



Kathy Nystrom '13 surveys Quetzaltenango, Guatemala. Story, p. 6.

INSIDE THIS ISSUE:

NEJM Essay	2
Huber Retires	3
Chem Curriculum	3
Careers in Public Health	4
Summer Adventures	8
Chemistry Events	11
Alum Notes	12
Grad Launch	12

FoCuS Bridge Program Inaugurated

10 New Students Spend Summer at CSB/SJU

CSB/SJU Chemistry welcomed its first cohort of FoCuS scholars in July. A National Science Foundation (NSF)-funded program aimed at providing additional support for incoming chemistry or biochemistry majors, FoCuS allows selected students to take their first chemistry course and lab during the summer before their freshman year.

The program was developed by Associate Professors **Kate Graham** and **Ed McIntee**. Graham spearheaded the effort, submitting a grant to NSF for

\$600,000 to support the scholarships and a number of allied activities. Graham also taught the department's introductory course, *Chem 125: Structure and Properties*, with the entering group of 10 students during the "summer bridge" program. McIntee led the students' first lab course, *Chem 201: Purification and Structure*.

A third significant contributor to the program was **Paige Armbrister '14**. The Nassau, Bahamas,



Members of the FoCuS Program at ASC

native spent the summer on campus preparing the laboratory for the students' arrival and acting as a teaching assistant for both Chem 125 and 201. Armbrister enjoyed the experience. "I got to work with some amazing freshman (continued p. 7)

McIntee Wins S. Mary Grell Award

Ed McIntee, Associate Professor of Chemistry, is the winner of the 2012 Sister Mary Grell Award. The award recognizes excellence in teaching and is presented annually to a member of the faculty of the College of Saint Benedict.

McIntee is a 1992 graduate of the University of Minnesota, Morris, the state's public liberal arts college. He went on to earn a Ph.D. in medicinal chemistry from the University of Minnesota, Twin Cities, in 1997, working under

the direction of Carston Wagner. After post-doctoral work with Stephen Hecht of the University of Minnesota Cancer Center, McIntee joined the CSB/SJU chemistry department in the fall of 2000. (continued p. 2)



Syverson hiking in the Appalachians.

Syverson Essay in New Engl. J. Med.

Chemistry major **Matt Syverson '13** recently had an essay published in *The New England Journal of Medicine (NEJM)*. The opinion piece, "The Impact of New Media on Public and Personal Health", examines the sometimes negative impact of social media on health-related decisions. In the essay, Syverson argues that physicians need to become more sophisticated

in using social media to counter widespread misconceptions about issues such as vaccinations.

This submission to the journal was part of an essay contest commemorating the 200th anniversary of *NEJM*. Two hundred winning essays were selected to appear in the online edition of the journal.

Syverson, who has been working in the

emergency room at St. Cloud Hospital, read about the contest in an issue of the journal. His interest in the topic had been sparked by debates in a bioethics class he took with Assistant Professor Kathy Lilla Cox of the theology department.

Syverson looks forward to putting his ideas to use. He will be applying to osteopathic medical schools this fall.

An emphasis on
teamwork in the
classroom



McIntee

McIntee Wins Grell, Addresses Convocation

(continued from p. 1)

McIntee has always been a popular instructor and many students were pleased to learn of the award. "Thumbs up! He was great!" said Sophie Stangl '15, who took Chem 250 with McIntee, upon hearing of the award. "He really inspired and guided us," added Jeff Bowers '15.

In his remarks before the CSB Convocation in August,

McIntee emphasized the prominent role of teamwork in the contemporary classroom and the modern workplace. He cited a recent survey of 70 Minnesota biotech companies that revealed the four qualities most valued in new hires are work ethic, problem solving, good communication and teamwork skills. Drawing analogies from sports and chemistry as well as a story about prod-

uct development at 3M, McIntee argued that groups working together often outperform strong individuals.

McIntee also highlighted the emphasis on teamwork in the classroom at CSB/SJU, noting that studies have shown team building skills constitute "one of the categories that our students excelled at" compared to those from other institutions.

