

Message from the Chair



Steve Gammon

Tufts. We are very excited about Amanda's return and anticipate that she will be as excellent a colleague and teacher as she was a student. Bernadette Davidson, our long-time program manager has moved to another position at WWU. Kate Blizzard has smoothly made the transition into this critical post. As you read the rest of the newsletter, you will be introduced to several of our Limited Term faculty. We have been very fortunate to have these talented individuals support our program through their outstanding instructional efforts.

In the previous newsletter I announced the impending renovation of the Chemistry Department during the 2009-2010 academic year. After having a few bumps in the road, we had to go back to the drawing board and take a different approach to the remodel project. Today, I am happy to report that bids for the redesigned project were accepted and the project is full steam ahead starting in June. We are all looking forward to the new classrooms, office, and research space that this project will afford.

News that extends beyond the halls of the Chemistry building includes the impacts of the economic downturn and the state budget. For those of you following the story of funding for higher education in Washington, the news certainly has been challenging. Higher education in Washington is sustaining budget reductions at the highest level in the country. As always, serving students at the highest level is the top priority of our department. In this regard, we have managed, at least to date, to avoid major cuts to our instructional program; we have been finding cost savings in other areas (such as an electronic newsletter!). As part of this cost saving strategy, we have put our faculty hiring schedule on hold; hopeful that when the economy improves we will be more prepared to fill the last couple of vacancies in our faculty roster. Because of the strength of the Chemistry students, faculty, and staff, I am optimistic that, even in the face of budget reductions, our program will continue to thrive throughout the coming months and years.

As always, we would like to see or hear from you. If you have any information that you would like to share with the department, or you need to update your contact information, please use our electronic form to send us your news (<http://carbon.chem.wwu.edu/AlumData>). The Chemistry Department continues to be deeply appreciative of your strong support of our educational mission and students.

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PLK Scholars Week Fund Drive

Scholars Week at WWU has emerged as the premier event for students to highlight their research work. The Chemistry Department has been an enthusiastic participant in Scholars Week since its inception. It is a tremendous experience for our students. Our program for that week is the most comprehensive and developed of any at WWU. An important feature of Scholars Week is to bring a distinguished scientist on campus for several days. This individual interacts with our students in the classroom, at a poster session, meals, and as the keynote presenter at an afternoon of student research presentations. Sustaining our Scholars Week program requires significant funds; we estimate that an endowment of \$100K is required to allow us to continue this program. Toward this end, I am pleased to announce that emeritus faculty

Don Pavia, Gary Lampman, and George Kriz ("PLK") have gifted \$30,000 to the Pavia-Lampman-Kriz Chemistry Endowment. Their generous contribution is a significant start toward meeting the \$100K goal.



We encourage you to contact the Chemistry Department if you have interest in joining Don, Gary, and George in supporting Scholars Week by making a contribution to this endowment.

Gary Lampman, George Kriz and Don Pavia

Morse Symposium

On April 4, 2009, the WWU Chemistry Department had the opportunity to honor Karen Morse for her contributions to the field of chemistry and the WWU Chemistry Department. By all accounts it was a tremendous success. Events included a luncheon, a symposium, and a celebratory dinner. Former students, colleagues, and chemist friends were able to paint a stunning picture of how Karen has had a significant and wide-ranging impact on the field of chemistry, chemists, and science education.



Karen Morse

Vyvyan Wins Elich Excellence in Teaching Award

Continuing the tradition of outstanding teaching in the Department of Chemistry, Professor James Vyvyan was honored by WWU with the 2008 Peter J. Elich Excellence in Teaching Award. The Elich Award is given annually to one faculty member from either the College of Science and Technology or the College of Humanities and Social Science. Professor of Chemistry George Kriz won the Elich Award in 2000, and Professor Emeritus Gary Lampman won the Outstanding Teaching Award for the College of Arts and Sciences in 1976, prior to the award being named for Peter Elich, professor emeritus of psychology and long-time Dean of the WWU College of Arts and Sciences.



Jim Vyvyan



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Bill Kindler



A faint breeze teases the surface of the small lake causing the lily pads to pulse in rhythm to the lapping waves. On the far side of the lake, two fishermen quietly move along the shoreline in a wooden boat searching for rising fish. The oarsman skillfully maneuvers the craft around fallen timber and snags, while the fisherman in the bow executes perfect casts. Nearly every cast is met with a fish eager to display its vigor and beauty when brought to hand beside the boat; the delicate “cuts” beneath the jaws are a burning orange in the sunlight filtering through the twilight sky

What, you might ask, does fishing and flowery prose have to do with the WWU Chemistry newsletter? The fishing vignette describes an evening that I was fortunate to spend with WWU Chemistry alumnus Bill Kindler ('65) this past July. The person executing the “perfect” casts (maybe just a bit of poetic license) was me and the skillful oarsman was Bill. The most notable feature of the evening was being able to fish in the stunningly beautiful Adirondack boat in the company of its creator. The story of how Bill and I came to share time on the water is notable and worth telling as an example of how the current faculty, staff, and students relish the opportunity to connect and reconnect with former students.

