

Advances in Bioanalytical Chemistry and the Changing Climate for Academic Engagement with Commercial Entities

A symposium honoring contributions of Prof. Peter T. Kissinger and celebrating his 60th year. Purdue University, West Lafayette, Indiana October 6 - 7, 2005



Pete Kissinger became engaged with modern liquid chromatography in the early 1970s following Ph.D. work in electroanalytical chemistry with Prof. Charles N. Reilley. He quickly saw the advantages of combining the two methodologies for applications in neuroscience stimulated by Prof. Ralph N. Adams. Commercial possibilities were immediately clear. Biomedical scientists had measurements to make and they did not wish to build instruments; they wanted to buy them. After an attempt to transfer liquid chromatography/electrochemistry (LCEC) to Waters Associates and Princeton Applied Research (PAR), it became clear that these existing companies were busy enough. One understood chromatography but not electrochemistry; the other understood electrochemistry but not chromatography; and neither had the required passion for this outside idea.

Pete remained convinced and followed the "do-it-yourself" approach. Bioanalytical Systems, Inc. (BASi) was thus born in 1974, at a time when academic engagement in such activities was discouraged rather than stimulated as it is today. BASi evolved into a life science research company with five laboratory locations and a team that will soon pass 400 talented people. Purdue is using the excuse of Pete's 60th year to organize this symposium, aimed at celebrating his contributions to the university, and to analytical chemistry and biomedical research and development.

The symposium features scientific talks that recount advances in bioanalytical chemistry, unmet needs in bioanalytical chemistry (particularly as they relate to the pharmaceutical industry) and best practices at the academic/commercial interface, as well as a roundtable discussion. There will be a good mix of industrial and academic scientists to discuss science at their interface. For more information, contact Prof. Paul Shepson, Dept. of Chemistry, Purdue University, pshepson@purdue.edu; 765-494-7441

New to BASi Evansville

Dr. David Hopper, D.V.M., Ph.D., D.A.B.T., has joined the BASi Labs in Evansville, Indiana as Director of Toxicology. He brings an extensive background in, and knowledge of, contract research and regulatory document preparation and submission. His areas of expertise include: Study Director for many non-clinical studies with developmental drugs and

medical devices, managing projects for non-clinical small molecule and biologic drug programs, guiding investigational drug projects to IND and NDA submissions, and managing Clinical Pathology, Safety/General Pharmacology and Toxicology laboratories.

Dr. Hopper received both his Ph.D. in Toxicology / Pathology and his D.V.M. from Kansas State University, and a B.S. in Zoology from the University of Wyoming. He is a Diplomate of the American Board of Toxicology, and a member of the Society of Toxicology, the American Veterinary Medical Association and the American Association for the Advancement of Science.

5th International Symposium on Microdialysis in Drug Research and Development

June 16-17, 2006, Leiden, The Netherlands

This International Symposium is being held to discuss the latest developments in microdialysis in the field of drug research and development. The meeting will focus on the unique role of quantitative microdialysis in monitoring extracellular pharmacokinetics and biomarkers related to pharmacodynamics and/or disease progression, together with considerations and progress from the technical perspectives in microdialysis experimentation and sample analysis. The symposium will be preceded by a one-day course on Basic and Advanced Aspects of *in vivo* Microdialysis (June 15).

Session Themes

1. Methodological Advances and Considerations
2. Mechanisms and Kinetics of Biophase Equilibration
3. Pharmacokinetic-Pharmacodynamic Relationships
4. Monitoring Biomarkers in Disease Conditions

Scientific Committee

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For more information visit: www.lacdr.nl

Farewell, Old Friend



We are sad to report that longtime BASi Board of Directors member W. Leigh Thompson, Ph.D. M.D. ScD(hc) FACP FCCM, died of idiopathic pulmonary interstitial fibrosis on Friday, February 11, 2005.