Huber Retires From Teaching Chemistry

David Huber, a long-time member of the chemistry department, retired from teaching this past May. Huber had been an Assistant Professor in the department since the autumn of 1980.

Huber's teaching career marked a return to the department: Huber was himself a 1964 graduate of SJU. After graduating with a bachelor's degree in chemistry, Huber earned a master's in chemistry from Ohio State.

Feeling a need for something more fulfilling, Huber entered the Peace Corps and was posted to Colombia. He was immediately struck by the ingenuity of his fellow Peace Corps volunteers who sought to teach science labs without the sophisticated equipment Huber was used to. He also vividly remembers how local craftspeople helped to fashion laboratory materials out of pottery.

While in Colombia, Huber also met his future wife, Amanda.

The couple still travels frequently in Latin America and they maintain a zest for the food and culture of the region.

Huber's chief responsibilities in the department included teaching courses for nursing and education majors. In addition to his chemistry background, Huber was also awarded a Ph.D. in education from the University of Minnesota in 1991.



Huber

Chemistry Departments Nationwide Develop New Approaches

Innovations Are Subject of Discussion at Fall National Meeting of American Chemical Society

Major changes in college chemistry education came to the fore at the Fall Meeting of the American Chemical Society (ACS), which was held August 19-23 in Philadelphia, PA.

The ACS Committee on Professional Training (CPT) held a forum to discuss reactions to revised ACS-CPT curricular guidelines issued in 2008. The committee reported that so far about 60% of schools have undertaken some level of curricular revision in response to the guidelines.

In a session on Chemistry and the Premedical Curriculum, a number of presenters discussed how their current curricula reflect changes in recommenda-

tions from the ACS, as well as how new approaches might better serve premedical students. A number of schools are introducing organic chemistry

earlier in the curriculum, either in the first or second semester, generally as a method of providing more appropriate *(continued p. 11)*

Below: An Outline of the First 2 Years of Chemistry at Different Colleges

First Four Semesters in Chemistry	Schools
General – General – Organic – Biochem	Memphis, Oberlin
General—Organic—Inorganic—Analytical	Indiana, San Francisco State, Michigan
Organic—Organic—Inorganic—Analytical	Juniata, Washington & Jefferson
General & Organic Combined (x4)	Bennington
Structure & Properties in Org, Inorg, Biochem (x3) — Stoichiometry	DePauw
Structure & Properties—Reactivity in Org, Inorg, Biochem (x2-3)	College of Saint Benedict / Saint John's University
OR Chemical Analysis	

Public Health Careers Draw Grads



Switlick and her husband in the Coorg Mountains, India

Realizing that helping others find health doesn't always involve medicine

When considering what they want to do for a career, many students are motivated by the idea that they can use their skills to help people. Medical school applicants frequently cite service to others as a prime consideration in their career choice. To a growing number of CSB/SJU chemistry and biochemistry graduates, however, the field of public health offers a rewarding alternative.

Huong (Nguyen) McLean '00 first became interested in service work during her study abroad in South Africa. Later, while thinking about joining the Peace Corps, she discovered that public health is an important component of volunteer activities overseas. Fur-

ther reading led her to the field of epidemiology: the study of patterns and causes of disease on a population level. She was intrigued. Applications to graduate schools quickly followed.

Now an Epidemiologist at the Centers for Disease Control and Prevention (CDC) in Atlanta, McLean juggles tasks including surveillance, control, research, and policy on vaccine-preventable diseases, such as measles, mumps and rubella.

For **Erica Layer '06**, the Peace Corps did indeed provide a practical introduction to the field. After graduation, Layer served as a volunteer in a remote village in South Africa. "At the time, I didn't realize that I was doing public health work," said Layer, whose duties included educational efforts with the community. "In addition to the devastating effect of HIV/AIDS on the community, there were very high levels of alcoholism, malnutrition, teenage pregnancy and child mortality," she explained. She liaised with local governments and corporations to produce educational solutions and

increase medical access for her village. By the time her tour was over, she knew she had found her calling.

