

July, 2008

Dear Chemistry Alumni:

We want to tell you what is happening in the Chemistry Department at Valparaiso University, and we also want to let you know about your classmates.

We have hired a new chemistry professor, **Dr. Bob Clark**. He received his PhD from Univ. of Wisconsin and has teaching experience at Hope College. He taught biochemistry and general chemistry this past school year. This summer **Dr. Clark** and students **Rachael Steinken**, a senior, and **Edra Jani**, a junior, are setting up a bioinorganic research laboratory to investigate the structural & functional properties of a family of heme proteins known as the gas sensors. **Dr. Clark** and his students seek to obtain a molecular-level understanding of how the functions of these proteins are regulated by the binding of gas molecules such as O<sub>2</sub>, NO, and CO to their heme groups. Currently, the Clark group is studying the activation mechanisms of two of these proteins: CooA, a CO sensor that regulates CO metabolism in several bacteria, and FixL histidine kinase, an O<sub>2</sub>-sensor that helps to regulate nitrogen fixation in the root nodules of several plants.

**Dr. Warren Kosman** is continuing to work with inventor **Gary Rapp** on odor abatement. Excellent odor control has been achieved at hog farms in Iowa. He was co-presenter at a conference of a talk entitled "Rapp Technology for Control of Gas and Odor from Swine Manure Pits". He is continuing his research (which he started in the spring with student **Melanie Jones**) on the extraction of oil from tar sands. He, student **Stephanie Scherer**, and two chemists from Thermo Fisher Scientific co-authored an article entitled "Testing Shows Benefits of Near-Infrared Analysis" which appeared in the June 2008 issue of *Biodiesel Magazine*.

**Dr. Steve Engerer** is busy this summer with VU Focus sessions where new incoming freshman students are preregistering.

**Josh Cardinal** and **Katie Krieter**, both juniors, are working with **Dr. Kevin Jantzi** this summer on research focused on synthetic organic chemistry. Their research project seeks to synthesize two new compounds (containing either an epoxide or aziridine functional group) that will be used as starting materials in the trimethylenemethane chemistry developed by Professor Barry Trost (Stanford University). The goal of the project is to make highly functionalized rings that could be used by synthetic organic chemists in their synthetic pathways. This research project is supported by the Petroleum Research Fund.

**Dr. Tom Goyne** is working on research with three students this summer, namely junior **Sarah Tesch** and seniors **Changmo Sohn** and **Jonathan Penny**. The overall goal of their project is to elucidate the mechanism by which bacteria reduce plutonium ions. The specific goal of this summer's work is to finish sequencing a family of genes that code for metal-reducing enzymes expressed by the bacterium *Shewanella* algae.

Last summer **Dr. Jonathan Schoer** continued his interdisciplinary water quality project in the Valparaiso Chain-of-Lakes watershed north of town with two students. The project was sponsored by the Valparaiso Lakes Area Conservancy District, the Chain-of-Lakes Watershed Group, and the Indiana Department of Natural Resources. The students collected field water quality data and water samples for subsequent laboratory analyses from approximately 40 sites within the Valparaiso Chain of Lakes watershed. Data is being shared with local and state government agencies, private organizations and individuals, and has been presented at several conferences in chemistry and related fields. . This summer the project is being continued and further developed by junior chemistry majors **Lindsey Gilman** and **Windy Santa Cruz**.

Senior chemistry major **Jason Feder** and **Dr. Schoer** have teamed up with the National Park Service this summer on an interdisciplinary study of water quality and its impact on two species of crayfish in the Great Marsh complex of the Indiana Dunes National Lakeshore. Of particular interest are how the restored areas of the marsh are affecting the water quality, how the crayfish are responding to the restoration efforts and how the crayfish are affected by the water quality in various areas within the marsh complex. The project is being funded by a grant from the National Park Service and has received attention from the adjacent community of Beverly Shores and from researchers from the University of Chicago and the University of Illinois that are doing related work. **Dr. Schoer** is hopeful that collaborations can be established with these groups to develop better understanding of the chemistry occurring in the marsh complex and its impact on the organisms that reside there.

Last summer **Dr. Schoer** and a group of 3 students initiated an interdisciplinary research project in Zhejiang province of China with colleague **Dr. Zhang Zhijian** of Zhejiang University. Most of the project was focused in the area surrounding the city of Hangzhou, but data and samples were also collected in the Wuzhon, Taihu Lake, and Ningbo areas of the province. The purpose of the project was to connect watershed management efforts in China and Northwest Indiana. The project initiated last year in China received funding for the summer of 2008 and **Dr. Schoer** was joined in his trip to China by 2008 graduate **Jeff Field** and junior **Lindsey Gilman**.

