Highlights of 2014

An exciting development this year was the investiture of Richard van Breemen as the Matthias C. Lu Collegiate Professor of Pharmacy. Many of you will remember classes with Medicinal Chemistry Professor Matt Lu, for whom this professorship is named. Our group published 17 papers this year, which is the most since 2005, and presented 25 papers/abstracts at meetings. Other highlights include adding two new postdoctoral fellows, graduate student awards, and visiting former lab member Jinbo Fang at his university in Wuhan China. Read on for details of these events and more.

Investiture as the Matthias C. Lu Collegiate Professor of Pharmacy. Front row: Lingyi Huang, Guannan Li, Richard van Breemen, Tristesse Burton, and Elisabeth Walker; Back row: Mike Rush, Brian Wright, Daniel Nosek, and Zane Hauck.

Investiture as the Matthias C. Lu Professor

On August 17th, 2014, Richard van Breemen was invested as the first Matthias C. Lu Professor of Pharmacy. Matt Lu was a member of the faculty search committee who recruited Richard to UIC in 1993. A member of the Medicinal Chemistry faculty from 1973 until 2010, Matt Lu received eight Pharmacy and UIC teaching awards. Matt Lu, his wife Mei and son Dan, are pictured (right) with Richard van Breemen at the investiture party held at the Pharmacognosy Field Station. Current lab members Mike Rush and Zane Hauk brewed beer for the event.
New Postdoctoral Fellows

Dr. Elisabeth Walker joined the lab as a postdoctoral trainee in January 2014. She came to Chicago from Baltimore where she received her Ph.D. in Pharmacology at the Johns Hopkins University with Namandje Bumpus and the late Robert J. Cotter. Her dissertation concerned mass spectrometric studies of histone post translational modifications and cytochromes P450. Before graduate school, Elisabeth received her BS degree from Wellesley in Neuroscience and Chemistry. Elisabeth is developing MS-based screening assays that will enhance our original pulsed ultrafiltration natural product ligand discovery up to 100-fold.

Dr. Alyssa Sprouse joined the UIC/NIH Botanical Center and our laboratory in September 2014. She received her Ph.D. in Pharmacology and Toxicology from the Indiana University School of Medicine, where she worked with Brittany-Shea Herbert. During her dissertation research, Alyssa investigated how resveratrol enhances the chemotherapeutic action of paclitaxel in resistant breast cancer. Alyssa received her BS in biology from the University of Dayton. At UIC, she is investigating drug-botanical (natural product) interactions.

Investiture Celebration

The College of Pharmacy held a formal investiture ceremony for the Matthias C. Lu Professorship. Richard van Breemen’s family attended including Denise (on faculty at the University of Illinois College of Medicine as well as the Hines VA), and their children Bridget (who had just graduated from Oberlin College as a computer science major), Evan (about to start his junior year at Bradley University, and Megan (about to begin her freshman year at Oberlin College). Also attending were Matt Lu and his wife, Mei, their son Dan Lu (now working in the Medicinal Chemistry and Pharmacognosy office), and their daughter Kathleen and her family.

The entire lab group, the van Breemen and Liu families, UIC faculty and staff, and some of our lab alumni from the Chicago area also gathered for a picnic at the Pharmacognosy Field Station in Downers Grove.

To enrich the festivities, current lab graduate students Mike Rush (Medicinal Chemistry; above) and Zane Hauk (Pharmacognosy; pictured below) brewed three types of beer and brought them to the investiture reception as well as the picnic. Mike and Zane prepared the following labels for their brews. We cannot thank Mike and Zane enough for helping to make this event spectacular.

Although we did not know it at the time, our lab party was to be the only event held at the Field Station in 2014. Due to problems with the grounds keeping, the annual Department picnic (Pharmapalooza) was rescheduled at the Molecular Biology Research Building on campus. We hope to return to the Field Station next summer.
Grants in 2014

1. 2014 marked the 15th anniversary of our UIC/NIH Center for Botanical Dietary Supplements Research and our focus remains on supplements used by menopausal women as alternatives to conventional hormone therapy. Guido Pauli leads our pharmacognosy project, Judy Bolton leads the bioassay project, and Richard van Breemen leads the drug-botanical interaction project as well as the entire Center. We worked diligently on a competitive renewal grant application (P50-type) to the NIH Office of Dietary Supplements and the NIH National Center for Complementary and Integrative Health to fund the Center through 2020. We look forward to good news later in the New Year.

2. Just ending its second year, our NIH training grant (T32AT007533) HQWLWOHG³ Research training in natural product complements and alternative medicine, remains the only training grant in the College of Pharmacy. It is currently funding the stipends of 6 graduate students and 3 postdoctoral fellows (two in our lab) in natural products complementary and alternative medicine.

3. We are also fortunate to be supported by NIH grant R01CA79870. Now in its second year, this grant is supporting our efforts to enhance the throughput of pulsed ultrafiltration mass spectrometry over 100-fold for faster identification of active natural products. This grant is also funding the validation of fast UHPLC-MS/MS assays for the standardization of botanical dietary supplements.

Awards

1. At the 16th Annual College of Pharmacy Graduate Student Awards (part of the 5th Research Day) last spring, Pharmacognosy graduate student Andrew Newsome received an Edward Benes Scholarship. Andrew has been working on the natural blue pigment project with Cathy Culver of PepsiCo.

2. At the same Awards ceremony, Medicinal Chemistry graduate students Guannan Li and Yongchao Li received W. E. van Doren Scholarships. Guannan works on drug-botanical interactions and Yongchao studies prostaglandins and inflammation.

Meetings and Seminars

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At the 62nd ASMS Conference in Baltimore, MD, we had 5 presentations. Our group made another 5 presentations at the 55th Annual Meeting of the American Pharmacognosy Society in Oxford, MS, and 3 presentations at the MSACL conference in San Diego.

Formerly a visiting scholar to our laboratory and now Associate Professor of the Tongji School of Pharmacy, Huazhong University of Science and Technology in Wuhan, China, Prof. Jinbo Fang hosted Prof. van Breemen’s visit to Wuhan in November 2014.

Prof. van Breemen presented a seminar and received a Visiting Professor appointment. A gracious host, Prof. Fang showed Prof. van Breemen some of the magnificent sights in and around Wuhan. We plan to continue collaborating with Prof. Fang and his colleagues at the Tongji School of Pharmacy.
2014 Publications

Since 1999, our lab has published between 10 and 20 papers per year. Last year, we published 17 peer-reviewed papers, which exceeded our 2013 total of 16 and 2012 total of 15 papers.


