



Selected CMD5 members

CMD⁵

The Department has initiated its Center for Molecular Diversity in Drug Design, Discovery, and Development (CMD⁵). The Center was created to advance revolutionary efforts at drug design and discovery. As the **Dr. Mike Zaworotko**, Professor and Chairman, noted “The Department of Chemistry is uniquely qualified and positioned to make an impact.”

“Our nucleus of medicinal chemists, together with our cross-disciplinary resources at USF, represent a synergy for harnessing advances in molecular science that will lead to better understandings of human disease, disease prevention, and the discovery and development of novel treatments,” he added.

The Center is led by Professor **Edward Turos**, Interim Director of CMD⁵ and a

number of Chemistry Faculty including **Drs. Jon Antilla, Bill Baker, Alfredo Cardenas, Kirpal Bisht, Mohamed Eddaoudi, Ted Gauthier, Julie Harmon, Randy Larsen, Roman Manetsch, Abdul Malik, Mark McLaughlin, Edwin Rivera, Brian Space, and Mike Zaworotko.**

Dr. Turos noted that a major aim of the Center is to break down barriers to collaboration and to open new avenues for drug discovery. “We want research groups around campus to work together creatively and more far-reaching ways,” he noted. “We believe that CMD⁵ will be one of the catalytic sparks in this process.”

Dr. Zaworotko noted, “It takes 10-12 years and costs \$800 million on average to bring a newly discovered potential drug candidate to market. Only the largest pharmaceutical companies ... have the resources for this late-stage development of drug candidates. What is severely lacking in pharma is *early stage* drug discovery of the type conducted by CMD⁵. Most large and mid-sized companies have, in fact, downsized their in-house R&D, favoring acquisition of drug candidates through in-licensing.”

“The novelty of the molecular structures and the molecular diversity of drug candidates is the guiding principle of CMD⁵. CMD⁵, as an academically-grounded drug discovery effort will therefore play a complementary and synergistic role with industry since it will focus upon provision of the essential new pharmacophoric units that feed the drug discovery and drug development pipeline.”

“Of course,” he was careful to add, “risky drug candidates fail more often in academic labs and small biotech companies, but risk is encouraged in academic labs where scientists are judged by the novelty of the papers they publish, the grant support they obtain, and by the caliber of students they train.”

Introducing new faculty members...

Dr. Peter Zhang, Associate Professor of Chemistry comes to us from the University of Tennessee. And **Dr. Bratoljub Milosavljevic**, Instructor in Chemistry, was a chemistry faculty member at Marshall University before joining us.

Recognition

Tanise Shattock, doctoral candidate, and an advisee of **Dr. Zaworotko**, is the recipient of the 2006-2007 Merck Research Laboratories Graduate Fellowship in Chemistry, Pharmaceutical Science, Material Science, and Engineering. She will be conducting research at Merck Research Laboratories in Rahway, NJ throughout the Fall 2006 semester.

Out and about...

The Department's summer Social was held July 28 for available alumni, faculty, staff, and students. **Mr. Jarrod Eubank** agreed to coordinate the social with the cooperation of and advice of **Dr. Zaworotko**. **Mr. Eubank** was assisted by labmates **Ms. Jaci Brant** and **Mr. Farid Nouar**. Special guests included **Dr. Arthur Guilford** (Associate Dean, CAS)

Ms. Wanda Mundy (Student Affairs Office), and **Dr. and Mrs. Robert Braman**.

Faculty and students have been attending state, national, and international meetings. These include FAME 2006 (where **Dr. Mike Zaworotko** was a plenary lecturer in two sections, Drug Delivery and Drug Design and Inorganic Chemistry. **Dr. Abdul Malik** was a plenary lecturer in Analytical Chemistry. Other presentations and contributions came from **Drs. Mildred Acevedo-Duncan, Randy Larsen Li-June Min, Dean Martin, Abdul Malik, Edward Turos**, and **Mike Zaworotko** (or their students).

Dr. Edward Turos gave a talk on CMD⁵ (Center for Molecular Diversity in Drug Design, Discovery, and Delivery) at the 3rd Annual Tech Transfer Conference in Sarasota (May 23). He also gave a talk on CMD⁵ at the FAMU-USF retreat held in Brooksville (July 24). The retreat was designed to bring together researchers from the two universities to discuss current research projects, programs, and future collaborations.

Drs. Eddaoudi, Larsen, and Zaworotko and selected students attended the annual meeting of the Canadian Chemical Society in Nova Scotia in May and presented papers.

Dr. Abdul Malik presented an invited plenary lecture at the 29th International Symposium on Capillary Chromatography that was held in Rivera del Garda, Italy (May 29-June 2).

Dr. Jennifer E. Lewis, as an invited lecturer, presented "One Step at a Time: Working toward Change in General Chemistry" at the Integrating Science and Mathematics Research into Teaching

Biennial Conference held in Orono, ME, on June 27 .