A native of Charleston, South Carolina, Leigh was born June 25, 1938 to Wilmer L. Thompson EE JD and Mrs. Mary Bissell

McIver Thompson. He attended the College of Charleston (B.S. Biology 1958, Honor Alumnus 2004), the Medical University of South Carolina (M.S. 1960, Ph.D. Pharmacology 1963, ScD honorary 1995, and Distinguished Alumnus 1999), and the Johns Hopkins University (M.D. 1965 [Alpha Omega Alpha and Phi Beta Kappa], Osler Medical Residency, the Society of Scholars 2003 and Medical Distinguished Alumnus 2003). In December 2003 FDA Commissioner McClelland awarded him the rare Special Citation citing: *"His pioneering initiatives in critical care, pharmaceutical development innovations, information technology management and collaborations with regulators have been remarkable and left a sustaining positive impact on the industry, patients and the many professionals whom he has mentored."*

At MUSC Leigh invented hetastarch, the most widely used substitute for blood plasma. He served at the NIH, the Johns Hopkins Hospital, and Case Western Reserve University Hospitals at each of which he built and directed their first Medical Intensive Care Unit. He was President and an Honorary Life Member of the Society of Critical Care Medicine and co-editor of the first two textbooks in this field. In 1982 when he was Professor of Medicine and had edited 10 medical textbooks and authored 300 scientific papers, he joined Eli Lilly and Company from which he retired in 1994 as Chief Scientific Officer. In recent years Leigh lectured and consulted worldwide on drug development and research management. He was Chairman of the Board of Inspire Pharmaceuticals and had also been a member of the boards of DepoMed, Diabetogen, Guilford Pharmaceuticals, LaJolla Pharmaceuticals, Medarex, and Sontra.

Leigh met Maurice Horne at the College of Charleston in 1954 and they married at Grace Episcopal Church on March 29, 1957. They have one daughter, Mary Linton Bounetheau Thompson Peters, who resides in Cambridge, MA. Maurice and Leigh together have published murder mysteries such as *Murder at Spoleto* and *CN (cyanide)*. He was a member of the Society of Colonial Wars, the St. Andrews Society, the Carolina Yacht Club, the Huguenot Society of South Carolina, and numerous academic societies.

A memorial service was held at Grace Episcopal Church on February 17. In lieu of flowers the family suggests donations be made to: Osler Foundation, Johns Hopkins Medical University, Baltimore, MD 21287.

In Memoriam, Tuzhi Peng 1946 - 2004



Tuzhi Peng, 58, died of cancer on December 7, 2004, in Hangzhou, Zhejiang Province, China. At the time of his death, Peng was Deputy Director of Analytical Center and Professor of Chemistry at Zhejiang University, China, where his work focused on developing novel methods in the fields of electroanalysis, analytical chemistry

and bioelectro-analysis.

Professor Peng graduated from Nanjing University, China in 1968 and earned his Masters Degree from Hangzhou University, China in 1980. (Hangzhou University later became the part of Zhejiang University.) Professor Peng also studied at New Mexico State University and Los Alamos National Laboratory, USA as a visiting scholar (1985-1987) and later at the University of California-Berkley (1998-1999). Professor Peng worked as an assistant lecturer, associate professor and then professor at Hangzhou University, which later also became Zhejiang University, from 1980. There he was Dean of the College of Chemistry and then Director of the Analytical Center in Hangzhou University. After the four universities merged to become the Zhejiang University, Professor Peng was chosen to be Executive Deputy Director of the Research Center of Analytical Chemistry. He received more than ten awards from the Chinese National Scientific Foundation, Chinese Scientific and Technology Minister, and Zhejiang Province in recognition of his research achievements in electrochemistry and analytical chemistry. He led his group to finish the "Fast Measurement of DNA series and their unusual structures by Electrochemical sensors" project. He held several patents in new devices for electrolysis and in new technology for electrolysis of tin protosulfite.

Professor Peng was author and co-author of five books and more than 150 other publications. He also was editor-in-chief of *Electrochemistry*, one of four books of the *Analytical Handbook*, most often used by analytical chemists in China. He was one of the editors of the *Chinese Journal of Analytical Chemistry* and of *The Journal of Metal Analysis*. Professor Peng influenced countless students through his teaching, and many of them are making significant contributions to scientific research in China and other countries.

