chemistry wwu

Newsletter for Alumni and Friends

Message from the Chair

Steve Gammon

As I write this message, we are finishing up the first day of classes of Spring quarter. As with the start of any quarter, there is a sense of excitement of the possibilities of what will be learned in the lab, classrooms, athletic fields, and from the interactions with the people who are part of the WWU community. It is this excitement that motivates each of us to do the outstanding job of educating students that is the Western tradition.

This past year has brought several personnel changes to the department; the most significant being the retirement of Denice Hougen in January. Denice, with her 30+ years of tenure in the department, managed to have a substantial and lasting impact on everyone, and I mean everyone, in the department. There is an article on page 2 that provides glorious examples of how important Denice is to our departmental community. On a personal level, I greatly appreciate her patience, kindness, and willingness to educate the inexperienced chair about the ways of managing the department.

I am pleased to announce that we have made a successful faculty hire. Dr. John Antos will be joining the faculty as an organic chemist. John joins us from a position at a biotechnology company in the Seattle area. Incidentally, he is the husband of Professor Amanda Murphy. John is excited about working at WWU, and Amanda has let me know that she is excited about not having to commute from Everett every day. (I think that Amanda continues to be excited about working at WWU as well!)

In addition to the departure of Denice, Kate Blizzard, our program coordinator, took a promotion to become the Administrative Services Manager in the Department of Communication Sciences and Disorders. Kate did an excellent job serving our students, and we wish her great success in her new position. With the departure of both Kate and Denice we now have two new faces in the office. Sara Young is the new department manager, and Karen Smith is our new program coordinator. Both Karen and Sara are new to WWU, but bring a wealth of relevant experience to our operation. Colin Hanson (WWU 2011) is currently filling in as our Instrument Technician. He replaces Wendy Schatzberg (WWU 2001) who left in December to pursue a postdoc in chemical education. When you are in the department, please stop by and introduce yourself to Karen, Sara, and Colin.

People are the most important part of our organization. We are very fortunate to have had an abundance of wonderful talented people, past and present, choose to work in the department. We are equally fortunate to have a wonderful group of students past and present who motivate us to be excellent in all that we do. As you read this newsletter, we hope that you take a moment and reflect upon the people in the WWU chemistry family who supported your aspirations.

Best wishes to all of you!

Steve

inside:

Denice Hougen Retires

Denice Ambrose Hougen grew up in the South Fork Valley of Whatcom County, in the shadow of the Twin Sisters. (As she later learned in geology class at WWU, they are the largest extrusion of olivine on the North American continent; being a science nerd she was delighted to collect that factoid about the "mountains in the backyard.") Denice attended Mt. Baker High School where she was a cheerleader ("no sports for girls in those pre-Title VII days") and played the tenor saxophone in the marching band. She fell in love with a football star, Joe Hougen, and married him in 1972 after completing bookkeeping training at Bellingham Technical College so that she could work and put him through college. Following that, she planned to come to WWU as a biology major. That first period as a WWU student in the mid 70s was short-lived. Financial reasons took Denice back into the business world, but it was long enough for her to complete initial course sequences in biology and general chemistry ("Dr. Neuzil is the best!"), which instilled her lifelong love of science.

Denice Hougen

In 1980, Denice accepted a position on campus in Career Services as part of a plan to be able to work on her own degree on a part-time basis, this time with a switch to business administration as a major. When the long-time secretary of the Chemistry Dept retired later that year, Denice was quick to transfer to the position, allowing her to return to the science arena, this time as a staff member rather than as a student. She graduated with honors in 1985 and was also selected as the outstanding graduate in the Dept of Management. However, her most cherished memory of graduation was not of her graduation honors but rather the standing ovation she received from the Chem Dept graduates as she walked across the stage at the graduation ceremony in Carver Gym.

In 1986, after retirement of the Chemistry Dept Manager, Denice assumed that position while also enrolling in the WWU MBA program which she completed in 1988. At that point she decided to remain with the department rather than reenter the business working world so that she could "practice her vocation in her area of avocation." And she readily admitted her addiction to students!

Denice was an integral part of the department for over 30 years, where she helped it grow from occupying a single floor in Haggard Hall (those WERE the good old days), to occupying the chemistry building, which occurred in 1993. She was the go-to staff member, covering both the duties of her own position and often the duties of other staff positions during times of vacancy. She also served on numerous university committees, and was honored in the year of inception with one of the President's WWU Staff "Exceptional Effort" awards.

Unfortunately, Denice was forced into early retirement at the end of December 2011 when she was diagnosed with amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig's disease, which is a disorder of the nerve cells in the brain and spinal cord that control voluntary muscle movement . She is greatly missed by students, staff and faculty here. She is at home with her 2 kitties, Leo and Mouse, and is busy (of course) catching up on her reading. She also is travelling vicariously on the internet and looking forward to an extensive road trip to the

Denice Hougen Retires (cont.)

Utah Canyonlands with her husband this upcoming May. Denice also enjoys hearing from former work colleagues and students. If you would like to contact her directly, her email address is denicehougen@yahoo.com . Although her 90+ words per minute at the keyboard has been replaced with a one finger hunt-and-peck on her Ipad, she still is able to continue correspondence, often with the assistance of the nifty dictation Ipad application set up by her husband.

If you would like to make a gift in honor of all the things Denice did for you (or just because you like her), you can do so at (www.wwu.edu/give). Alternatively, you can send a check to the Western Washington University Foundation, 510 High Street, Bellingham, WA 98225-9034.

Student Reflections

Denice's first priority here was always the students. She had a positive influence over so many lives. Here are memories some of our alums shared about Denice:

My fondest memory of Denice is my simplest: She would always stop in the hallway between the office and computer lab to strike up a conversation with me, whether it be how classes were going, how research was, or my future plans after graduation. She was always curious and excited where chemistry was going to take me. She was so supportive in my undergraduate studies and in my opinion the backbone of the department. I hope she enjoys retirement and makes the most of it, she deserves it!!!!!
Joe Gibbons, Class of 2007

She was such a caring, understanding, and upbeat person to have around the chemistry department, and she seemed to have endless vigor and organization that kept the department functioning smoothly. She gave me great advice for tackling my chemistry degree at Western and on graduate school applications. She was so personal and friendly the few times that I met with her and always managed to brighten my day when going into the chemistry office. It is devastating that such a terrible disease has taken hold of a person such as Denice.
Laura Steffens, Class of 2008

Denice was the first person I ever met in the Chem Dept. Needless to say, I felt immediately comfortable and welcomed. If there is anything I can do to help, please let me know, and I will be there in a flash.
Daryl Kaiser, Tech Sales, Class of 1999