**Dr. Gil Cook** as Senior Research Professor continues on with his research, primarily with enamines. However, he has gone into other areas. He had a paper on a Knoevenagel initiated reaction under microwave reaction conditions in the September, 2007 issue of the *Journal of Chemical Education*. A second paper entitled "Determination of Solvent Effects on Keto-Enol Equilibria of 1,3-Dicarbonyl Compounds Using NMR. Revisiting a Classic Physical Chemistry Experiment" appeared in the November, 2007 issue of that journal. A co-author of this second paper was **Paul Feltman ('07)**. A third paper, this one involving enamines and co-authored by **Sarah Folk ('98)**, appeared in the June, 2008 issue of *Letters in Organic Chemistry*.

The VU chapter (Beta Sigma) of *Phi Lambda Upsilon*, a national Honorary Chemical Society, inducted 10 new undergraduate members at the annual **Chemistry Awards Banquet**. The new members are **Ryan Beck, Kim Kolstedt, Ben Mueller, Matt Rioux, Stephanie Scherer** and **Rachel Steinken**. The speaker this year was **Zach Matson ('00)** who is a chemistry teacher at Lafayette Senior High School, Lexington, Kentucky. He spoke on "Science Majors in Secondary Education". **Zach** was accompanied by his wife **Adrienne (Winkler) Matson ('01)**. **Adrienne** received a Pharm.D. from the University of Kentucky, and she now works at a VA Hospital in Lexington as well as the Univ. of Kentucky. Other awards given at the banquet were as follows: **Susan May Willtrakis** (St. John, IN) received the **CRC General Chemistry Achievement Award**; **Lindsey Gilman** (South Bend, IN) received the **Undergraduate Award for Achievement in Organic Chemistry**; **Kim Kolstedt** (Bonita Springs, FL) received the **Undergraduate Award in Analytical Chemistry**; **Rachael Steinken** (Indianapolis, IN) received the **Charles W. Wolf Memorial Award**; **Amanda Nosie** (Plainfield, IN) received the **American Institute of Chemists 2008 Award**; **Petra Malova** (Bratislava, Slovakia) received the **Outstanding Senior Chemist Award**.

In addition to these awards, our chemistry majors received other honors. Senior chemistry major **Petra Malova** was elected to the Eta of Indiana Chapter of the *Phi Beta Kappa Society*. The following two seniors graduated *Summa Cum Laude* (GPA of at least 3.8/4.0): **Petra Malova** and **Dean Webb**.

There were 14 chemistry alumni who came to the **29<sup>th</sup> Annual “Standup” Luncheon**. Be sure to stop by for the **30<sup>th</sup> Annual “Standup” Luncheon**, which will be held in the lobby of Neils Science Center on Homecoming Saturday, October 11, 2008 from 11:00 AM through 1:00 PM. Be sure to stop in and chat with us and with your former classmates. On the preceding day, Friday, October 10 we will be having the **12<sup>th</sup> Annual Premedical Lecture**. Last year, **Dr. Andy Makowski ('99)** was the speaker in a joint meeting with the Physics Colloquium. The VU Chemistry Club would like to invite any of you alumni who will be at Homecoming to pair with an undergraduate chemistry major in a game of miniature golf against other pairs. Let me know if you are interested.

The Chemistry Department Seminar meets weekly, and we have had some of our alumni as speakers this past year. These alumni speakers were **Chris Clausing ('00)** who teaches at Bloom Trail High School and **Karen Leonard-Looney ('91)** who is Project Manager at Eli Lilly in Indianapolis.

The ISIS Program (Initiative for Schools, Industries and the Sciences) is continuing on with providing modern instrumentation to the middle and high schools in Northwest Indiana. The instruments that are being delivered to the schools are IR spectrometer, UV/visible spectrometer, gel electrophoresis, atomic absorption spectrometer, and gas chromatography.

News from the classes is as follows: **Walter Schur ('34)** writes: “I have been in solo practice after receiving my M.D. and still have office hours twice a week. Soon I will have practiced long enough to really get serious. My practice at the same office started in 1944. ... We'll carry the Schur name on the Valpo roster with my third grandson matriculating as a freshman in just a few days.” **Art Diesing ('54)** is retired. He worked at Chemical Abstracts for four years during the start of the Registry System. **Tom Evans ('62)** keeps busy with various woodworking projects and work at his cottage on the lake in Michigan. **Martin Diesterhaft ('64)** works in the public schools in Charlotte, NC. He teaches science at a low performing school in one of the poorest parts of Charlotte. He received a PhD in chemistry in 1968. Martin writes: “My kids call me Dr D, as do most of the faculty. I hope you understand I will always be grateful to the beginning that Valpo gave to a poor farm kid from Wisconsin.” **Rick Mueller ('66)** and his wife recently retired from Bristol Myers Squibb. **Kathy (Ungrodt) Ernst ('67)** and **Carol (Van Auken) Roeglin ('67)** were on campus Homecoming Weekend for a Gamma Phi reunion. **Warren Kosman ('67)** and I gave them a tour of the chemistry facilities. **Karen (Dace) Ault ('67)**, after 25 years in compressed gas industry working as an applications engineer, returned to grad school for dual degrees in library science and information science. She is currently working for Infotrieve Company under contract at Dow Agro Sciences, Indianapolis, indexing the research intellectual property. **Tom Hecht ('69) and his wife** have returned to the US after an exciting time living 4 years in Australia and 3 years in Korea.