During the spring of 2008 Prof. Gary Lampman stopped by my office and mentioned that Bill Kindler, a former WWU Chemistry student, was planning to stop by and visit. Bill had not been on campus since his graduation in 1965! Therefore, Gary thought that Bill would enjoy meeting some of the current faculty and taking a department tour; after all, much has changed during the past 40 years.

Bill has many memories of his time spent at WWU that include outstanding faculty such as Professor Eddy who was instrumental in turning him on to chemistry; professors Neuzil and Besserman who pushed hard in the physical chemistry classes and in doing so, left Bill well prepared for the challenges of graduate school. There was a senior thesis project with Professor Clark that served as an introduction to The Institute of Paper Chemistry. Intertwined with the memories of courses and research are classmates Tom Hines, Don Norton, Alan Jacka, Barney Bournes, Bill Cannon, Jeff Hurlbut, and Myles Phipps.



Bill Kindler (cont.)

After graduation, Bill managed to chart a fulfilling and interesting path through life. Beginning the post-WWU journey was a PhD from The Institute of Paper Chemistry. Starting in 1970 and for the next 31 years, Bill worked in a variety of positions in the paper industry, which included being vice president of numerous operations and divisions of James River Corporation. He finished his career in the paper industry as the Vice President and General Manager of Rayonier's Specialty Pulp Division. Of paramount importance is that during this time he shared the adventures with his wife Trudy and two children.

After retirement in 2001, Bill and Trudy elected to settle down in the Port Angeles area. The limitless opportunities to wet a line in the local lakes and rivers have proven to be a powerful force that has bound Bill to that area and community. Bill and Trudy have emerged as important citizens in the region by supporting the Olympic Parks Institute and the Wild Fish Conservancy. Additionally, further afield, the Minnesota Epilepsy Foundation, the Wooden Boat Foundation, and WWU have benefited from their generosity. There are many other areas where Bill and Trudy have had a positive impact on people, land, and critters; their generosity to WWU is just another example of their good works.

Given Bill's background, it should come as no surprise that he responded enthusiastically to our offer for an opportunity to visit. Therefore, we arranged for Bill to meet with some faculty, observe students in the research laboratories, and become familiar with the "new" Chemistry building. As an added bonus, he was able to reconnect with former classmate Jeff Hurlbut. (Jeff is currently a temporary instructor.)

This visit was my first contact with Bill. During our conversation, I learned that Bill's motivation for returning to WWU was Professor Lowell Eddy, his freshman Chemistry instructor. Bill stated that Professor Eddy had played a critical role in igniting his passion for chemistry and learning. In tribute to Professor Eddy, Bill had planned on making a donation during his visit. However, after witnessing the vibrancy of the department, he wanted to learn about ways in which he could pay tribute to Professor Eddy and assist our students. Naturally, I was able to present several areas that would benefit from his support. The day ended with Bill stating that he would think about our conversations and get back to me about how he would like to contribute.

Soon after his visit, Bill indicated that he had decided to contribute funds in the name of Professor Eddy to support a summer research student. Thanks to Bill's generosity, this past summer Scott Delbecq worked with Professor Clint Spiegel in studying the atomic structure of a novel protein complex.

The Chemistry Department at WWU has a long and rich tradition of support from alumni, friends, and parents. These supporters contribute in a variety of ways and are critical to our mission of providing the best chemistry learning experience in the country. I chose to highlight Bill not for the size of the donation, but rather for the way in which it was made; we are eager for our alumni to follow Bill's lead to stop by for a visit to renew their ties to the department. Perhaps, like Bill, you will be inspired to play a role in the lives of the current and future WWU Chemistry students. The students, faculty, and staff delight in the prospect of meeting our former students and in so doing, become more connected to the legacy of success of WWU Chemistry.



New Faculty and Staff

Kate Blizzard joined the office team as the Department Secretary/Advising and Registration Coordinator in November 2008, coming to us from the WWU Foundation. She is originally from Homer, Alaska. Kate earned an Associate of Arts degree from Treasure Valley Community College in Oregon, and has lived in Bellingham for more than a decade.

A portion of Kate's time as the front desk "triage" person is spent assisting students with a variety of things including several aspects of the registration process. She is also involved with chemistry major and minor evaluations. She appreciates the opportunity to work closely with students in helping them to achieve their educational goals.

When away from work, Kate spends time with her son Konnor and their dog Max exploring Bellingham's parks and trails. They especially love the waterfront and anywhere that good rocks can be found. Her interest in rocks is fostered by being an active member of the Mt. Baker Rock and Gem Club.



Kate Blizzard



Carley Chandler

Carley Chandler joined the department in fall 2008 as a visiting assistant professor in organic chemistry. She was born and raised in Tennessee and obtained her BS in Chemistry at Tennessee Technological University in 2002. Carley attended the University of Colorado, Boulder for her graduate work, and earned her PhD in Organic Chemistry in 2006. Her doctoral work with Professor Andrew Phillips centered around the broad topic of the synthesis of complex marine natural products. After completing her PhD, Carley was a postdoctoral fellow at the Max-Planck-Institut für Kohlenforschung in Mülheim an der Ruhr, Germany with Professor Benjamin List. Her postdoctoral research was in the field of organocatalysis, and focused on developing new methodology involving proline-catalyzed reactions and their application to natural product synthesis.