She also contributed a paper "To Journal or Not to Journal - That Is Not the Question: Fundamentals for Reflective Peer Leader Training" at the Biennial Conference on Chemical Education in West Lafayette, IN on August 2. The paper was presented by **Ms. T. M. Eckart**, her doctoral advisee.

Dr. Li-June Ming organized a two-week workshop in bioinorganic chemistry, "2006 Summer Bioinorganic Chemistry Workshop: Metal Ions in Biology, Medicine, and the Environment". The workshop was given in July at the National Chiayi University in Taiwan, where **Dr. Ming** handled the lectures and **Mr. Giordano da Silva** was responsible for discussion sections.



Dr. Ming, Mr. da Silva and students

Dr. Dean Martin attended the annual meeting of the Aquatic Plant Management Society in Portland, OR in July. **Mr. Derek Guenther** participated in the Student Paper Contest.

Dr. Bill Baker gave a talk at the Natural Products Gordon Research Conference in Tilton, NH. Then attended the American Society of Pharmacognosy meeting in Washington, DC, where his post-doctoral

associate, **Dr. Solomon Weldegirma**, gave a talk and four of his graduate students each had a poster, as did one undergraduate researcher.

Dr. Peter Zhang presented a paper in the Symposium on Chiral Porphyrins for Self-Assembly and Catalysis at the 4th International Conference on Porphyrins and Phthalocyanines, Rome, Italy; July 2-7. He also presented "Toward Mechanistic Understanding of Cobalt Porphyrin-Catalyzed Carbene and Nitrene Transfer Reactions" at a National Science Foundation Workshop, in Blaine, WA; June 6-9.

Dr. Brian Space presented "Theoretical descriptions of the nonlinear spectroscopy of aqueous systems and identification of novel species at interfaces", at the "Gordon Research Conference on Water and Aqueous Solutions", held at the Holderness School (July 30 - August 4, 2006).

Dr. Mohamed Eddaoudi was one of 30 U.S. scientists invited to present a poster and participate in the Transatlantic Frontiers of Chemistry Symposium, held at Durham, NH (August 10-13). The stated goal of the symposium organizers was to bring together "highly qualified early-career scientists, 30 each from Germany, the United Kingdom, and the United States, to discuss the most advanced perspectives of chemical Research."

Recognition...

Speaking of meetings... **Dr. Mohamed Eddaoudi**, attended the ICYS-ICMR Summer School on Nanomaterials, 2006 in Tsukuba, Japan (July 22-28) and received a **Best Presentation Award** for his oral

presentation, "Molecular Building Block Approach to the Assembly of Zeolite-like Metal-Organic Frameworks (ZMOFs) with Extra-Large Cavities".

REU News

REU is a research experience for undergraduates and was initiated as an NSF-supported summer program with a three-year grant, as noted in previous issues of *News*. The program was adapted to the fall and spring semesters and started in the fall of 2005 with some 70 students working with various faculty members. **Dr. Noel Dickson** serves as REU coordinator and **Mr. John J. Perry IV**, is the graduate assistant.

A REU Student, **Mr. Fernando Ortiz**, was selected to receive the "Successful Latino Student Award for 2006" (October 5).

Campus news...

The annual Faculty/Staff Fund Drive set a new record of \$2,200,000. Funds donated by faculty and staff members go to support various campus scholarships and funds (including the Department of Chemistry Operating Fund that supports special projects).

Anniversaries...

According to USF Bulletin, the following chemistry faculty members celebrated service anniversaries during August: *25 years*, **Dr. Steve Grossman**; *15 years*, **Dr. Li-June Ming**; *5 years*, **Dr. Bill Baker**, **Dr. Jennifer Lewis**.

Down memory lane...

The Holloway Fund. This is a fund that was established to honor the memory of **Michael Holloway** (M.S. '67, Ph.D. '77), who died much too soon after his time at USF. A fund was started in his memory by **Dr. and Mrs Jesse Binford** and **Dr. Bill Swartz**, with the assistance of the late **Mr. Bernie Pulin**, Department Curator. Dr. Binford had been his masters thesis advisor and Dr. Swartz was his doctoral dissertation advisor. Others contributed to the fund, which was used to provide short-term loans to graduate students, especially when the pay checks didn't arrive in a timely manner. More recently, there seems to have been a much smoother operation, and thus a lesser need for loans, but his memory is yet green. He was one of our first graduate students, and a pleasure to know.

The joy of our present, the hope of our future...

[a continuing series on current graduate students]

Amy Cairns wrote "I was born in 1981 in Sydney, Nova Scotia. I spent my first eighteen years growing up on Cape Breton Island, a small island off the north east coast of Nova Scotia. Upon graduating from Riverview Rural High school in 1999, I received an Award of Excellence scholarship and moved to the mainland to attend Acadia University in Wolfville, Nova Scotia. After one year, I realized small town life was not for me and moved to Halifax to attend St. Mary's University. From 2002-2004, I had the opportunity of doing undergraduate research under the supervision of Dr. Hilary Jenkins. My project focused on coordination chemistry using derivatives of pyridyl-amine ligands.