I am greatly saddened to hear the news about Denice. She was a great help to me during my time at WWU. I don't have any particular stories to tell, but she was always friendly and full of useful advice when it came to paperwork or academic advising. I visited the department a few times over the last couple of years, and I was always pleased to find her there. She was a very visible member of the Chemistry Department, and I am saddened that she is diagnosed with such a disease. Give her my best!
Jonathan Clark, BS Chemistry March 2010

When I was a very immature freshman, Denice was the one who helped register me for a biochemistry major. Throughout my 4 years at WWU, she was a constant resource to me and other students who had questions about the Chemistry Department's inner workings. I honestly do not think I would have made it through the biochemistry program without her help. As a student, I always knew that I could ask Denice any question about my major, and she would know the answer. When I first heard of her diagnosis, I was deeply saddened. It's hard to imagine WWU Chemistry without her. She will be greatly missed!
Nate Perkins, Class of 2010

I am Denice's counterpart at Central Washington University. As the office manager for Chemistry at CWU, there are times when I need another person to talk to who understands what it's like to work with chemists in academia and the challenges we sometimes face in all of the facets required to administer such an academic department. She has been an invaluable resource, and I already miss her greatly in that role. She's such a friendly, amazing gem of a person...whoever takes her place has HUGE shoes to fill!
Lisa Stowe, Chemistry Department, Central Washington University

Denice Hougen Retires (cont.)

One of my many, many memories of Denice was how fast she could type before the days of computers slowed her down. When the word processors came in, she would have to stop and wait for the Tarbel to catch up to her. Back in the days of the IBM Selectric typewriter, I hand wrote a letter, grabbed my coffee cup, and headed for the office. I dropped off my letter on Denice's desk, went through the Chemistry library (Haggard Hall), poured my coffee and returned to the office. Denice looked up and said "your letter is ready for your signature." It was complete with envelope and no mistakes!
Ruth Schoonover, BA Chemistry 1961 / BA in ED 1966 / MS Biochemistry 1971
Chemistry Stockroom Lab Supervisor 1966-1972, Stockroom Manager 1982-1995

I*n 1981 I was in the process of completing my MS after doing research on cobaloximes with Professor Gay Lampman. Gary had just told me that I needed to visit him in the UK if I wanted to finish my MS any time soon because he was about to go there to University College, London on sabbatical! (my great excuse for a 3-month trip to UK and Europe) I ended up hiring Denice to type my master's thesis. She was very patient with me, especially my anxiousness about the whole thing, and the fact that I needed to have it typed quickly. She also made some helpful suggestions about my grammar. Denice was also always so dependable—she did a very careful job in her typing of my thesis. That turned out to be very important because there was little time to proof it, and later when I ended up carrying it with me to University College the only typewriter available was an ancient Underwood that was missing a couple of keys!*
I remember when Denice was first hired (we were still in Haggard Hall). Although new in the department, she fit in so easily, had the requisite sense of humor, and was so pleasant that soon it seemed that everyone felt like Denice was part of the family.
Jim Hungerford, PhD, BS 1979 / MS 1981

Denice was a star. I always felt taken care of with her advice and guidance. Her passion for science was something I couldn't have learned in the classroom. It was a real pleasure to know her and work with her. She will be greatly missed.
Peter Johnston, Class of 2010

A*s for a story or memory about Denice, I don't know if I truly have a great story, but I think it should be mentioned that she did a fantastic job for us in the Chemistry Department. Denice was compassionate, hard-working, never bending to failure, and always willing to help others. Even with the never-ending demand of her job, you could always catch her smiling.*
Jennifer McCarville, Class of 2011

Back as an undergraduate chemistry student, I was entertaining the thought of entering the wine industry. It was an uncommon thing for chemistry students to do at WWU (in fact I don't know of anyone else in the department who was thinking about it), but Denice was very excited and supportive of the prospect from the start. We had some good long entertaining conversations about wine, and at some point, she told me about a little winery called Screaming Eagle down south in the Napa Valley. I actually had not yet heard of it, and she explained their rise to fame through the amazing wines that they began producing in the early 1990's from their ranch in Oakville, perched on a special alluvial fan of igneous rock coming down from the Vaca Mountain range. She also explained how she had gotten on their mailing list (to buy the wines each vintage) in the beginning, when the price was just $50/bottle, and how then, the price had risen to well over $500/bottle as the wines got discovered by some influential wine critics, and lauded for their unique, vibrant characters. The way she talked about the wines and the story of the vineyard sparked a powerful curiosity in me. Charged by her encouragement, I left for Napa immediately after graduation, with Jimi Hendrix blaring in the truck the whole way down, to get into the homeland of U.S. winegrowing. After a spectacular Cabernet vintage up on Howell Mountain, I headed down to New Zealand to work at one of the southern hemisphere's top wineries, and then to graduate school at UC-Davis in Viticulture and Enology, and finally, back to Napa. Now, some years later, I'm writing this note from the tidy little office and lab here at Screaming Eagle, where my daily responsibilities include all aspects of the winemaking and ranch management. Little did Denice or I know what a lasting impression our conversation at the WWU Chemistry Department that day would have! And, Jimi Hendrix is playing on the radio at this very second, and I smile to myself now knowing (as of several months ago) that he was himself a Screaming Eagle as a member of the 101st Airborne. Life is full of beautiful circles, and as bud-break is rapidly approaching us in the vineyard, here we go again! Please wish her my best, she did an awful lot for me!
Nick Gislason, Class of 2005

Inaugural Year for Summer REU Program at WWU

In 2011 our department was awarded funds from the National Science Foundation to start our own summer Research Experience for Undergraduates (REU) program. Our inaugural year was very successful due to the hard work of two faculty members that served as the program coordinators, Clint Spiegel and Greg O'Neil. The purpose of the program is to give students the opportunity to be part of a vibrant undergraduate research community that is not available at their home institutions. Nine undergraduate students were chosen from across the country to participate in research projects mentored by nine different chemistry faculty members (O'Neil, Vyvyan, Murphy, Emory, Rider, Bussel, Speigel, Anthony-Cahill and Smirnov). In addition to the research experience, the students participated in many training and development activities, and presented their work in a department symposium at the end of the summer.