An overseas experience also furnished a first exposure to public health for **Kimberly Switlick '99**. Originally planning to apply to medical school after a gap year, Switlick was living in East Jerusalem and working in a hospital when she underwent what she describes as a "mental switch". Health care, she realized, was not just about medicine. Instead, she explained, "the determinants of health... were broader, including policy, culture, and socio-economic status." Returning to the US, she took a public health class from the University of Minnesota. The class only confirmed that she was on the right track.

These days, Switlick works on public health policy issues in developing countries, "trying to strengthen healthcare systems to respond to national health needs, particularly the poor and vulnerable." She deals largely with Ministries of Health, but also engages

other public and private agencies “to help strategize and implement meaningful health reforms to reduce morbidity and mortality.” Areas of specific concern include HIV/AIDS, maternal and child health, and malaria, as well as neglected tropical diseases.

All three alumnae mention the opportunity to see other countries and cultures as among the most rewarding aspects of working in this area. Their travels started in graduate school: McLean spent 4 months in Uganda for her Ph.D. project, Layer spent a year in Tanzania for her master’s, and Switlick’s graduate studies were conducted in Bangladesh. Since then, McLean has been to the Marshall Islands and Burkina Faso for measles outbreak investigations and to Kenya to help with the global effort to eradicate polio. Switlick has had the opportunity to travel extensively in southern and eastern Africa (Ethiopia, Zambia, Malawi, Kenya and Mozambique) as well as Senegal, India and Yemen.

Layer has recently been posted to Tanzania again, where she works for Johns Hopkins University as the Process Evaluation Coordinator for a large HIV prevention trial. □The study will analyze data on over 12,000 people over the next four years, comparing new HIV infection rates in villages that

have adopted a number of new approaches to those that use more standard practices. Layer hopes the study will convince officials to take a more holistic view of HIV prevention, adopting combinations of methods that may offer a synergistic effect in reducing disease.

Sometimes, a public health career can lead closer to home. That has been the case for **Glenise Johnson ’06**. After working for a few years with the Minnesota Department of Health, Johnson recently accepted a position in Nassau, where she grew up. Johnson now works as an epidemiologist for the Bahamas Ministry of Health in the area of HIV and other sexually transmitted infections (STIs). Currently, she is developing and implementing case-based surveillance systems for HIV and STIs, conducting surveys about behaviors that lead to transmission, and estimating disease prevalence in at-risk groups. “Ultimately, the data that I generate will be used by the government of the Bahamas to create targeted programs to reduce the rate of new diagnoses in the population,” said Johnson.

Another alumna has also stayed close to home, but for **Sarah (Henderson) Larson ’98**, public health has a very different hue. Larson is the State Program Administrator for the Petroleum Remediation Program at the Minneso-

ta Pollution Control Agency in St. Paul. “Our program serves to investigate petroleum releases from petroleum tanks, and to evaluate and remove risks to human health and the environment resulting from those releases,” said Larson. Groundwater, atmospheric and waterway contamination are all vital concerns in this area. One of Larson’s principal roles is to manage investigations and subsequent site clean-up; often, the responsible party is unable to take corrective action on their own. The state spends about \$7 million each year for these purposes, under Larson’s supervision.

To Larson, working with people is the most rewarding part of the job, whether it means leading someone through an array of government processes or helping a property owner attain closure. The others all echoed *(continued on p. 6)*



Johnson

Many roles for the public health professional

Layer conducts an interview.



Public Health Offers Variety, Flexibility



Larson visits the State Fair.

A successful public health professional is liberally educated

McLean with a friend in Africa.



(continued from p. 5) this sentiment. Johnson added that the educational dimension of the job can be a high point, whether it comes from working with government officials or the population at large. McLean has loved working with people who are making landmark strides in wiping out diseases, and Switlick has been inspired by the commitment and hard work of her colleagues in the field.