Carley is currently teaching organic chemistry here at Western. She and her husband Greg O'Neil (also on the Chemistry faculty) are looking forward to exploring the Pacific Northwest. They enjoy hiking, biking, camping, and skiing and hope to add kayaking to their list of outdoor activities.

New Faculty and Staff (cont.)



John Gilbertson

John Gilbertson joined the department in fall of 2008 as an assistant professor in inorganic chemistry. John grew up in Sioux Falls, South Dakota where he completed his BA in Chemistry at Augustana College. For his graduate work, John attended the University of Oregon where he worked with Professor David Tyler. His doctoral studies involved investigations of the coordination chemistry of water-soluble iron phosphine complexes, and the utilization of those complexes in the laboratory fixation of atmospheric dinitrogen. After completing his PhD, John accepted a postdoctoral research associate position with Professor Bert Chandler at Trinity University in San Antonio, Texas. During his postdoctoral work he investigated the synthesis and catalytic properties of dendrimer encapsulated nanoparticles. This work provided insight into the materials side of inorganic chemistry. After the two-year stint in the scorching Texas heat, John returned to his alma mater, Augustana, for a one-year visiting assistant professor position where he taught the general, qualitative inorganic, and advanced inorganic chemistry sequences. The winters were a little colder than John remembered so he is happy to be residing in the more moderate climate of the Pacific Northwest.

Research efforts in the Gilbertson group are focused on two areas. One involves the utilization of the secondary coordination sphere of coordination complexes to tune their reactivities. The other area of interest is converting CO₂ into a useable feedstock such as methanol. In particular John's group is investigating the use of Cu and Cu-based mono- and bimetallic nanoparticles for the CO₂ to methanol conversion.

His spare time is spent producing a few good homebrews.

Tara Hagena joined the teaching staff in fall 2008. She was born in Michigan and moved to Arizona with her family when she was in middle school. She earned a BS in Chemistry from Arizona State University. During that time, Tara joined the research group of Professor Skibo and synthesized single and double ¹³C-labeled aziridiny semi-indoloquinones as potential anti-tumor agents. She then received her PhD in 2008 from the University of Michigan where she was in the lab of Professor Coward. Her research included fluoridolysis and acid-catalyzed C-glycosylation on glycosyl epoxides to synthesize (5-F) and (5-CN) glycosides as mechanistic probes of carbohydrate-metabolizing enzymes. In addition to research, Tara served on many student committees and also was the College of Pharmacy NMR assistant.

During her spare time, Tara likes to hike, bike, cook and bake. Tara and her husband Jonathan, a mechanical engineer, enjoy living in the Pacific Northwest and participating in many different outdoor activities together. They can also be found cheering on the Michigan football team on fall Saturdays



Tara Hagena

New Faculty and Staff (cont.)

Janelle Leger joined the faculty as the first of three hires that will occur in the new Advanced Materials Science and Engineering Center (AMSEC). She joins 17 faculty from Chemistry, Physics, Geology, and Engineering Technology who are current members of the AMSEC team. While Janelle is part of AMSEC, her appointment is shared by two departments, Physics and Chemistry, with Physics being her primary department.

Janelle has been slowly working her way along the west coast since college, completing her undergraduate work in Physics and Mathematics at UC Davis. She received her PhD in Physics in June 2005 from the University of California at Santa Cruz, where she studied "The Doping and Optical Properties of Light-Emitting Polymer Materials and Devices". Also during her graduate studies she worked as a Research Scientist at Add-Vision, Inc. in nearby Scotts Valley, CA, where she helped to develop a method for screen-printing organic light-emitting devices. Her most recent appointment was at the University of Washington, where she was a NSF Discovery Corps Postdoctoral Fellow in the Department of Chemistry.



Janelle Leger

At Western her research will focus on organic and hybrid materials for electronic and optoelectronic devices including, for example, light-emitting diodes, solar cells, and transistors. Her research group is growing, with three research students busy helping her build her lab. She is also very interested in developing curriculum at the interface of materials, chemistry, and physics, and is currently working on developing courses for Western's new interdisciplinary minor in Materials Science.

Janelle is also the busy mother of a 5-year-old girl who is currently planning to be both a scientist AND a princess when she grows up. That, or a hockey player. They are enjoying exploring Bellingham together.



Greg O'Neil

Gregory O'Neil joined the department in fall 2008 as an assistant professor in organic chemistry. A native of New Jersey, Gregory obtained his BS degree in Chemistry at Boston College in 2002. He attended the University of Colorado, Boulder for his graduate work, and earned his PhD in Organic Chemistry in 2006. His doctoral work with Professor Andrew Phillips involved the development of new titanium methods for the synthesis of polyketide natural products.

After completing his PhD, Gregory was an Alexander-von-Humboldt postdoctoral fellow at the Max-Planck-Institut für Kohlenforschung in Mülheim an der Ruhr, Germany with Professor Alois Fürstner. His postdoctoral research focused on the synthesis of a complex marine natural product named spirastrellolide A. Gregory is currently teaching organic chemistry here at Western while initiating his own research program in organic synthesis.