Chemistry REU Student Kaitlyn Elting and Faculty Advisor Spencer Anthony-Cahill

Chemistry REU Student Conner Roberts and Faculty Advisor Greg O'Neil

REU Chemistry Participants at Deception Pass

(left-to-right) Deliana Arias, Kaitlyn Elting, Janee Jones, Rebecca Pizano, Stephanie Nguyen, Masha Polozova, Connor Roberts, Michael Takemura, and Jamie Winkler

Alumni Spotlight - Matt Kaeberlein

Matt Kaeberlein

After finishing high school in Seattle, Matt Kaeberlein spent a few years working for United Parcel Service where he loaded trucks at dawn. While employed by UPS he completed his AA at Highline Community College and then transferred to Western where he completed requirements for both BA Math and BS Biochemistry. He was the recipient of Knapman and Price/Sherer Scholarships from the Chemistry Department. In June 1997 the faculty selected him for the Sea Bong Chang Biochemistry Award and the Outstanding Graduate Award.

Matt did undergraduate research with Professor Sal Russo. Matt's honors project was entitled "A Comparison of the Thermostability of Glyceraldehyde 3-phosphate Dehydrogenase from Thermophiles and Mesophiles in Different Ionic Solutions". Note that mesophiles exhibit optimum growth in the 20-37 °C range, whereas thermophiles grow optimally at 50-70 °C. His research led to a publication. Matt's strong work routine is illustrated by the fact that his experiments were often completed by the time anyone else got to the lab in the morning.

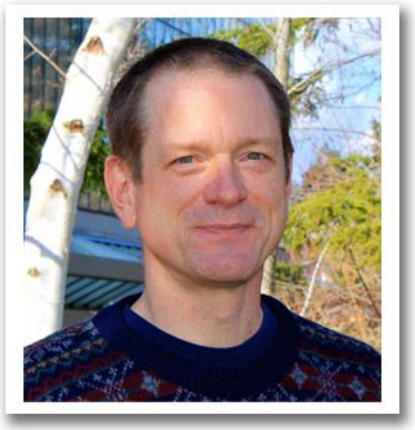
Matt went on to the graduate program in biology at MIT. He was attracted to the lab of Professor Leonard Guarente who was applying genetics and molecular biology to study the biology of aging using yeast as a model system. Matt's thesis work reported that increased expression of the SIR2 (silent information regulator 2) gene was sufficient to extend life span. This observation, along with subsequent studies of Sir2 homologs (sirtuins) in multicellular eukaryotes, has spurred research by many labs and pharmaceutical companies into the potential of sirtuin activators as therapies for age-related diseases, including diabetes and Alzheimer's disease.
After receiving his PhD from MIT, Matt and Preston Estep co-founded the human longevity research biotech company Longenity Inc that was located in Waltham, MA. The company published research showing that short-term calorie restriction in male mice feminizes gene expression and alters key regulators of conserved aging regulatory pathways. Matt served as vice president of the company.

Matt returned to the Pacific Northwest in 2003, where he was a postdoctoral fellow with Professor Stanley Fields in the Department of Genome Sciences at U. of Washington until 2006. In the Fields lab, Matt continued his studies of the basic mechanisms of aging, returning to the yeast model system and applying genomic methodologies to identify dozens of new longevity genes. During this time, Matt also developed a strong interest in understanding which aspects of aging are evolutionarily conserved by utilizing a second model organism, the nematode Caenorhabditis elegans.
In 2006 Matt began his appointment as an assistant professor in the Department of Pathology at U. of Washington and was promoted to associate professor in 2011. The Kaeberlein lab continues to use yeast and C. elegans, along with mice, to uncover conserved mechanisms of aging. Work in the Kaeberlein lab is broadly based with multiple areas of interest. These include the molecular pathways that link diet and aging, mitochondrial-nuclear communication and regulation of mitochondrial function, and cellular pathways for ensuring protein homeostasis during aging. Between 2006-2011, the Kaeberlein lab published over 60 Pubmed-indexed papers, 9 of them in Science or Nature.

Matt has received numerous honors: Glenn/AFAR Breakthroughs in Gerontology Award (2007), Alzheimer's Association Young Investigator Award (2008), Ellison Medical Foundation New Scholar Award in Aging (2008), U. of Washington Undergraduate Research Mentor Award (2009), U. of Washington Science in Medicine Young Investigator Award (2009), and Vincent Cristofalo Rising Star Award in Aging Research (2011). In 2011 he became a Fellow of the Gerontological Society of America. Matt has also been honored with a Distinguished Visiting Professorship at Guangdong Medical College in the southern part of China where he runs a small laboratory and mentors students, post-docs, and junior faculty in aging-related research. Matt is one of the best students to go through Western's biochemistry program, and we congratulate him on his continued success.

Matt married long-time sweetheart, Tammi Isaacson ('97 Biology), in August 2000. Matt and Tammi have two sons, Connor (10) and Jase (6). They live in North Bend, where they enjoy the rural setting and spending time outdoors whenever possible.

Spencer Anthony-Cahill Honored as Outstanding Teacher

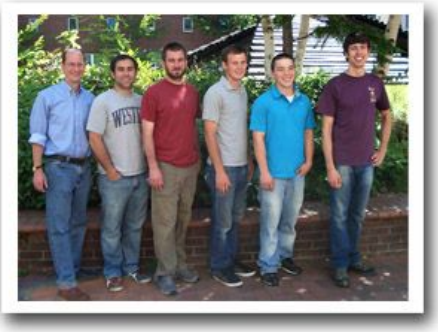


Associate Professor Spencer Anthony-Cahill is the 2012 recipient of the Peter J. Elich Excellence in Teaching Award. Given annually since 1976 and named for the long time Dean of the (former) College of Arts and Sciences, the honor includes a $1,500 WWU Foundation fund for professional development. Anthony-Cahill is the fourth member of the Department of Chemistry to receive this prestigious award [Gary Lampman (1976), George Kriz (2000), James Vyvyan (2008)]. Anthony-Cahill joined the WWU faculty in 1997. Long known for his passion for instruction and rigorous academic standards, Spencer led the effort to expand the department's biophysical chemistry curriculum and teaches an elective course in protein engineering. He also regularly teaches general chemistry and the first two quarters of biochemistry. This year, Spencer spread his enthusiasm for biochemistry beyond WWU's borders as the newest author of the significantly revised 4th edition of Biochemistry with co-authors Christopher K. Mathews, Kensal E. van Holde, and Dean R. Appling. "I aspire to impart to students at WWU the same sense of accomplishment and fascination with learning that I experienced with the guidance of my excellent college instructors," says Anthony-Cahill. "It is a tremendous honor to be recognized for my efforts with the Peter J. Elich Excellence in Teaching Award - particularly when many faculty members at WWU are equally deserving of such recognition." Congratulations, Spencer!

Grant Funding in 2011

Congratulations are in order to the following chemistry faculty members who were awarded research grants in 2011.

Mark Bussell - Game Changer Award



Professor Mark Bussell received the Game Changer Program Grant ($92k over 2 years) from Shell Global Solutions. This funding will support a project that aims to develop commercial hydrotreating catalysts based on the research in the Bussell lab focused on metal phosphide catalysts.