Time for family was also mentioned as a priority. Switlick, Larson and McLean value careers that are flexible enough to allow time for their small children.

“There is a strong culture of work-life balance here at the MPCA,” said Larson, “and that allows me time with my husband Mike, my son, Tommy, who is 6, and my daughter, Lily, who is 2.”

Larson can’t imagine leaving the agency, although she does see room for advancement within the organization.

The others value the mobility they see in their jobs. Switlick can imagine doing more work with the private sector in the future. In November, McLean will be starting a new position at the Marshfield Clinic Research Foundation in Wisconsin, where she will expand the infectious disease epidemiology research program. Both Johnson and Layer have thought about doing doctoral work, although they are both committed to bringing their current projects to fruition.

In some cases, the influence of a favorite professor led students to pursue careers in this

area. Johnson still remembers an organic chemistry lab in which **Dr. Kate Graham** suggested that she consider a career in epidemiology. Larson followed a trail that started in the research lab with **Dr. Mike Ross**, investigating pesticide levels in local watersheds. Others, like Layer and Switlick, hadn’t even heard of public health until after they had completed college.

For those who are interested in working in public health, Larson stressed taking full advantage of a liberal arts education. “A successful public health professional needs to be able to communicate with a wide range of audiences, and understand people and their behaviors,” she said. Taking psychology or writing classes, engaging in classroom debate and discovering new authors can be indispensable. Layer highlighted the importance of networking with alumni. She also suggested finding a relevant internship opportunity “Never pass up the opportunity to volunteer,” agreed Johnson. “Nothing indicates your passion for doing something as much as when you do it for free.”

Public Health: Focus on Graduate Training

Graduate training in public health comes in a variety of forms, reflecting the broad scope of the field. Both McLean and Johnson earned Masters in Public Health (MPH) in Epidemiology from the [University of Minnesota](#); in

addition, McLean has a Ph.D. in Epidemiology from the [University of Washington](#). Larson is also a U MN graduate, but with a Master of Science in Public Health (MSPH) in Environmental and Occupational Health: Environmental Chem-

istry, plus a minor in the Rhetoric of Science and Technology. Layer, too, has an MSPH, but from the Department of International Health at [Johns Hopkins University](#). Switlick obtained an MPH with a focus on international policy from [George Washington University](#).

FoCuS Group Gets Good Start to Academic Year

students,” she said. Armbrister also coordinated outreach activities in which students worked with children at Boys and Girls Club. In addition, she mentored students on adjustment issues and planned activities “to ensure that they remained sane”.

The summer bridge program offered students a major advantage. “I got all my college jitters out,” explained **Jane Keohen ’16**, of Shakopee, MN. **Emmanuel L. De Leon ’16**, of Houston, TX, agreed. “Taking classes... isn’t the ideal way to spend the summer,” he said, “but it makes the transition into college that much easier and more fluid.”

Working with a small group of classmates has also been a key aspect of the experience. For **Lorien Rusch ’16**, of Litchfield, MN, it meant having a support network in place for her first year of college. Arriving on campus early allowed students to bond over their studies as well as other activities:

“Trips to the beach at St. John’s, rollerblading, rock climbing...” listed **Meghan Glasgow ’16**, of White Bear Lake, MN.

Other opportunities arose as well. De Leon had the chance to participate in the College Bound canoe trip to the Boundary Waters the week before fall term started. He described it as “a week of nothing but wildlife at its finest.” It was an experience most people never get to have, De Leon pointed out, especially if they come from an urban neighborhood. “If I could do it again, I wouldn’t hesitate,” he added.

Students talked about the unique nature of the campus as an influence in their decisions to join the program. “There is something about this place that I can’t explain but all I know is that it makes you feel at home,” said **Shawnalea Chief Goes Out ’16**, who grew up in different locations across the western U.S., coming most recently from Ashland, MT. Similarly,

an attachment to the campus helped draw Glasgow. “I fell in love with the Abbey in 10th grade at a choir festival”, she confessed.