From the 1970's comes the following news: **Chuck Vick ('72)** works at Perkins Products, Bedford Park, IL. **Patricia (Thompson) Morris ('75)** works for the US Environmental Protection Agency. **Jeanne (Alford) Witte ('77)** works for Central Life Sciences in Dallas, TX. She is on another recently approved patent for a stabilized block pesticide composition. One of her sons graduated from VU in engineering this spring. **Bob Keller's ('77) wife** passed away last year. He continues to use his Mooney 201 aircraft to fly back and forth between Lexington, KY and LaGrange, GA. He is Manager of Materials Development for Freudenberg-NOK General Partnership O-ring Division while living in Lexington. He will probably soon relocate to the Division Headquarters in LaGrange. The niece of **Chuck Wolf ('78)** is enrolling at VU this year. **Chuck** died during his first year of medical school, and his parents help set-up the **Wolf Scholarship Award** in his memory. This award is given each year to the outstanding junior premedical arts student who is also a chemistry major.

From the 1980's comes the following news: **Michele Mellett ('81)** continues her busy schedule as a trauma surgeon in Chicago. **Ann Edahl ('82)** is an editor of journals and books such as American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America. She received a PhD in musicology in 1993. **Sandy Rosenthal ('87)** has been promoted to full professor at Vanderbilt University.

From the 1990's comes the following news: **Stephanie Kapfer ('91)** is working on staff at Portsmouth Naval Hospital in Virginia as a pediatric surgeon. **Kathy (Diesterhaft) Manning ('91)** was a practicing PA and now she is finishing up medical school. **Quenby Erickson ('94)** has separated from the air force and is now doing a Fellowship in MOHs Micrographic Surgery at MD Anderson Cancer Center in Houston. **Martin Erhardt ('96)** is a student at Princeton Seminary and is enjoying his time there. **Dawn (Lechmaier) Case ('96)** works for Sigma-Aldrich as Supervisor of the Quality Control Department in Sheboygan. She has found it to be an exciting challenge to manage 30 people on multiple shifts and re-familiarize herself with analytical chemistry after working in the production facility for many years. **Matt Dahlgren ('97)** is an ophthalmologist with Milwaukee Eye Care Associates. **Beth (Tatro) Grossart ('97)** is a Major and Battalion Surgeon in the Medical Corps, U.S. Army. She is deployed in Iraq. She writes: "Working for a non-profit isn't the only noble calling in this life. Working in Iraq is one of the more meaningful experiences I've had as an adult. Today I met with a local physician. His brother was killed last year, and he and his fellow clinic employees are threatened almost daily. Yet this doc keeps coming to work. There is no heat, no electricity, no running water, and very few supplies in the clinic, but he is the one constant in this neighborhood, and he actually cares. It's refreshing. The docs in the Iraqi Army are also pretty cool." **Vaughn deGuzman ('97)** graduated with a SDM from Southern Illinois Univ. in 2002, and he is now a practicing dentist in Rosoe, IL. **Brian Lenz ('97)** is a development chemist at Polartech Additives, Inc. in Bedford Park, IL. **Ryan Schumacher ('97)** is an Orthodontics Fellow at Mayo Clinic. **Jason Spoljoric ('98)** graduated from Indiana Univ. Medical School with an M.D., did an anesthesia residency at Indiana Univ. & is now a practicing anesthesiologist at Ball Memorial Hospital in Muncie, IN. **Sarah (Folk) Hernandez ('98)** at Broughton High School, a magnet school in Raleigh, NC.