He and his wife Carley Chandler (also on the Chemistry faculty) are looking forward to exploring the Pacific Northwest and enjoying the many outdoor activities the area has to offer.

New Faculty and Staff (cont.)

Serge Smirnov joined the department in fall 2008 as an assistant professor in biochemistry. He was born in Russia and obtained his college degree with a double major in Applied Physics & Mathematics and Molecular Biophysics at Moscow Institute of Physics and Technology in 1990. Serge attended graduate school at State University of New York at Stony Brook where he received his PhD in Molecular Pharmacology in 2000. His doctoral research in the lab of Professor Carlos de los Santos focused on structural characterization by NMR of DNA duplexes with carcinogenic and synthetic nucleotides.

After completing his PhD, Serge worked at the Center for Genome Research, Whitehead Institute / M.I.T., Cambridge, Mass. where he designed software for automated annotation of newly sequenced bacterial, fungal and mammalian genomes. Following that, Serge decided to pursue an academic faculty career in structural biology and biomolecular NMR. He joined the lab of Professor Rafael Brüschweiler at Clark University, Worcester, Mass. as postdoctoral scientist to work on “covariance NMR”, a novel approach for delivering biomolecular NMR data of higher sensitivity and resolution. Serge did his second postdoctoral at Boston University School of Medicine where he eventually became a Training Fellow receiving support from the Whitaker Cardiovascular Institute. During this time, Serge worked in the group of Professor C. James McKnight where he uncovered new structural elements and dynamics features of the protein villin, a modular, multi-purpose regulator of the cytoskeleton.



Serge Smirnov

Serge currently teaches biochemistry and general chemistry while initiating his research program at Western. At the moment, he has one graduate and five undergraduate students working with him. The main research focus in Serge's lab is on deciphering the three-dimensional structure, dynamics, and biological function of novel modular proteins regulating actin and myosin II.

Being new to Bellingham, Serge and his wife Tatiana are busy helping their four-year-old daughter Dasha prepare for school starting next year. Their older sons, Kirill and Alex, are college students now. Serge and Tatiana enjoy many outdoor activities. They are looking forward to hiking in the area with a favorite DSLR camera “for her” and an 8x-binocular “for him” to use in capturing spectacular Northwest views.



Spencer Anthony-Cahill Update

This past year the Anthony-Cahill group has worked hard to characterize permuted hemoglobins and establish conditions for the production of ^{15}N -labeled myoglobins for NMR studies. They have also expressed, purified, and characterized novel fibril-forming proteins that display electron carrier domains. The progress in both areas has been encouraging.

Outside the lab Spencer continues to work on developing a solid layer of scar tissue (mostly from mountain biking injuries) and, more recently, on the operation of a dedicated Aikido Dojo. The Kulshan Aikikai Aikido Dojo opened in September of 2008 and hosted a visit by Master Zenko Okimura in November. Some chemistry students have stopped by to check out the fun, and you can too: www.kulshanaikikai.org. Gary Carlton is also an instructor at the Dojo and in addition to teaching Aikido classes, he handmade all the wooden racks and benches in the new facility.



Steven Emory Update

Prof. Steven Emory is spending the 2008-09 academic on sabbatical leave at, of all places, Emory University. Actually Steve is working at the Emory-Georgia Tech Cancer Nanotechnology Center that is a joint program between Emory University and Georgia Tech, which are both located in Atlanta, Georgia. Steven is taking this opportunity to learn some new science and to get back into the lab to do some real chemistry. He is currently synthesizing luminescent cadmium selenide nanoparticles (a.k.a. quantum dots) that are being used as optical labels for cancer imaging and detection. This fall he worked with a team of engineers to design and build a prototype imaging system that can be used in an operating room to image cancer tumors labeled with the luminescent quantum dots. This system will assist cancer surgeons in identifying and removing tumors from patients. The emphasis on biomedical engineering and applications is a new research area for Prof. Emory. He is pursuing funding from the National Institutes of Health (NIH) and the American Cancer Society to continue this new research when he returns to Western in the fall of 2009.

During his leave, Steven has continued his lunch-time running, albeit without his cohorts Prof. Clint Speigel and Scott Wilkinson (BS '03, MS '06). Steven and his wife Christy are both training for the Georgia Marathon which will be held on March 29, 2009. Their children (Aili 10, and Alec 6) have adjusted well to their new school in Atlanta and enjoy the weekend excursions to places like Piedmont Park, World of Coca-Cola, Graceland, Georgia Aquarium, Monster Jam, Kennesaw Mountain, Carter Center, and the Big Pig Jig. This spring the family is planning a trip to the Grand Ole Opry in Nashville, Tennessee. Steven is also planning to attend the PhD thesis defense at Georgia Tech of his former undergraduate research student, Christina Hampton (BS '02).



George Kriz Update

With the retirement of Don Pavia, Gary Lampman, Mark Wicholas, and others, George is now the “old man” of the department. But that’s OK – he still is having fun coming to work, teaching his classes, working with students, and interacting with his faculty colleagues. George takes great pride in looking back over the 42 years since he was a youngster joining the faculty and seeing how far our department has come. He is very proud of the program and is delighted with the quality of the faculty (even though most of them seem so young).