Professor Peng not only was prominent in education and scientific research, he also possessed leadership and administrative abilities. He was elected to be Vice Chairman of Zhejiang Scientific and Technological Association, to be a member of the Scientific Council of the State Key Laboratory of Electrochemistry, Chairman of the Analytical and Measurement Society of Zhejiang Province, and Chairman of the Electroanalytical Chemistry Society of Zhejiang Province, member of the Standing Committee of Zhejiang University, Vice Chairman of Zhejiang Minority Intelligentsia Association, and Vice Chairman of the Chinese People's Political Consultative Conference of Zhejiang Province. Professor Peng was influential in developing the economy and protecting intellectual properties in Zhejiang Province. He was very active and collegial in exchanging scientific studies with domestic and foreign scientists and invited many noted scientists to visit Zhejiang University. His friendships extended across China and around the world.

IBM and Indigo BioSystems Create Research Repository for Data Mining

IBM and Indigo BioSystems, Inc. recently announced a collaboration to host a global warehouse capable of storing raw human proteomics data. The warehouse, based on Indigo BioSystems' True Blue Archive technology, is specifically designed to reliably capture and store life sciences research data from a wide variety of instruments. The result is a public database of information designed to help global researchers reduce time spent and costs by re-mining existing data to develop new conclusions. This work is part of a worldwide community effort.

According to Indigo chief scientific officer, Randall K. Julian, Ph.D., this repository will test one way to meet an important requirement for the Human Proteome Project: accessibility of raw data to enable global collaborative analysis. The final implementation of such a repository will make raw proteomics data available to the international research community for the first time.

The joint effort between IBM and Indigo BioSystems, Inc. to test a model for global implementation of a proteome database was constructed using open standards developed by the Human Proteome Organization - Proteomics Standards Initiative (HUPO-PSI). The Archive will house instrument data from proprietary formats, which has been migrated into new open standards, like the HUPO-PSI mzData standard.

The companies believe that open standards are vitally important to continued progress in this field, and this project uses open standards from HUPO-PSI to represent the proteomics raw instrument data, along with Web services to access the data. Web services can then be integrated into workflows using Service Orientated Architectures and broad industry standards such as BPEL.

Indigo BioSystems, Inc. first began to develop the True Blue archive to meet the data management challenges of a large pharma Drug Disposition group. The archive was then applied to proteomics, which seeks to identify and to characterize all the proteins synthesized in biological systems. Based on this information, researchers can then try to understand how individual proteins or protein groups function within an organism. Experimenters hope that access to raw data will accelerate proteomics research and speed the understanding of the human proteome and its relationship to disease processes.

Utilizing the successful IBM Linux on POWER™ hardware, the DB2® database, and IBM® WebSphere® Application Server, the repository makes use of Indigo's archival storage technology to help ensure data integrity during storage and retrieval of data.

KEEPING PACE WITH YOUR RESEARCH



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Don't waste another drop of blood. Take blood samples from mice automatically using your Culex® automated pharmacology system.

- It's a smaller catheter for easy vessel cannulation surgeries in mice by your in-house surgeons.
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- Same reputable materials as the popular BASi rat catheters.
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- No waste of precious mouse blood during sampling regimen.

Want someone else to do your surgeries? Ask your lab animal supplier for Culex-ready animals. They use BASi catheters!

Waste Bottle Bracket

Securely attaches the waste container to your Culex cart. This new accessory is now being shipped with all Culex units. It is also available for purchase by users who bought their Culex systems before the bracket was standard.

A waste line descends from each Culex fraction collector. If you are not using the Culex waste containment system to capture blood or condensates, you must flush the waste material out of the fraction collector at the end of every study. That waste ends up in whatever container you place under the cart, and it may end up on the floor if you move the cart before removing the container.

This new bracket provides a way to securely attach the waste container to the Culex cart, so the waste container moves along with the cart. The bracket will hold up to a 1-gallon container, such as a milk jug, but is adjustable for smaller containers, too, and it fits on all Culex carts. Place one on each

side of the cart to serve the fraction collectors on both sides.

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- Manage your PK crossover design study using the same rat to eliminate inter-animal variability.
- Utilize automated IV dosing, oral dosing, and blood sampling, all for the same study!