From the 2000's comes the following: **Pam Kreeger ('00)** is finishing her postdoctoral work at MIT. Starting in January 2009, she will be an assistant professor in the Department of Biomedical Engineering at the University of Wisconsin-Madison. **Jennifer (Bender) Cash ('00)** is continuing her studies in the PhD/MD program at Illinois, where she splits her time between medical school classes and her research in the Microbiology Department. She was married last June. **Erica (Kaufman) Palys ('00)** was chosen to be the chief resident for the 2007-'08 year at Cedars-Sinai Medical Center in Los Angeles. She recently was awarded a fellowship to continue her research in infectious diseases at Cedars-Sinai for the next several years. **Jessica (Amrozowicz) Kerins ('00)** has received a PhD from Washington Univ. (St. Louis) and is now doing a postdoctorate at Southern Methodist Univ. Her husband, **Mark Kerins ('00)** has received a PhD and is now teaching at Southern Methodist Univ. **Trey Porter ('00)** is a postdoc at the University of Michigan. **Zach Matson ('00)** is teaching at Lafayette Senior High School in Lexington, KY. His wife, **Adrienne (Winnkler) ('01)** has a Pharm.D. and is working as a pharmacist at the VA Hospital in Lexington and at the Univ. of Kentucky (see above). **Nate Bowling ('00)** is teaching at Univ. of Wisconsin-Stevens Point. **Chris Clausing ('00)** is teaching at Bloom Township High School. **Karen (Switek) Schultz ('00)** is working as a Scientist in Convergence Products for TransForm Pharmaceuticals in Lexington, MA. **Andrea (Voges) Greyson ('01)** obtained a Ph.D. from Northwestern University and is now working as Senior Scientist at Rohm and Haas near Philadelphia. **Allison (Witt) Sommers ('01)** spent two weeks in China and has now moved to Ohio where her husband, after receiving his engineering Ph.D. from Univ. of Illinois, is teaching at Miami University.

**Anne (Warner) Martin ('02)** is remediation director at Chesterton Middle School, Chesterton, IN. **Aaron Miller ('02)** received a Ph.D. from Northwestern University and is now a consultant in Evanston, IL. **Kevin McCusker ('02)** is continuing his graduate work at Univ. of California-Berkeley. **Suparna**

**Bera** is Project Coordinator for Guyana Red Cross Society after receiving a MSc from Univ. of the West Indies. **Lauren (Urbanczyk) Pearson ('02)** is working at Argonne National Laboratory in bioscience, especially using LC-MS. **Aster Kammrath ('02)**, after receiving a Ph.D. from University of California-Berkeley and now has a post doctoral position at University of Wisconsin-Madison in atmospheric chemistry. **Lee (Lude) Cambrea ('03)** is a research chemist running the vibrational spectroscopy lab for the US Navy in China Lake California. **David Kelley ('03)** received an MD from Loyola Medical School and is starting a family practice residency at Lagrange Adventist Hospital in Illinois. **Claire Peeples ('03)** received an MD from Loyola Medical School and is residency in general surgery at William Beaumont in Michigan. **Mark Landmeier ('04)** receive an MD from Loyola Medical School and is staying at Loyola for an internal medicine residency. **Ben Lovaasen ('04)** is continuing his graduate work at University of Chicago. **Ben and Emily Hoovey ('04)** got married. **Emily** receive an MD from Loyola Medical School and now doing residency in family medicine at West Suburban Hospital in Oak Park, IL. **Mike Sjoding ('04)** received an MD from Loyola Medical School and is doing residency in internal medicine at Univ. of Chicago. **Kristina (Wehmeyer) Thompson ('04)** is with Barnes & Noble Booksellers. **Amanda Taticek ('07)** is working for Pharmaceutical Products Development in Madison, WI. **Shelly Schmeltz ('07)** is working for Pollution Control Industries. **Danielle Nunnelly ('07)** is working as a Research Tech at Rush University Medical Center in a cellular biomechanics lab. **Ruth McAlonan ('07)** is continuing in Univ. of Illinois Veterinary School. **Ashley Coulter ('07)** is working for US Steel. **Deborah Steffen ('07)** is continuing her studies in biochemistry at Uniform Services Graduate School. **Cathy Nelson ('07)** is continuing her studies in osteopathy at Midwestern University. **Jessica Saunders ('07)** is working at Argonne National Laboratory.

The future plans for some of the 2008 graduates are as follows: **Jared Friedhoff** and **Laura Engerer** will be attending Vanderbilt University graduate school in chemistry. **Rachel Dannemeyer** is working for FONA, a flavoring company. **Dean Webb** is going to dentistry school. **Melanie Jones** is working for Pratt and Whitney Rocketdyne in California. **Patrick Long** is working as a formulation chemist at Spectrum Brands near St. Louis. **Amanda Nosie** will be attending Univ. of Wisconsin-Madison graduate school in Cellular and Molecular Pathology. **Tyler Nusbaum** will be attending Valparaiso Univ. Law School. **Petra Malova** will be going into a masters program in Vienna.

Again, I encourage all of you to stop in to see us when you come through (or near) Valparaiso. At least drop us a note either written or by E-mail so that we know what you are up to these days.

Sincerely,

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