I graduated in 2004, with a Bachelor of Science degree with honors in chemistry.”



Ms. Amy Cairns

“ In the winter of 2004 I attended an open house at USF and moved to Tampa in August. Shortly thereafter, I joined Dr. Mohamed Eddaoudi’s research group. My research primarily focuses upon synthesizing novel porous metal-organic frameworks for potential hydrogen storage applications. Thus far, I had the opportunity to present my research at numerous regional and national meetings. Also, I have received a scholarship from the International Center of Materials Research to attend a two-week summer school on porous materials held at the University of California, in Santa Barbara.”

Campus changes --- past and future...

USF is celebrating the 50th anniversary of its founding. A DVD is available that summarizes the history of the University and Dr. Mark Greenberg has edited a book that provides history and pictures. A gala dinner is planned for December

From what we hear...

Charles Asowata (B.A. ‘80), Major U.S. Army, is stationed at the pentagon and is also working on a doctorate at George Mason University.

Dr. Fernando Cardozo-Pelaez (M.S.’91) is Associate Professor of Neurotoxicology in the Department of Biomedical and Pharmaceutical Sciences, CEHS, University of Montana.

Kathleen Carvalo-Knighton (Ph.D. ‘00) Assistant Professor of Environmental Science&Policy, USF- St Petersburg, gave seminars in Chemistry (September 21) and in ERIC (October 4) on the Tampa Campus.

LaNetra M. Clayton (Ph.D. ‘05) is a polymer research chemist at NASA-Kennedy Space Center. Dr. Julie Harmon was her advisor.

Dr. Jack Fernandez, Charter Faculty member and Professor Emeritus of Chemistry is a Community Columnist for the Tampa *Tribune* and the author of three novels, the most recent of which is *Café con Leche*, a novel about Ybor City from the Great Depression to the Castro Revolution.

Dr. W. Karl Olander (M.S., ‘68) wrote that he formally retired in June as Vice President, Business Development, ATMI, a firm that he co-founded in 1986.

Previously he had been a General Manager of Lord Corporation’s Chemical Products Division, responsible for their North American Operations. And prior to holding that position, he was Director of Materials Research with American Cyanamid Co. as Director of Engineered Materials Research, and Director of PPG Industries Barberton

Technical Center, where he had been in charge of new product development in the area of specialty chemicals and specialty silica markets.



Dr. Karl Olander

He is the holder of over 35 patents.

He and his wife, Zuli, received their undergraduate degrees from USF.

[Some material obtained from ATMI press releases]

Mick Perez-Cruet, M.D. (M.S. '86) just finished his second textbook, "An anatomical Approach to Minimally Invasive Spine Surgery". Further details are available at www.qmp.com. It was a five-year project, probably something that was good to have finished. His medical practice is in Michigan.

Dr. Douglas J. Raber (Faculty, 1970-1991) of Green Point Science, Washington, D.C., was a fellow guest at the ACS Speakers Luncheon at the fall ACS Meeting in San Francisco, Sept 11.

Dr. Kathleen L. Seley-Radtke is a 2006-2007 Jefferson Science Fellow and will be serving for a year at the US Dept. of State on leave from the Department of Chemistry and Biochemistry at University of Maryland, Baltimore County, where she is Associate Professor of Organic and Biomedical Chemistry. For further information, see:

[http://www7.nationalacademies.org/fellowships/Jefferson_Science_Fellows.html]

She worked with **Dr. Terence Owen** and **Dr. Stewart Schneller** while at USF, and has dual expertise in pandemics and emerging infectious diseases, as well as nonproliferation and biowarfare,

Dilojan Senanayke (M.S. '96) wrote from Sri Lanka that he has been very busy with post-tsunami activities of the Water and Habitat Section of the International Committee of the Red Cross. "From digging tube wells to ensuring water quality are some of the many activities of the Red Cross."

Sirius Yoo, M.D. is in his fourth year of residency in Otolaryngology: Head and Neck Surgery at the University of Washington. At USF, he worked with Dr. Jung before going to medical school.

Dr. Mike Zaworotko was quoted in *Popular Science* (October p. 64) concerning an achievement of **Dr. Omar Yaghi**, UCLA. **Dr. Mohamed Eddaoudi** was a postdoctoral associate in Dr. Yaghi's laboratory some years ago.

News and feedback

For additional information on faculty, staff, students, and programs (as well as past issues of *News*), please see our Department Home Page : <http://chemistry.usf.edu>

Look at this page (upper right-hand corner) for Graduate Alumni to see if we have your correct occupation.

And if you have news for us, please contact us at: dmartin@mail.cas.usf.edu

Finally...



Recently retired faculty member transitioning between formal and casual attire. Photo courtesy of Dr. Randy Larsen. Shirt courtesy Drs Patricia and George Dooris.