The FoCuS Scholars have a range of reasons for majoring in chemistry or biochemistry. Rusch, for example, wants to pursue graduate studies in biochemical engineering, whereas Keohan and Glasgow are considering careers in the health professions. For all of them, the FoCuS program has provided a valuable start. “I established a really good chem base,” said Keohan.

This fall, the group has the opportunity to build on that base in *Chem 250: Reactivity I*, the next course in the chemistry sequence. At the same time, they are developing peer leadership skills by TAing for sections of *Chem 125*. Whatever their ultimate destination, the inaugural set of FoCuS scholars are well on their way to forging indispensable skills as well as lifelong connections.

Arriving on campus early allowed students to bond over their studies as well as other activities.

My Summer Vacation

*Chem & Biochem Majors
and Minors Report Diverse
Experiences*



Humbert, Wissler,
Luke and Gerdes in
Ardolf Science Center

*Chem- and
biochem-related
jobs; shadowing
healthcare
professionals;
getting work
experience*

Marple & Saunders
(center) in geyser country



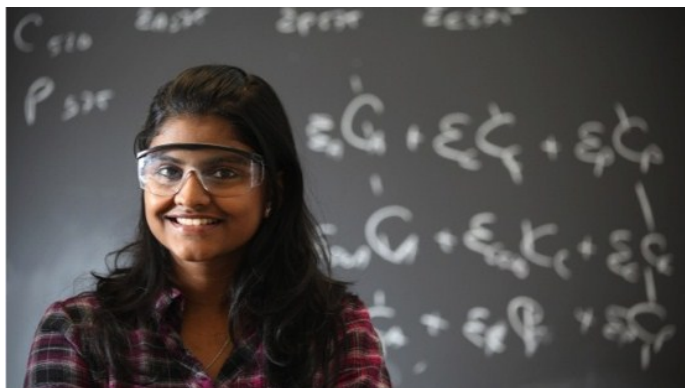
Krista Barzen-Hanson '13 had an internship at NASA Ames Research Center. Her project focused on the growth optimization of horizontal graphene films on Ni substrates using chemical vapor deposition. These materials have applications in ultracapacitors, photovoltaics, and DNA sensors. Barzen-Hanson also made a dye-sensitized solar cell using grown graphene on Cu as one of the electrodes. **Andrew Cascione '13** worked in the Ardolf stockroom. **Felicia Burns '13**

worked at the Collegeville Institute for Ecumenical and Cultural Research. She helped coordinate and conduct workshops for up-and-coming writers in the religious community. "I had the opportunity to meet so many interesting people from different parts of the world. It was definitely an amazing experience." **Daniel Neuberger '13** did research with **Dr. Alicia Peterson**. **Beth Grega '13** did research on tree swallows with Carol Jansky and Rachel Ziegler of the CSB/SJU biology department. Grega examined the aggressiveness of adult, female birds using neophobia and nest defense tests and then compiled the data into a scale. Aggressiveness was compared with brood sex ratios, determined by molecular methods, to check for a correlation. **Abby Gauer '13** spent her summer working as a pharmacy technician. "Job shadowing was good," said Gauer, "But a consistent job in the field I am interested in was a great way to see the day-to-day operations!" **Tyler Gerads '13** did research on nanoparticle synthesis with **Dr. Leo Seballos**. **Re-**

becca Henle '13 worked in the soil lab at Minnesota Valley Testing Labs. She was in charge of testing for sulfurs and nitrates, as well as reading for zinc and potassium using atomic absorption spectrometers, testing and counting nematode cysts, sample preparation, and other testing. I also spent a short time in the feed lab assisting with testing for fiber content. **Kate Kaiser '13** had the opportunity to do research in the Chemical Ecology Department at Mote Marine Lab in Sarasota, Florida. Kaiser's work involved determining the capabilities of a new instrument that will be used for water quality analysis and oil detection. **Jennifer Marple '13** and **Carla Saunders '14** spent the summer at Montana State University with **Dr. Nicholas Jones**, functionalizing dendrimers in the Cloninger lab. "It was an incredible experience," said Marple, referring to the lab work as well as weekend trips to "Bozeman beach", Mt. Sacajawea and Yellowstone Park. **Kathy Nystrom '13** returned from a semester abroad in Quetzaltenango, Guatemala. Afterward, she worked as