George continues at his usual post, teaching the organic chemistry series. He gets as much pleasure out of this as always. He also supervises a few students each quarter in individual research projects.

Recent highlights have included supervising two graduate students and taking on a new responsibility on campus. George was advisor for Sian Thornton’s MS dissertation project, which was to develop an entirely “green” organic chemistry laboratory curriculum. This proved to be a challenge, but in the end it was quite rewarding. Additional student projects continue to spin off from this original work.

George was also advisor for Natalia DeKalb Dunn’s dissertation. Her project was aimed at developing a system whereby chemistry programs at underfunded institutions would be able to gain access to Western’s high-field NMR instruments from their own location, with their real samples, in real time. This system relies on Western’s Integrated Laboratory Network – a special development by Devon Cancilla and others. It would certainly be worthwhile if organic chemistry classes at local community colleges or tribal colleges could have access to the same instrumentation as our own students.

In the Fall of 2007, George took on the role of Director of Pre-Healthcare Professions Advising. This includes responsibility for all pre-medical, pre-dental, pre-pharmacy, pre-veterinarian, and pre-optometry advising for the campus. Up to that time, the advising for these pre-professional students had fallen into some disrepair, owing to lack of funding and resources and some key retirements. George’s assignment is for one-third of his time to be spent in advising, developing connections with local professionals, presenting lectures, and meeting with other advisors and admissions officers. The results have already been very positive – the success rate of Western students applying to healthcare programs has jumped considerably. George now has a second office in the Career Services Center which is his advising headquarters.

George and Carolyn live in Everson, about 20 miles from campus. They enjoy living in the country, but the commute is getting to seem long! With their blended family, they enjoy six grandchildren, with one more on the way. For fun, George sings in two choral groups in the Bellingham community, and he continues to struggle with his golf game.

Life at Western has been very good – George considers himself to be extremely lucky to be part of such a wonderful program and to be living in this great community. Thanks to all of the terrific students who have passed through his office doors for so many years!



2007 / 2008 Chemistry Awards

Outstanding Chemistry Department Graduate
Anna Asmundson

Chang Memorial Biochemistry Award
Matthew Holt

Hypercube Scholar
Brendan Abolins

Outstanding Analytical Student
Liza Koren-Selfridge

Outstanding Organic Series Student
Derek Paul

Outstanding General Chem Honors Series Student
Casey Mapes

CRC Press Freshman Chemistry Award
Gregory Horning

Advancing Chemistry Through Service
Brooks Ohlson
Rebecca Swanson



From Left -Front Row: Rebecca Swanson, Casey Mapes, Liza Koren-Selfridge, Derek Paul, Anna Asmundson. Back Row: Gregory Homing, Brendan Abolins, Brooks Ohlson, Matt Holt.

2008 / 2009 Scholarship Recipients

Knapman Senior Renewal
Karla Slenkamp

Knapman Junior Scholarship
Bryan Ager

Barbara French Duzan Biotechnology
Peter Littlefield
Alexandria Taber
Hayley Wall

Ruth Watts Female Research Scientist
Liza Koren-Selfridge

Jerry Price/Nancy Sherer
Heidi Dimmitt

Verna A. Price
Sarah Mohn

Chemistry Fund
Jennifer Novotney

Tuition Waiver
Cameron Moore
Cameron Murphey

Hach Scientific Foundation Chemistry Teaching
Rose Elkins
Jason Fortner

Paul Woodring Scholarship
Hayley Wall



From Left -Front Row: Heidi Dimmitt, Alex Taber, Karla Slenkamp, Liza Koren-Selfridge. Middle Row: Haley Wall, Jenny Novotney. Back Row: Sarah Mohn, Bryan Ager, Cameron Moore

Outstanding Chemistry Graduate



Anna Asmundson

The graduating class of 2008 included many talented students. Among that group Anna Asmundson stands out. During her time at WWU Anna distinguished herself in the classroom, and as a result, she received three competitive academic scholarship awards: the Ruth Watts Female Scientist Award, the Women in Science Scholarship, and the award for the Outstanding Analytical Chemistry Student. Anna was also an exceptional student in the research arena. In the Fall of 2006 she joined the Anthony-Cahill lab and began work on the expression and characterization of a mutant hemoglobin that may eventually be useful in the design of an improved blood substitute. Anna made spectacular progress in the lab, and she presented her work on several occasions. She represented WWU at a regional conference of undergraduate researchers (sponsored by the Murdock Charitable Trust), and she presented her data at the Protein Society Symposia in 2007 and 2008. At the 2008 Symposium her work was selected for oral presentation in a session on undergraduate research. Anna's contributions in the research lab led to a manuscript entitled "Co-expression of human α - and circularly permuted β -globins yields a hemoglobin with normal R state but modified T state properties" which is currently under peer review. The Chemistry Department recognized Anna's achievements by selecting her as the 2008 Outstanding Graduate in Chemistry/Biochemistry. We are very proud of her, and all the graduates from our department who represent WWU Chemistry and Biochemistry so well!

