prof. Ron Orlando, The University of Georgia, Athens, GA, USA**

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**Short Course # 3: Preparative-scale Separation of Biomolecules**

**1:30 through 4:30 PM, October 21, 2007.**

**Presented by Prof. Alois Jungbauer, University of Natural Resources and Applied Life Sciences, Vienna, Austria**

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**Short Course # 4: Particle Packed Columns and Monolithic Columns in HPLC: A Comparison and Critical Appraisal**

**1:30 through 4:30 PM, October 21, 2007.**

**Presented by Prof. Klaus K. Unger and Romas Skudas, Department of Inorganic Chemistry and Analytical Chemistry, Duesbergweg 10 – 14, Johannes Gutenberg-University, 55099 Mainz, Germany**

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**Some of the Featured Talks for ISPPP 2007**

- R. Bischoff *et al* Biomarker Discovery in Body Fluids by LC-MS
- B. Karger *et al* Ultratrace LC/MS Analysis Using 10 µm i.d. PLOT Columns
- F. Svec: Monolithic columns for bioseparations: Present state-of-the-art and future trends
- U. Neue *et al* Theoretical and Practical Considerations in the Application of UPLC to the Separation of Peptides
- M. Gilar *et al* UPLC Separation of Oligonucleotides: Method Development.
- S. Cramer *et al* Investigation of chemical selective displacers using robotic high throughput screening, SPR, NMR and MD simulations.
- R. Orlando *et al* Novel Separation and Quantification Strategies for the Characterization of Glycopeptides from Complex Biological Mixtures
- D. Hunt *et al* Innovative Mass Spectrometry Technology for the Study of Cell Signalling
- D. Lubman *et al* 2-D Liquid Separations, Microarrays and Microproteomics for Mapping Changes in Disease States
- A. Jungbauer *et al* Separation of viruses by monolithic columns
- J. Kirkland *et al* High Speed Separation of Peptides Using Columns of “Fused-Core” Particles
- G. Guiochon *et al* Comparison of the Performance of some Modern HPLC Columns in the Gradient Elution of a few Protein Digests
- A. M. Lenhoff *et al* Towards Prediction of the Dynamic Binding Capacity of Proteins

A. Butté *et al* Macroporous Polymeric Monoliths by Reactive Gelation for Protein Purification

Y..Lyubarskaya *et al* Process Analytical Technology: Two-Dimensional Chromatography on-Line with Mass Spectrometry (2D-LC/MS) for in-Process Analysis of a Recombinant Protein Concentration and Glycosylation

A Schratenholz *et al* Analytical and biological implications of dynamics of protein abundances, molecular isoforms and localizations

M. Novotny *et al* New Glycomic and Glycoproteomic Tools and Methods for a Better Understanding of Human Diseases

and many more!

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