a camp counselor at Camp Buckskin for a second summer. Camp Buckskin specializes in serving kids of all ages with social, behavioral, and learning difficulties. "Even though the job is difficult at times," said Nystrom, "it is extremely rewarding." **Marissa Oram '13** studied abroad in Australia this spring (their fall). She then took physics as an ILP, volunteered under two veterinarians for about 50 hours and took the GRE, with the goal of applying for vet school in October. **Brandon Plante '13** interned in the Experimental Surgery department at the University of Minnesota. He was involved with anesthesia, blood tests, and was able to participate in a surgery. **Kyle Richards '13** did research in medicinal chemistry with **Dr. Ed McIntee**. **Lukman Sanusi '13** worked in the chemistry department with **Dr. Henry Jakubowski** on two lab development projects for Chem 203, Synthesis Lab. One of the projects was the transformation and expression of fluorescent proteins in *E. coli*. The second project involved synthesizing large unilamellar vesicles and labeling them with fluorophores. **Andre Washington '13** worked as a line and prep cook and a barback at the Amsterdam Bar in Saint Paul. **Haosen Wang '13** did research with **Dr. Brian Johnson** of CSB/SJU chem-

istry, working on the synthesis of a hexa-substituted benzene tripod ligand. The ligand is intended to bind to three Cu(I) ions and mimic the structure and behavior of the tricopper active sites in multicopper oxidases. **Paige Armbrister '14** worked as a stockroom assistant with **Nikki Jochman**, preparing various chemicals and also getting laboratory equipment ready for the fall semester. In addition, Armbrister acted as a TA for the FOCuS program with **Dr. Kate Graham**. **David Crotteau '14** and **Michael Humbert '14** did research with **Dr. Fazal**. **Autumn Flynn '14** worked with the chemistry department's **Dr. Mike Ross**, **Dr. M.A. Fazal**, **Dr. Leo Seballos** and **Dr. Richard White**. She worked principally on the development of Chem 204, Measurement Lab, as well as revisions to Chem 202, Chromatographic Purification Lab. She also helped **Nikki Jochman** in the stockroom, preparing samples for the Purification I & II Labs. **Harry Gerdes '14** did research with **Dr. Ed McIntee**. **Dinooka Jayasooriya '14** did research with **Dr. Kate Graham** and **Dr. Nicholas Jones**. **Hasini Kalpage '14** participated in molecular biology research at the University of Colombo, Sri-Lanka. She focused on cloning the bromelain gene present in pineapple to a prokaryotic



expression system. The bromelain gene expresses a variety of proteolytic enzymes that exhibit potential therapeutic activity. **Kaitlyn Lauer '14** did research on catalysts for environmental remediation with **Dr. Alicia Peterson**. **Ryan McMillan '14** did research in the chemistry department with **Dr. Amber Onorato**. He also spent spare time over the summer studying for the MCAT. This fall, he is abroad in Salzburg, Austria, taking German classes. **Miguel Mendoza '14** spent his summer at Penn State University studying atmospheric chemistry. He studied the effects of atmospheric acids on common mineral dust particles; these particles play a role in atmospheric ice nucleation, (continued on p. 10)

Kalpage

Researchers at
NASA, U MN,
Penn State,
Montana
State, Mote
Marine Lab
and more.

McMillan in
Austria.



