Annual Newsletter to Alumni and Friends of the Department

From the Chair

Greetings!

This is our second departmental newsletter for chemistry alumni and friends, and its timing auspiciously coincides with WWU’s centennial year and the start of the new millennium. The coming year will be a very exciting one for the department. We have been selected by Research Corporation and the Murdock Charitable Trust, two independent funding agencies, to apply for a six-year, $750,000 grant. The good news is that we are not competing with any other department! The grant, if approved, will begin January 2001 and run for six years. It will provide for new instrumentation, research funds for new faculty, and supplemental money in support of undergraduate research. Matching funds will also be provided by the University. The basic goal of the grant is to build a department which is nationally recognized for the research accomplishments of its undergraduates.

Time passes very quickly. Our "new" building is now six years old and already we are talking about remodeling in order to create more research space. Over the next six years there will be profound personnel changes in the department. Most of the faculty whom you know and took classes from will have retired. By 2006 Gerry Prody should be the senior faculty member in the department. The rest of us old-timers should be gone by then. So we have a big job ahead in the coming six years: we need to hire twelve new faculty, two per year.

Since we moved into the building in July 1993, the number of students we served has increased significantly. Chemistry and biochemistry majors have increase by 80%. General chemistry enrollment has increased by 35%. Approximately 10% of Western’s students take a general chemistry course in any given year. We are a very busy department! We plan to hire two instructional laboratory coordinators to help improve our program. One coordinator will teach in and organize the general chemistry labs while the second will have a similar role in the organic chemistry labs.

If you haven’t yet visited our new building, please try to come by. The building has aged very well and you will be greatly impressed.

Mark Nicholas

Chemistry Conferences at WWU

Since moving into the new chemistry building in July 1993, the department has been hosting more professional gatherings. In April 1994 we hosted for the first time the annual American Chemical Society (ACS) Undergraduate Research Symposium for the Puget Sound Section. In November 1994 we hosted the Linus Pauling Award Symposium, and will do so again in October 2000. The symposium is sponsored by the ACS and will draw approximately 200 attendees to the campus to hear talks by nationally known speakers in chemistry. In September 1998 we hosted a multi-state conference for chemistry department chairs. In July 2002 we will host the national Biennial Conference on Chemical Education, a blockbuster meeting sponsored by the ACS Division of Chemical Education. We expect 2,000 attendees (the largest conference ever to be held at WWU) and George Kriz is the Conference Chair in charge of all arrangements. Through these meetings we are bringing regional and national exposure to WWU and the Chemistry Department.
MS alumnus is on staff, attracted enough potential participants that a second tour was arranged. Seminars and workshops for upper division majors were sponsored, including “NSF REU Summer Research Experiences,” “How to Choose a Graduate School,” “Pursuing Summer/Work Internships,” and “The Scientific Job Search.” Social activities sponsored by the chapter for chemistry students (and often faculty and staff) included in-house movie nights, bowling nights, a Halloween “Trick or Treat the Professors” event, and the annual May chemistry department picnic. (Alumni are always welcome at the picnic. If you would like to join us this year, just call the department office in early May for more details.)

1998/99 Outstanding Graduate

Congratulations to Joseph Mougos, recipient of the Chemistry Department Outstanding Graduate Award for 1998/99. Previously Joseph was selected for the department’s 1998/99 $1,500 Verna Alexander Price Scholarship. While at WWU he participated in two years of research in the lab of David Patrick focusing on scanning tunneling microscopy studies, which resulted in co-authorship of a paper which appeared in Langmuir and lead authorship of a paper which is under review for publication in Physical Review Letters. In the spring of 1998 Joseph received the “Best Research Project” award at the annual undergraduate research symposium of the Puget Sound Section of the American Chemical Society (ACS). He also received a nationally-competitive “I.M. Kolthoff Award in Analytical Chemistry” for research excellence in analytical chemistry. The award included travel funds to the 1998 ACS National Meeting in Boston where Joseph presented the results of his research in a poster session. Joseph completed a BS-Biochemistry degree in June 1999 and is now at the University of California, Berkeley where he is pursuing a doctorate degree in molecular and cellular biology under a 3-year Howard Hughes Fellowship.