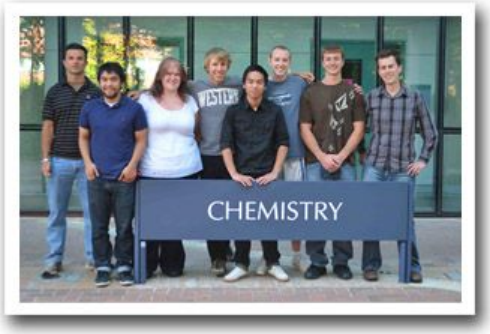
Grant Funding in 2011 - cont.

Congratulations are in order to the following chemistry faculty members who were awarded research grants in 2011.

Janelle Leger - SCIALOG Award

Assistant Professor Janelle Leger (joint faculty with Physics) received a Research Corporation SCIALOG award ($100k over 2 years) for a project entitled "Novel Low-Loss Plasmonic Waveguides to Create High Efficiency PV from Ultra-Thin Organic and Low-Purity Earth Abundant Inorganic Layers." This work will be done in collaboration with Christine Luscombe and Hugh Hillhouse at the University of Washington. The goal of this work is to use abundant inorganic materials as high index dielectric plasmon polariton waveguides to improve absorption in both organic and inorganic solar cells.

David Rider - ACS Award



The American Chemical Society Petroleum Research Fund awarded Assistant Professor David Rider (joint faculty with ETEC) $50k for his work entitled “Size and Shape Controlled Electrodeposition of Cuprous Oxide Semiconductor Nanoparticles from Tailored Diblock Copolymer Templates”. The aim of this work is to develop new materials for photovoltaic devices by establishing a versatile route for templating and controlling the electrochemical growth of cuprous oxide semiconductor at the nanometer length scale.

Serge Smirnov - RII Award

Assistant professor Serge Smirnov was given a private corporate donation ($3,393) from Retail Imports International to support his on-going research on breast cancer. The funds will be used to study the structure and biophysics of double-stranded DNA that contain chemical modifications originating from oxidative damage and epigenetic regulation and that are linked to breast cancer.

In Memoriam: Dr. Marion Besserman

Marion Besserman

In fall of 1967 the Chemistry Department was in the midst of a growth spurt; transitioning from its origins in the Department of Sciences of a state teachers college to the Department of Chemistry in a widely recognized regional university. Drs. Kriz and Wicholas had just been hired, and the department was in the midst of interviewing more candidates to further expand the department. At that time the faculty was comprised of thirteen members: Ed Neuzil, Lowell Eddy, Andy Frank, Fred Knapman, Don King, Gary Lampman, John Miller, John Whitmer, Mark Wicholas, Bill Wilson, Sea Bong Chang, George Kriz, and Marion Besserman; all of them PhDs and all, but Dr. Besserman, men.

Dr. Besserman was born March 11, 1921 in Jamaica, in Queens, one of the boroughs of New York City, and raised in a traditional Jewish family. As a teenager she passed the exams and was offered placement in the prestigious Bronx High School of Science, a school for students who were extremely capable in science and math. However, her mother felt that it was too dangerous for her to take subways across town to attend, so she went instead to her local high school. After graduating from high school Marion decided to come west. She received her undergraduate degree from the University of Washington in 1943 (BS General Chemistry). She was employed by Industrial Tape Corporation as a research chemist, but soon decided to continue her education. In 1944 she moved to Indiana where she studied with Professor Nathan Kornblum at Purdue University (MS, Organic Chemistry 1947). Professor Kornblum had an interest in "ambident" nucleophiles (molecule that has two or more nucleophilic reactive sites). Marion's Master's thesis, aimed at a difficult synthesis, was titled: "Attempted Preparation of Pure Secondary Nitroparaffins" (pub Feb 1947). After Purdue, she returned to University of Washington where she was a student of Professor Edward Lingafelter. She studied how the position of a sulfonate group on a long hydrocarbon chain affected the ability of detergents to form micelles. Her doctoral dissertation was titled: "A Study of the Aqueous Solutions of the Positional Isomers of Sodium Dodecanesulfonate as Colloidal Electrolytes" (pub 1953). Her PhD in Physical Chemistry from UW was granted in 1953. Prior to coming to Western in 1952 she was an instructor for a year at Reed College in Portland, Oregon. There she worked with Professor Arthur F. Scott, an analytical chemist who was known for his work on the determination of atomic weights. With Professor Scott, Marion studied the formation of potassium metal "cacodyls," compounds that are formed when carbon monoxide reacts with molten potassium. She is cited on several of his publications. Although Western initially hired her as an acting Instructor, Dr. Besserman became an assistant professor of Chemistry in 1953. She received tenure and promotion to rank of associate professor in 1957. She retired from teaching in 1982.

Dr. Besserman was involved in a social circle comprised of her peers in all the departments at Western. When Dr. Linus Pauling came to Western in 1960 to dedicate Haggard Hall, the new Science facility, she was asked by the wife of Western's President Jarrett to host him and his wife. Mention of their stay with her is made in the letters of Anne Pauling. In addition to friendships with various faculty members and their wives, Marion maintained a close relationship with her mother, her siblings, and their families.

Professor Besserman was a skillful teacher, especially in large general chemistry classes, where she always learned every student's name. She accomplished this by assigning seats alphabetically – a practice for which she was well known. Her rationale was that she often had no contact with students outside of lecture and if they always sat in the same seat she could associate a name and a face. She also left the last two seats on the left in every row empty as she knew that she tended to lecture from the left of the room facing the right. When she wanted our attention she called us "people", not students or "ladies and gentlemen" but "people". It gave us a sense of being part of a whole. In addition to general chemistry, she taught part of the physical chemistry sequence, where she preferred teaching thermodynamics. Dr. Besserman paved the way for the women who now teach in the Chemistry Department at Western. She retired in 1982 and moved to Vancouver, Washington to be near her family. She passed away January 6, 2008 at the age of 86.

As a female chemistry major, a fairly small and select group at Western Washington State College (WWSC) during the late 60s, it was my privilege to be mentored by Marion Besserman. She had entered chemistry at time when there were

In Memoriam: Dr. Marion Besserman (cont.)

were few women in any science. She knew the challenges faced by women in academia, especially those in male-dominated disciplines. It was her practice to extend an invitation to young women in chemistry to join her for dinner in order for them to form a network with others in the same circumstances. The group ranged from graduate students to lowly freshmen. Not all of those invited chose to take advantage of the invitation, but those of us who accepted formed a support group that still exists to this day. "Bessie," as we chemistry coeds called her among ourselves (or more formally, Dr. Besserperson), always found time to discuss and give advice on any of our problems whether academic or about adapting to what was still predominantly a male discipline at that time. She showed us how to transition from sitting at a formal table to sitting in a less formal situation and carrying on civilized conversation. We spoke of the arts and social issues, rather than the synthesis of smelly compounds. Bessie was not one to mince words. If one of us went to her whining about how unfair a test was, her response was to query us on how we had studied for it; had we worked with others to make sure we totally understood the concepts, had we done the homework and then tried some extra problems. If we could answer yes to all of those we generally weren't in her office complaining about the test! At one point we found out her birthday was March 11th and making and sharing a chocolate cake with her became a ritual of finals week.