Further Adventures of Chem and Biochem Students



Above: Pickthorn in Greece



Kaiser (above); Grega in the field (below)



(continued from p. 9) which in turn influences cloud dynamics. **Sean Pickthorn '14** researched renewable polymers in the Hillmyer lab of the Center for Sustainable Polymers at the University of Minnesota. He worked on the development of strong, renewable multiblock copolymers from polylactic acid and polybutadiene. Coincidentally, chemistry faculty member **Dr. Chris Schaller** was on sabbatical in the Tolman-Hillmyer lab at the same time. Sean is currently studying abroad in the Greco-Roman program.

Melissa Stuckey '14 worked with **Dr. Mike Ross** at CSB/SJU, developing procedures for high performance liquid chromatography-mass spectrometry (HPLC-MS) and solid phase extraction

(SPE). Her goal was to detect relatively low concentrations of pharmaceuticals in water using these methods. **Joe Wick '14** spent the summer in Dr. Richard Weinshilboum's pharmacogenomics lab at Mayo Graduate School's SURF Program. The lab aims to identify new drug targets for treating depression, and to better understand the mechanisms responsible for causing depression. Wick examined the role that genomic variations in drug transporter proteins play in determining patient response to treatment with selective serotonin re-uptake inhibitors. **Erin Wissler '14** worked with **Dr. Alicia Peterson** and colleagues in CSB/SJU Chemistry, developing experiments for Chem 203, Synthesis Lab. She adapted experiments in polymer chemistry and the synthesis of coordination compounds. **Gabe Amon '15** organized medical records at a clinic in Willmar and also worked at a gas station. **Alex Frie '15** worked in synthetic organic methodology with **Dr. Kate Graham** and **Dr. Nicholas Jones**.

Krystal Heinen '15 participated in the Tanzania Service-Immersion program this summer, a program coordinated with fellow Benedictine monastic sites there. Upon her return, she worked as a pharmacy technician, grocery and video clerk, and also handled data entry for a chiropractic center. **Clare Johnston '15** was the supervisor at the movie theater in her hometown, and also worked as an office assistant at the Law Office of Doar, Drill, and Skow. **Anna Luke '15** worked with CSB/SJU's **Dr. Ed McIntee** on revision of Chem 202 lab experiments, including TLC chromatography and Affinity Gel chromatography. She also worked in the Ardolf stockroom. **Marie Nilles-Melchert '15** worked for the Willmar School District, rode and showed her horse, was crowned queen of WillmarFests and attended other local parades and festivals as an ambassador for Willmar. **Jay Zachman '15** did medicinal chemistry research with **Dr. Ed McIntee**.

More Changes in Chem for 2012-13

(continued from p. 3) background for premedical and biology students. An early introduction of biochemistry was also a common theme.

CSB/SJU's curriculum was presented by **Dr. Chris Schaller**. The department's program begins with a course on Structure & Property Relationships, from atoms to molecules. A three-semester sequence on Reactivity introduces a number of key concepts in organic, inorganic and biochemistry in an integrated fashion. The first semester of this sequence was introduced in spring, 2012, with the remaining two coming online this academic year. A two-semester sequence on Macroscopic and Microscopic Chemical Analysis examines methods of analysis and its physical un-

derpinnings; the first of these courses will be taught in the spring of 2013.

There was considerable interest in **Dr. Kate Graham's** presentation on the new laboratory curriculum at CSB/SJU, with ensuing discussion that extended through an intermission. The separate laboratory curriculum aims to develop practical techniques and problem-solving skills. Purification 1 and 2, first taught in 2011-12, focus on standard benchtop purification techniques and chromatographic methods, respectively. Synthesis lab is new in fall 2012, involving experiments in organic, inorganic, polymer and biochemistry. A Measurement lab will be introduced in spring, 2013, with a focus on the acquisition and

Fall Events in Ardolf

Several chemistry-related events have been planned in Ardolf Science Center this fall.

- The Chemistry Club will be holding a meeting and social event on October 23rd.
- A chemistry advising session is planned for October 25th, 5:30-6:30 pm.
- A panel on graduate school, with participating alumni, is planned for November 1st, 7:30-8:30 pm.
- A panel on summer research programs, with participating students, is planned for November 7th, 5:30-6:30 pm.