Anna is currently a PhD student in the Molecular and Cellular Biology program at the University of California, Berkeley. We wish Anna the best and hope that we will see her often when she comes back to Bellingham to visit her family.

Lowell Eddy Fellowship



Scott Delbecq

In June 2008, Scott Delbecq received the inaugural Lowell Eddy Memorial Fellowship for summer undergraduate research. Scott performed research with Prof. Clint Spiegel using x-ray crystallography to study the atomic structure of a novel protein complex that was computationally designed in Prof. David Baker's laboratory at the University of Washington. Currently, Scott is completing a comprehensive research project that has entailed using molecular cloning techniques, protein chemistry, and x-ray crystallography. Results from Scott's research led to the determination of the structure of one of the proteins in the complex at atomic resolution. That was a first here at Western Washington University! His most recent work during the academic year has been focused on determining the dimeric structure of the new complex. He presented his results at the Volcano Conference in Bio-organic Chemistry at the end of February 2009.

During his years as an undergraduate at WWU, Scott has been very active in the Chemistry Department, both as a teaching assistant for the last two years (assisting in general, organic, and biochemistry labs), and working on a separate research project in Prof. Gerry Prody's lab studying pistil growth in petunias. Scott is a native of Bellingham who has always had a love for science and the outdoors. Some of his favorite activities are bird watching, rock climbing, snowboarding, and fly fishing. On the weekends, Scott performs volunteer work to maintain native wood duck and owl populations in Whatcom County. The learning opportunities and the exposure to research and teaching Scott has had in the WWU Chemistry Department have been influential in setting his career goals. He is planning on attending graduate school in biochemical sciences next year.

Sea Bong Chang Award



Matt Holt

Matthew Holt was selected by the faculty to receive the *2008 Sea Bong Chang Award* as the out-standing biochemistry major. Matt was a student who truly excelled in both the classroom and research laboratory. To begin, he was among the very first group of students to enroll in Western's newly created honors chemistry course. He distinguished himself in this very challenging course and immediately started research in Prof. Emory's group after his freshman year. Matt's undergraduate research project involved the synthesis and characterization of magnetic core-shell nanoparticles (iron oxide cores coated with silica and gold layers) with unique surface-enhanced optical properties. He presented his research findings at numerous conferences, including two national meetings of the American Chemical Society (Chicago, Spring 2007 and New Orleans, Spring 2008). In addition, his work has recently been submitted for publication by Prof. Emory to *Chemistry of Materials*, an ACS journal.

After graduating from Western in the spring of 2008, Matt enrolled at Rockefeller University to pursue graduate studies in biochemistry. He recently joined the research team of Prof. Tom Muir and is currently investigating post-translational ubiquitination of histones. This is a significant departure from his undergraduate research interests and is a strong testament to Matt's passion for scientific discovery. All of the faculty at Western are proud of Matt and his accomplishments. We wish him well in his future endeavors.

Class of 2007 / 2008

Congratulations to our graduation class of 2007/08. Graduation honors and immediate post-graduation activities, as known to us, are listed after each graduate's name.

MS Chemistry

Natalia DeKalb	Chemistry Instructor, Skagit Valley College
Laura Dettinger	Research Associate, Medimmune
Dan Finley	PhD Program in Chemistry, Univ. of Cal. Berkeley
Rebecca Swanson	Secondary Ed Certification Program, WWU
Erik Werner	PhD Program in Chemistry, Univ. of Utah

BS Chemistry and ACS Certification

Brendan Abolins	Chem. Dept. Res. Honors; Magna Cum Laude; PhD Program in Theoretical Chemistry, Univ. of Cal. Berkeley
Rachel Adams	
Gretchen Bartelson	Magna Cum Laude; Organic Chemist, Edge Analytical Lab, Burlington
Cynthia Cobb	
Courtney Engles	MS Program in Chemistry, WWU, Vyvyan Lab
Julia Ferris	
Angela (Munson) Frohman	Research Associate, Syntrix Biosystems, Auburn
Carrie Getz	Preparation Analyst, Pace Analytical Services, Seattle
Matthew Hamblin	Metals Prep Technologist, Analytical Resources, Tukwila
Heather Hanson	
Soontak Kim	
Travis McMahon	PhD Program in Organic Chemistry, Colorado State Univ.
Adam Morris-Cohen	PhD Program in Chemistry, Northwestern Univ.
Jonathan Pittman	PhD Program in Organic Chemistry, Univ. of Oregon
Kenneth Quayle	Process Chemist, Saltigo
Daniel Shaw	MS Program in Chemistry, WWU, Patrick Lab
Laura Steffens	Chem. Dept Res. Honors; PhD Program in Organic Chemistry, Univ. of Utah
Tuan Truong	PhD Program in Chemistry, Florida State Univ.
Betty Vordahl	Chemist, Edge Analytical
David Winter	