Neva Jean Jones Pavia, BA ED (Chemistry), 1971; MS Chemistry, 1979.

New Faculty & Staff

John Antos will join the Department of Chemistry as an assistant professor in the fall of 2012. Though he never considered chemistry as a career while growing up in Mentor, Ohio, an unexpected fascination with organic chemistry during his sophomore year at The Ohio State University prompted a change of major, and led to his earning a BS in chemistry in 2001. John then did his graduate work at the University of California, Berkeley from 2001-2006, followed by a postdoctoral stint at the Whitehead Institute in Cambridge, MA from 2006-2009. A central theme of his research during these years was the development of methods to build protein derivatives that do not exist in nature. From 2010-2012, John served as a research scientist at the Seattle-based biotech start-up PhaseRx. He is thrilled to be returning to academia, and to contribute to the exceptional chemistry program at WWU. His research will focus on the use of bacterial enzymes to build modified proteins with unique and useful properties.

John is particularly excited to relocate his family (including his young son, Cohen, and his wife, current WWU chemistry professor Amanda Murphy) to Bellingham. He and his family are eager to explore the restaurants, hiking trails, and cultural activities of this beautiful area. John is also an avid guitarist and music-lover, and is always hunting for new and interesting sounds.

John Antos

Sara Young

Sara Young never thought she would stare at spreadsheets for a living. She grew up just outside of Chicago, and for most of her young life was only interested in art and athletics. She managed to steer clear of math and science throughout her college education, earning undergraduate degrees in Social Sciences and Craft. While trying to make a living selling her art, she took on management jobs at which to her surprise, she excelled. One thing led to another, and she ended up enrolling in the MBA program at Marylhurst University in Oregon.

After completing her MBA, Sara worked as a Director at the University of Western States and spent much of her time conducting social research. In addition to these professional endeavors, Sara worked as a consultant for many start-up companies in Oregon and assisted young artists in finding markets for their work.

Most recently, Sara took on the role of Administrative Services Manager for the Chemistry Department at WWU. Sara views this as an ideal opportunity to use her business skills and help create a harmonious work environment for her colleagues.

New Faculty & Staff (cont.)

Before joining the Chemistry Department at Western Washington University, Karen Smith enjoyed a long history in fast-paced customer service environments. From working as a Customs Broker Analyst for UPS to caring for patients as a Certified Nursing Assistant, Karen thoroughly understands the meaning of customer support.

Karen also worked for T-Mobile for nine years as a Team Lead-Financial Specialist. Karen directed 15 representatives and managed special projects for the company such as opening new locations and acting as a Subject Matter Expert and point of contact on all processes for her team.

Karen is presently enjoying the unique challenges that higher education brings while working as the Chemistry Department's Project Coordinator. She is proud to be in the position to help students, faculty, and staff alike, and relishes the opportunity to provide much needed support to students as they navigate their way through Western's rigorous Chemistry curriculum.

"I feel lucky to be in a place where I am in a position to improve processes and provide support for my colleagues. I am also happy to have a career which allows me the freedom to do the things I love: reading, walking, camping and basically anything else which might include fun activities with my son."

Karen Smith

WWU Chemistry Department Newsletter 11 was produced by:

Amanda Murphy ..... Coordinator

Amanda Murphy..... Photography

Sal Russo ..... Editing

Gary Carlton ..... Layout and Design

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2010 / 2011 Chemistry Awards

Outstanding Chemistry Department Graduate
Jennifer Liddle

Sea Bong Chang Memorial Biochemistry Award
Benjamin Allen

Hypercube Scholar
Mica Smith

Outstanding Analytical Student
Nicole Koeppen

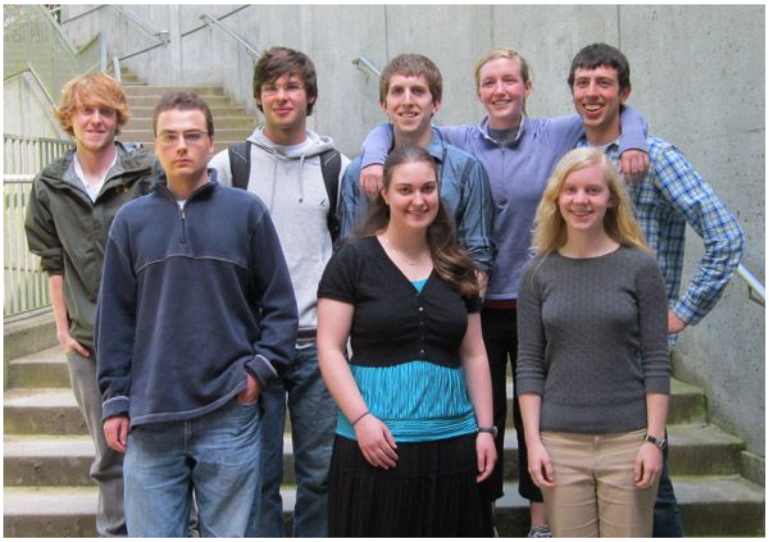
Outstanding Organic Series Student
Alexandr Baronov

CRC Press Freshman Chemistry Award
Luciana Prada
Johann Sigurjonsson

ACTS Award
Adam Jansons
Amanda Norell Bader
Kelly Wu

Back Row (left to ight): Mica Smith, Luciana Prada, Johann Sigurjonsson
Middle Row: Jennifer Liddle, Ben Allen, Adam Jansons
Front Row (left to right): Alexandr Baronov, Nicole Koeppen, Amanda Norell Bader, Kelly Wu

2011 / 2012 Scholarship Recipients



Back Row(left to right): Joshua Sears, Mikhail Konev, Michael Pegis, Leanne Sebren, Cameron Moak
Front (left to right): Alexandr Barnov, Nicole Koeppen, Morgan Schurr