Several events designed to help students plan ahead for spring semester and summer



Alumni Receive Awards, Pass Benchmarks in 2012

(continued from p. 12) cyclopropenimines. These compounds are strongly basic because they become aromatic in their protonated form, and Bandar has shown that they can catalyze reactions up to 800 times faster than other organocatalysts such as guanidines.

Kerry Bauer '09 has received an Indiana Clinical and Translational Sciences Institute Predoctoral Trainee

Award. The award includes an annual stipend as well as travel funds for attending a conference. Bauer is a graduate student in the lab of Professor Amanda Hummon in the Department of Chemistry and Biochemistry at the University of Notre Dame. Currently, she is examining the expression of a group of genes that are significant predictors of colon cancer relapse.

Daryl Fields '10 has passed his 2nd year medical licensing exam. Fields attends the University of Wisconsin-Madison.

Amy Hogerton '10 passed her admission to doctoral candidacy exam in chemistry at the University of Minnesota, where she is a member of Professor Michael Bowser's lab.



Alum Notes



News From Former Chem and Biochem Students

Jerry Droege '80 has passed away after a battle with cancer. A graduate of Washington School of Medicine in St. Louis, Droege trained in obstetrics and gynecology at Harvard Medical School and at Brigham and Women's and Massachusetts General Hospitals in Boston. After practicing medicine for a number of years, Boynton joined the research group of Professor William Boynton of the Lunar Planetary Lab at The University of Arizona in 2006. Droege's eclectic interests also included sailing and mountain climbing.

Thu Nguyen '03 has accepted an adjunct assistant professor position at Lake Superior State University in Sault Ste Marie, Michigan.

Alexi Young '04 and Jennifer (Fair) Young '03 have a new baby girl, Mina, born July 22nd.

Lisa (Ortgiesen) Engstrom '05 was awarded a Ph.D. in chemistry from the University of California, Davis, working under Professor Sheila David. Engstrom has taken a post-doctoral position in the laboratory of Professor Larry Que at the University of Minnesota.

Jeff Bandar '09's recent research was mentioned in the March 29, 2012 issue of *Chemical and Engineering News*. Working in the laboratory of Professor Tristan Lambert at Columbia University, Bandar has developed chiral organocatalysts based on *(continued on p. 11)*

The Cavendish Chronicle

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Story Credit: John Taylor, CSB/SJU chemistry & biochemistry students & alumni

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College of Saint Benedict /
Saint John's University

Grad Launch 2012

Chemistry and biochemistry seniors forge new paths in the world

Moses Adeagbo is working with the Benedictine Volunteer Corps in India. **Shirin DeSouza** is attending Loyola University Stritch School of Medicine in Chicago. **Khadija Fernandez** is a supervisor at National Broadcasting Network in Trinidad & Tobago. She also teaches classes leading to the Caribbean Advanced Proficiency Exam in chemistry. **Joe Gair** is teaching high school chemistry through the Benedictine Volunteer Corps in Tanzania. **Erin Karl** is working as a char-

tered nursing assistant in St. Cloud for the fall; in the spring, she will be doing volunteer work in San Lucas, Guatemala. **Jill Kerrigan** is in graduate school in environmental engineering at the University of Minnesota. **Aaron Koenig** is in graduate school in physical chemistry at the University of North Dakota. **Christine Lucachick** is in dental school at the University of Minnesota. **Ryan McCoy** is in the Doctor of Pharmacy program at Creighton University

(RyanMcCoy@creighton.edu). **Abi Passe** is in pharmacy school at Creighton University. **Danelle Rolle** is in the Ph.D. Program in medicinal chemistry at Purdue University. **Chris Seiler** is in graduate school in medicinal chemistry at the University of Minnesota. **Elana Simonson** is a full time volunteer Spanish translator and nursing assistant with the St. Joseph Worker Program. **Eric Uzelac** is in the graduate program in chemistry at North Dakota State University.