BA Chemistry

Un Oh

BA ED Chemistry/Mathematics

Alison Dickinson



Class of 2007 / 2008

BS Biochemistry

Lindsey Anderson	Technician, Seattle Eye Clinic
Anna Asmundson	Chemistry Dept Outstanding Graduate Award; Chem. Dept. Res. Honors; Magna Cum Laude; PhD Program in Mol/Cell Biology, Univ. of Cal. Berkeley
Danielle Conrardy	applying to medical school
Paul Craig	MS Program, Boston Univ.
Angela Fielder	applying to medical school
Ryan Gallagher	
Gregory Gipson	Biochemist, Siemens, Berkeley, CA
James Hall	MS Program in Chemistry, WWU, Anthony-Cahill Lab
Aaron Hicks	
Nick Hoisington	
Matthew Holt	Chang Biochemistry Award; Chem. Dept. Res. Honors; Magna Cum Laude; PhD Program in Chemical Biology, Rockefeller Univ.
Rebecca (Brown) Krefl	Lab Technician/Chemist, Meridian Valley Laboratory
Kyle Langowski	
Brittany Lapham	
Junwen Law	applying to medical school
Chelsea Layes	
Tyler Mamiya	School of Pharmacy, Univ. of Wash.
Brooks Ohlson	Medical School, Univ. of Wash.
Lauren Retallack	Univ. Honors Program; Cum Laude; Vet. Med. School, Wash. State Univ.
Thomas Rogers	applying to medical school
Kasse Rupp	Research Assistant, Seattle Institute of Biomedical & Clinical Research
Jonathan Sage	PhD Program, Univ of Oregon
Nick Sary	Sales Representative, Bellevue Healthcare
Katelin Tasa	MS Program in Mathematics, WWU
Jacob Yeager	Chemist, Puget Sound Naval Shipyard



Chem Club Receives ACS National Award

The Chem Club at Western Washington University, a student affiliates chapter of the American Chemical Society (ACS), has developed a tradition of excellence since its formation in March of 1969. In 2008, the Chem Club received its first *Commendable Chapter Award* from the ACS in recognition of its outstanding activities and efforts. Nationally, only 68 other ACS student affiliates chapters received such distinction for the 2007-08 academic year. In addition, the club received its first *Green Chemistry Chapter Award* for its efforts to promote the integration of environmentally-benign technologies in academia and industry. These awards mark the eighth consecutive year that the ACS has recognized Western's Chem Club. The ACS formally recognized the club in *Chemical & Engineering News* and in *Chemistry* magazines. The student chapter also received an award plaque at the 237th ACS National Meeting in Salt Lake City, Utah on Sunday, March 22, 2008.

Brooks Ohlson, biochemistry major from Everett, Washington, was president of the 2007-08 Chem Club. The *Commendable Chapter Award* stems from his submission of the student affiliate chapter annual activity report. Brooks is now a first-year medical student at the University of Washington. Current Chem Club president Erin Gleason, from Fairbanks, Alaska, will accept the 2007-08 awards on behalf of the Chem Club in Salt Lake City, Utah.

Prof. Emory and Prof. Raymond were co-advisors for the 2007-08 Chem Club. Both are very proud of Western's Chem Clubs past and present. "Like science, the Chem Club builds on the efforts of its predecessors. Over the years students have established traditions like the Annual Department Picnic and Science Day for Elementary Students that current students continue to organize and refine. As an advisor, I am thankful to be involved with such a dedicated, creative, and fun group of students," Prof. Emory said.

The primary goals of Western's Chem Club are: 1) to serve as a resource for students during their undergraduate and/or graduate careers at Western, 2) to create a fun-loving community for students involved in the Chemistry Department at Western, and 3) to promote chemistry in the broader community. Activities such as the Annual Department Picnic, informational seminars, Bowling for Chemistry, 80's Night, industry tours, lunch with invited speakers, conference travel, Scholars Day, Wizards@Western, and Science Badge Day for Girls Scouts are designed and organized to meet these objectives.

If you have any questions or suggestions, please feel free to contact the 2008-2009 Chem Club Advisor, Prof. Raymond at braymond@chem.wvu.edu or 360-650-3134.