Knapman Chemistry Scholarship
Morgan Schurr
Cameron Moak

Barbara French Duzan Biotechnology
Anna Chlebowski
Casey Medina
Levi Vincent

Ruth Watts Female Research Scientist
Nicole Koeppen

Jerry Price/Nancy Sherer Scholarship
Joshua Sears

Verna A. Price Chemistry Scholarship
Michael Pegis

Rathman Foundation Scholarship
Leanne Sebren

W WU Chemistry Scholarship
Alexandr Baronov
Mikhail Konev

Lowell Eddy Memorial Fellowship
Nicole Koeppen

Outstanding Chemistry Graduate

Jennifer Liddle

From among the many deserving chemistry and biochemistry graduates in 2010-2011, Jennifer Liddle was chosen as the Outstanding Graduate from the Department of Chemistry. During her time at WWU Jen distinguished herself as an exceptional student in her coursework and her research. She received numerous awards in recognition of her achievements: the Barbara French Duzan Scholarship (2010), NASA Space Grant Consortium awards for summer research support (2009, 2010), and best poster awards at WWU Scholar's Week (2010, 2011). In the Spring of 2009 she joined the Anthony-Cahill lab and began work on the expression and characterization of proteins that form amyloid structures and display electron carriers. The goal of that work was to try to find protein designs that would form conductive wire-like structures. She also worked on myoglobin mutants that are model systems for the development of blood substitutes. Jen presented her data at the Protein Society Symposia in 2010 and 2011. At the 2011 meeting she won a best poster award. Jen was also involved in significant volunteer activities with her church and as a local math/science tutor and in community ESL programs in Skagit County. Jen is currently a Ph.D. student in the Chemistry and Biochemistry program at the University of Colorado (Boulder), where she is finishing up her first year. She has been rotating through three labs that focus on protein biophysics and will choose one soon to be her "home" for her thesis work.

Lowell Eddy Fellowship

Nicole Koeppen

Nicole Koeppen was the 2011 recipient of the Lowell Eddy Memorial Fellowship, the Ruth Watts Scholarship, and the Outstanding Analytical Student Award. For the past two years, Nicole has been a member of Prof. Steven Emory's research group that seeks to develop new ultrasensitive chemical detection methods based on the size-tunable properties of nanomaterials. Nicole's project focuses on the design and construction of laser spectroscopy instrument to detect individual circulating tumor cells (CTC) in the bloodstream. The CTCs are labeled with either gold or silver nanoparticles and are detected by the Raman scattered light from a focused laser beam. Nicole recently presented her findings for this project at the National Meeting of the American Chemical Society in San Diego this spring.

In addition, Nicole has been an active member of the department. She has served as a lab assistant, and she is currently serving as the co-president of WWU's Student Chapter of the American Chemical Society (a.k.a. "Chem Club"). As a very active Chem Club member, she has been involved in numerous outreach activities including elementary school science shows and student mentoring. She is scheduled to graduate in the spring of 2013, after which she plans to enroll in graduate school to pursue a Ph.D. in the chemical sciences.

Class of 2010 / 2011

Congratulations to our graduation class of 2010/11.

BS Chemistry and ACS Certification

Qing Bai
Vance Bucklin
Emily Butler
Bo Carrillo
Stanislav Fedetchkine
Lillian Hale
Colin Hanson
Stephanie Haralson
Tosten Haugerud
Nicole Hoch
Bernard Ikegwuoha
Everett Jackson
Adam Jansons
Mitchell Kiriluk
Ping Lai
Jack Lally
Chu Liu
Cory Lund
Jennifer McCarville
Alexander McVey
Kyle Mikkelsen
Christopher Nevares
Scott Nordahl
Amanda Norell Bader
Ian Query
Ramon Rinonos-Diaz
Sean Rogers
Isabella Romero
Sean Ronan
Christopher Sabeti
Dara San
John Scott
Patrick Shelton
Aranjeet Singh
Alicia Smith
Mica Smith
Phillip Squier
Hannah Sturtevant
Seth Swanson
Zachary Thammavongsy
Miles Trotter
Daniel Weikart
Elizabeth Wellner
Kelly Wu
Loagan Yarbrough

BS Biochemistry

Shukri Abdi
Benjamin Allen
Kelsey Anderson
Jamie Apperson
Arseniy Belov
Kyle Carter
Margaret Hunter
Ngoc-An Huynh
Joscelyn Jones
Jennifer Liddle
Alicia Michael
Charles Nam
Alexander Nelson
Faye Orosz
Stephanie Pierce
Jessie Robinson
Benjamin Rollins
Tahir Tareen
Ann Tran
Terry Webb

BA Chemistry

Sara Brown
Jesse Otti
Nicole Riley
Kyle Throssell

Chemistry Picnic at Fairhaven Park

Please join us for the Chemistry Department picnic this year at Fairhaven Park on May 26th, 2012.

Thank You to Chemistry Department 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 2011-2012 academic year. Donations during the past year funded a variety of activities, including scholarship matching, academic awards, undergraduate research projects, department seminar program, and events for department majors and alumni.

Starting this year, as a small token of our gratitude, donors contributing more than $200 will receive a WWU Chemistry Department beaker mug.

Chemistry Fund Donors

Mark and Donna Aarstol
Paul and Cecily Aegerter
Kelli Arntzen and Joe Erickson
James and Gail Assink
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Alfred and Laurie Belanger
Sophia Zervas-Berg & Arvid Berg
Kathryn Birmingham
David Bishop
Eric Bradford
Ylisabyth Bradshaw
Jeff Bullock
Courtney Burris
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Michael Carpenter
Laura Cazares
Sara Champoux
Stephanie & Patrick Chlebowski
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Ann Dagle
Lisa and Charles Deen
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Robert M. Fleming-Jones
Sherry Funston
Lee and Diane Glinn
Karen Halley & Eugene Stirchek
Richard and Grace Hanson
Nancy R. Hart
Derek Harwell
Joe M. and Coni L. Hickey
J.C. and Mary Hickman
Mallory Higgins
Eric and Kristen Hill
Thomas and Cynthia Hinds
Elizabeth Hoener
Rebecca Inman
Derick Krutsinger
Thomas and Lisa LaGrandeur (match from Eli Lilly & Company Foundation)
Kathleen Larese
Gayle M. Laufer
Rhys and Brooke Lawson
Kenneth Lennon
Brian Lewis
John Logan (match from Yahoo! Inc.)
John and Heloise Logan
Dean and Renee Matson
Jeffrey May
Richard Maynard
Joshua McBee
Heather McKissick
Willard Miller
Scott Mokler
Rockie and Mary Morgan
Daniel Morris
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David and Sydney Olausen
Dennis Olson
Neva Jones Pavia
John Peterson
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Richard Price
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Catherine Radzewich
Scot and Donna Rassat
Robert Reed
Emmett Richards
Jessie R. Robinson
Christine Rose & Michael Poindexter
Charles Ross
John Rosser
Christian Rycraft
Mark and Martha Sadler
Matthew and Debra Santelli
Stephanie Sawhill & Mark Hansen
The Estate of Alan D. Schulz
Robert and Gennine Scuderi
Jennie and Michael Sheaffer
Brian and Alison Skoczenski
Megan Stanfield (match from Wells Fargo Bank)
Robert Thompson
Timothy Tuura
Dutch & Camille Van Devanter
Alan and Junell Whitford
Richard Wojt & Carolyn Latteier
Sheryl Ann Wood

Thank You to Chemistry Department Donors

Eddy Memorial Chemistry Fellowship

Bill and Trudy Kindler

Knapman Scholarship Endowment

Janet & Bob Harris

Hach Science Education Scholarships

American Chemical Society - Puget Sound

PLK Organic Endowment

George and Carolyn Kriz
Jim and Catherine Vyvyan
Donald and Neva Pavia

Wicholas Research Endowment

James Anable
David Munch
Robert and Jeanette Mustacich

Ruth Watts Scholarship Endowment

Mary Jane and Richard Vetter

WWU Chemistry Club Receives Its First Outstanding ACS Chapter Award

Western Washington University's Student Chapter of the American Chemical Society (a.k.a. Chem Club) has received an Outstanding Chapter Award from the ACS for the very first time. Of the more than 1,000 student chapters of the ACS, only 36 were recognized with this award. While this is the first time the chapter has received an outstanding award, this marks the 9th straight that the Chem Club has been recognized for its efforts with an award from the ACS for its efforts. In addition to the Outstanding Chapter Award, the Chem Club received an ACS Green Chemistry Award from the national ACS organization.

Chemistry professors Steven Emory and Betsy Raymond, faculty co-advisers for the Chem Club, said the award is based on such criteria as community service, professional development events, research, and involvement with ACS regional and national meetings. The Chem Club regularly performs demonstration programs and hands-on activities at several local schools, including science show kick-offs and student mentoring programs.

"The chapter has tried to balance social activities, like the annual picnic and bowl-off, with community service activities, such as the science show kick-offs and the annual canned food drive," Prof. Emory said. "By building on and continually refining activities each year, students have built a program that impacts students at Western and the broader community. The students are ambassadors of science and chemistry."

"This award is a testament to the quality of students we have the pleasure to work with at Western. As the chapter's faculty co-advisor, I am thankful that I get to be involved with such a wonderfully dedicated, fun, and creative group of students," said Prof. Raymond.

Amanda Norell Bader, chemistry and physics major from Spokane, WA, was president of the 2010-11 Chem Club. The Outstanding Chapter Award stems from the Chem Club's submission of the student chapter annual activity report, which Amanda was responsible for preparing. Amanda is currently a first-year chemistry graduate student at the University of Colorado at Boulder.

The award-winning chapters were recognized in the November/December issue of inChemistry magazine (www.acs.org/inchemistry) and were formally acknowledged at the ACS Student Chapter Award Ceremony during the 243rd ACS National Meeting in San Diego this spring. Current Chem Club co-president Nicole Koeppen from Redmond, WA, will accept the 2010-11 awards on behalf of the Chem Club at the meeting.

For additional information and photos, please visit the WWU Department of Chemistry Facebook page at: www.facebook.com/wwuchem

If you have any questions or suggestions, please feel free to contact Prof. Raymond (Elizabeth.Raymond@wwu.edu) or Prof. Emory (Steven.Emory@wwu.edu), the 2011-12 Chem Club co-advisors.

WWU Chemistry Club Receives Its First Outstanding ACS Chapter Award (cont.)

Birchwood Elementary

Bowling Night

Combined Food Drive

Tea Party

Scholars Day Colloquium

Our annual Scholars Week celebration of research at WWU was held May 14-18, 2011. The Chemistry Department keynote speaker this year was Prof. Gerard Parkin from the Department of Chemistry at Columbia University, who told the department about his exciting work in "Bioorganometallic Chemistry of Mercury and Approaches to Detoxification".

This year record numbers of posters were presented in the campus-wide forum. Of the 146 posters presented, 44 were authored by chemistry students. Several students from Chemistry also received "Best Poster" awards from Sigma Xi including:

Graduate Posters

Courtney Engles, "Preparation of Z-Substituted Styrenes Using Hiyama and Suzuki Cross Couplings: A Synthesis of Glandulone B" (Dr. Vyvyan)

Undergraduate Posters

Amanda Norell Bader, "Precise Color Tuning via Hybrid Light-Emitting Electrochemical Cells" (Dr. Leger)

Isabella Romero "Biocompatible Silk-Conducting Polymer Composite Electrodes" (Dr. Murphy)

Kyle Carter, Jennifer Storvick, "A Methesis Approach to Polyene Subunits" (Dr. O'Neil)

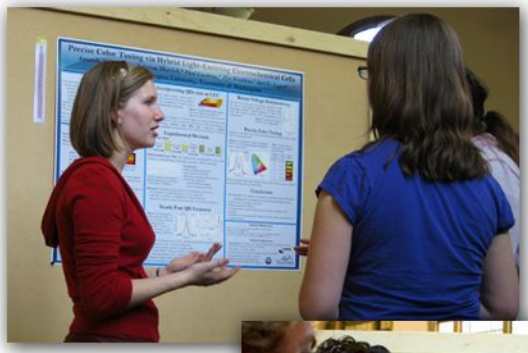
Michael Pegis, " Hydrogenolysis of Celluosic Biomass to Sorbitol Over Supported Metal Catalysts" (Dr. Gilbertson)

Jen Liddle, "Effects of Linker Composition of Permutein Stability: Characterization of a Circularly Permuted Recombinant Sperm Whale Myoglobin Fused to GFP" (Dr. Anthony-Cahill)