Happy Valley Elementary Students Visit



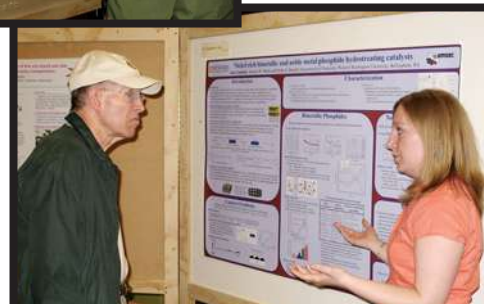
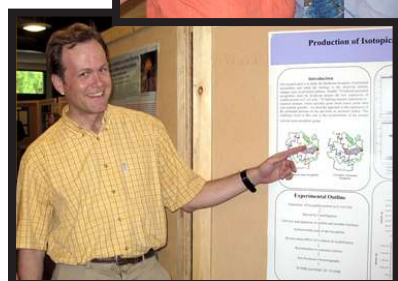
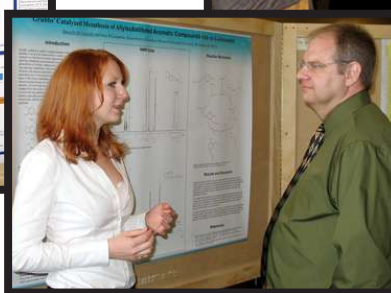
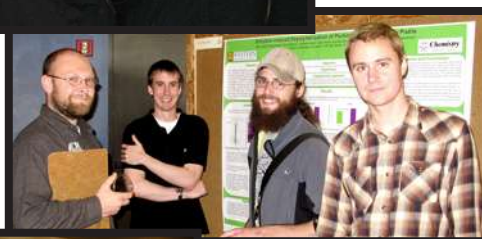
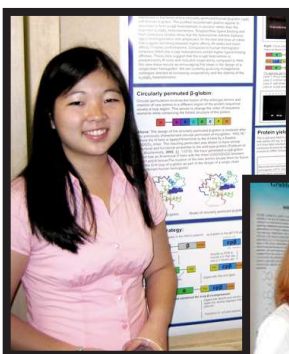
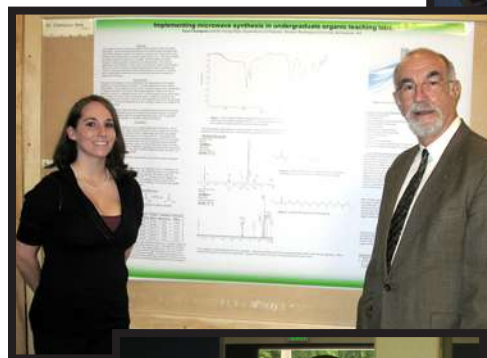
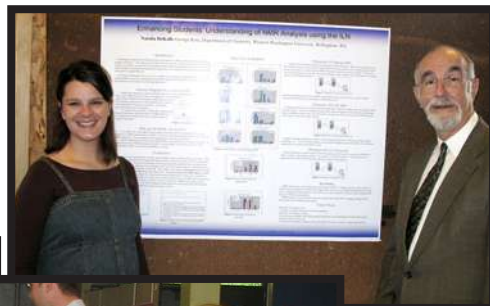
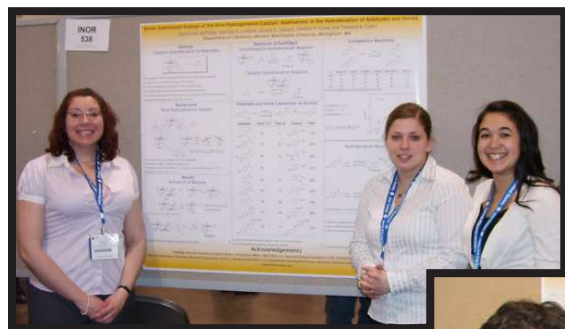
Girl Scout Science Badge Day



Scholars Day Colloquium

Our annual Scholars Day was held on May 23, 2008. There were 35 undergraduate posters, 7 graduate posters, and 4 Honors oral presentations. The keynote speaker was Charles P. Casey, Emeritus Professor of Chemistry, University of Wisconsin – Madison. His talk was entitled “New Hydrogenation Catalysts and New Mechanisms for Hydrogenation.”

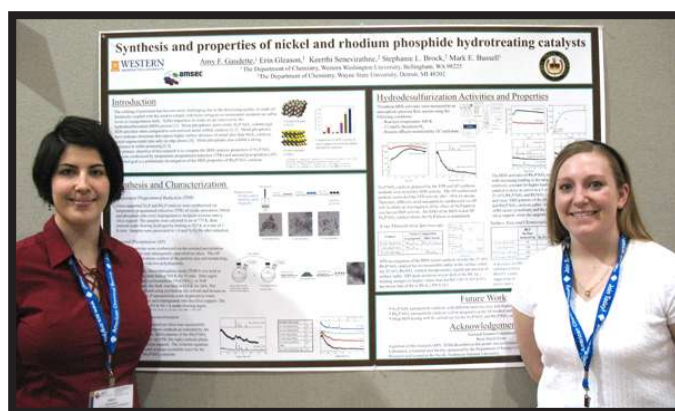
Our next Scholars Day will be held on May 22, 2009 and our keynote speaker will be Rachel Klevit, Professor of Biochemistry, University of Washington. Her talk is entitled “What Biochemistry and Structural Biology Reveal about the Breast Cancer Susceptibility Protein, BRCA1.”



Vyvyan Group at ACS National Meeting 2008



Bussell & Clark Groups at ACS National Meeting 2009



Thank You to Chemistry Dept Donors

We wish to thank the following alumni and friends of the department who donated to the following Chemistry Department Western Foundation Funds during the 2007/08 academic year. Employers that matched donations are noted in parenthesis following the donors' names. Donations during the past year funded a variety of activities, including scholarship matching, academic awards, undergraduate research projects, small equipment purchases, and events for department majors and alumni.

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Chemistry Building Addition

The Chemistry Building Addition and Exterior Improvement Project is currently in design. This project will provide an elevated two story addition on the west side of the Chemistry Building. In general, the project creates a collaborative configuration of Chemistry and Biology research space, relocates the Chemistry Department administrative area and provides a new classroom and computer lab. Interior improvements to the existing building are also included.

Construction work is scheduled to begin late this summer and continue into next year. The facility addition and interior improvements will be open for Fall Quarter 2009.