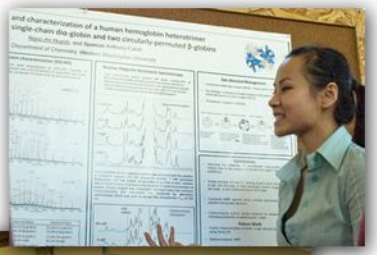
Scholar's Week Banquet

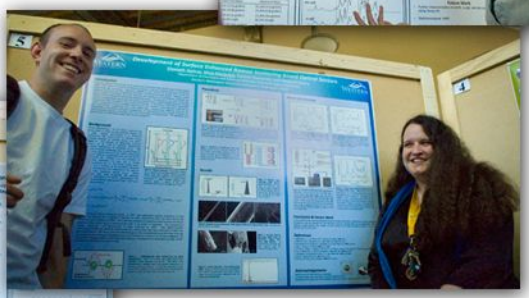
Scholars Day Colloquium

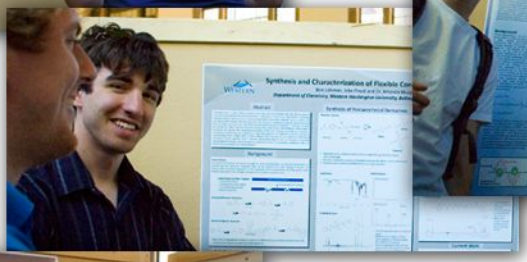
Amanda Norell Bader



An Huynh





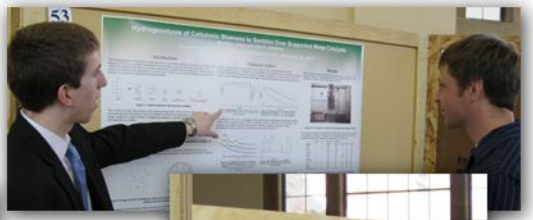


Ben Lehman
and
Jake Flood

Colin Hansen and Elizabeth Wellner

Tommaso Vannelli,
Geroge Kriz and
Kelsey Anderson

Michael Pegis ans Casey Medina



Betsy Raymond Jen McCarville

Jim Vyvyan
and
Jen Liddle

Isabella Romero and
Morgan Schurr

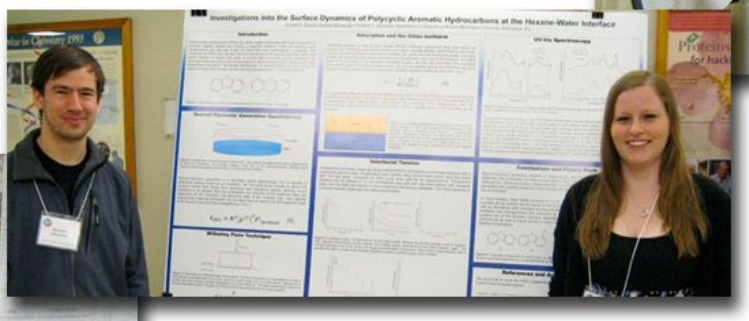
Jamie Apperson, Margo Hunter,
Jen Liddle and Jennifer Storvick

Tosten Haugerud

Conference Attendance

Amanda Murphy, Jake Flood, Morgan Schurr, Isabella Romero and Gabriel Matson

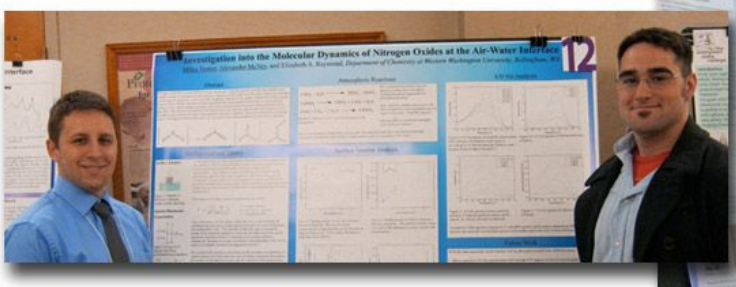
Kevin Smith



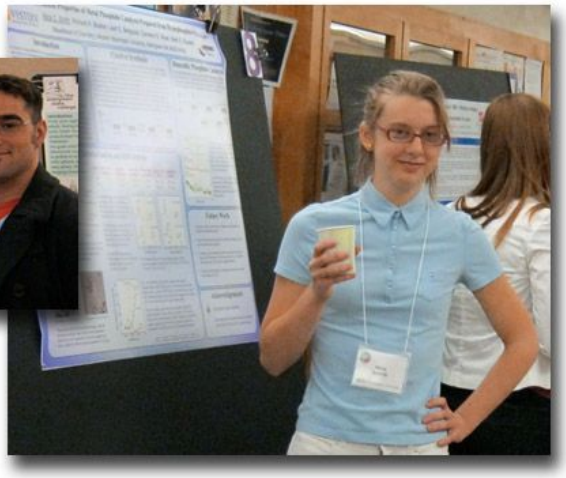
Everett Jackson and Jennifer McCarville

An Huynh

ACS Undergraduate Symposium at University of Washington, May 2011



Miles Trotter and Alex McVey

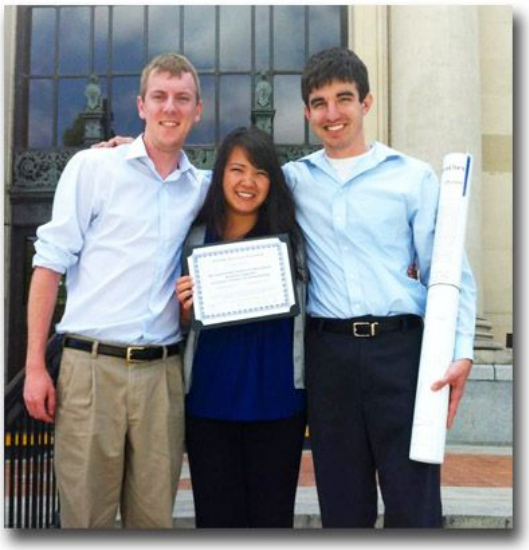


Mica Smith

Conference Attendance

Pacific Northwest Undergraduate Symposium at Oregon State University, August 2011

Isabella Romero won 'Best Lecture Presentation' at the PNW Undergraduate Symposium at Oregon State University.

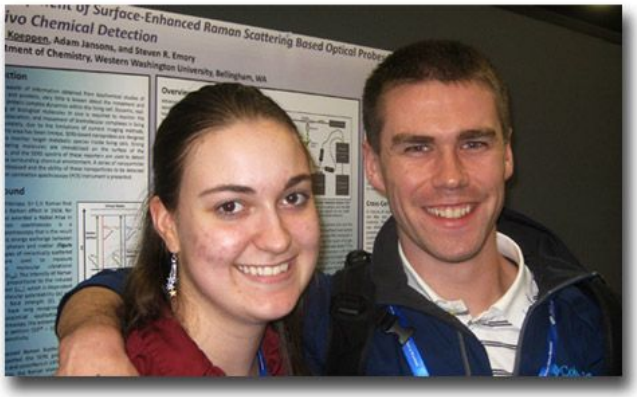


Ben Lehman, Isabella Romero and Jake Flood

Cameron Moore, Casey Medina, Leanne Sebren, Alicia Mangubat, Steve Emory and Ian Smith

ACS Meeting, San Diego, March 2012

Nicole Koeppen and Alicia Mangubat



Nicole Koeppen and Kevin Smith