Since our last newsletter (Fall 1992) the following students were recipients of the Chang Biochemistry Award: Ross Taylor, Brian Kraneer, Brian Young, Andrea Powers-Probstfeld, Matt Kaeberlein, Bryan Schmuel.

Other Chemistry Dept 1998/99 Awards

Outstanding Analytical Student
Rebeccah Main
Outstanding Organic Student
Andrew Bookter
Outstanding General Chem Freshman
Anna Buser
Hypercube Computational Chem Award
Chuck Schelle

Upcoming Alumni Reception

Mark your calendars for Thursday, May 11, 2000. On that evening, from 7-9 pm at the Woodmark Hotel on Lake Washington in Kirkland, the Chemistry Department and WWU Alumni Office will co-host a reception for our alumni group. Invitations will be issued by the WWU Alumni Office in April. We hope you can join us for an enjoyable evening catching up with your fellow alumni and department faculty and staff.
Spencer Anthony-Cahill
Assistant Professor
Two years ago my wife Yvonne and I decided that a big change was in order. We left Boulder, CO and a job in the biotech industry and headed back to my childhood stomping grounds (I was born and raised in the Seattle area) after accepting the new biochemistry position in the Chemistry Department. Yvonne had always thought I should teach (and this was my original motivation to attend graduate school), however, I’m sure her love of the ocean was a factor in her decision to join me on this latest adventure.

I must say that “professing” has been a lot of work but also tremendously fun. I do enjoy the teaching and have learned a lot myself in the process. I have also had the good fortune to have 11 students working in my research lab over the past two years. My research group is working to better understand factors contributing to the stability of engineered proteins. Proteins are an important class of biomolecules. They can be engineered to have specific desirable functions (e.g. therapeutics, diagnostics, and industrial catalysts). We are specifically interested in determining the relationship between protein sequence (“protein topology”) and the stability of the folded structure of globin proteins. Globins are a large family of proteins that includes the oxygen carrying protein hemoglobin. We hope that our research will facilitate the production of new therapeutic proteins and bioremediation catalysts.

My main teaching responsibilities have centered on biochemistry lecture courses and the protein chemistry lab. I have also been working with Sal Russo, Gerry Prody and our colleagues in the biology department to redesign parts of the biochemistry curriculum. The biggest change is the addition of another quarter of biophysical chemistry, which emphasizes the thermodynamics of protein folding and stability. I have also had the opportunities to develop an advanced topics course in protein engineering where students write a research proposal to engineer a protein of their choosing.

I am very excited to have the North Cascades in our backyard, and remain hopeful that as I become more efficient in my craft, I will have more time to spend in the mountains. I did climb Mt. Baker (Coleman-Denning Route) last summer and this summer I get within 700 ft. of the summit of Mt. Shuksan via the North Face route. One of my research students is an avid climber and he and I climbed the Beechey Route on the Liberty Bell earlier this summer. So much rock...so little time! While Yvonne enjoys rock climbing, she enjoys sailing and gardening even more. She loves her job at Cascade Cuts (a wholesale nursery) and has put in a beautiful garden (or as she says “work in progress”) at our home on the north side of Sheline Hill. In her garden, the day after spring commencement, we hosted what we hope will become an annual potluck feast for students, staff and faculty to celebrate the completion of another academic year. We both enjoy visiting with alumni and hope that freshly minted alumni’s will stay in touch and that we make the acquaintance of those of you that graduated before our arrival. Cheers!

Mark Bussell
Professor and President, Faculty Senate
The last few years have been busy ones for me. I continue to have an active research program focused on understanding the fundamental surface chemistry of the hydrodesulphurization process in which sulfur impurities are catalytically removed from fossil fuels. My research is funded by the National Science Foundation, the Dreyfus Foundation and the Petroleum Research Fund. The Dreyfus award has enabled me to take undergraduate and masters level students to national American Chemical Society meetings which has been fun for all involved.

In 1997-98, my family and I spent a sabbatical year at the Swiss Federal Institute of Technology in Zurich which provided an opportunity for me to explore some new research directions and for the family to enjoy life in Europe. Since returning to WWU in the fall of 1998, I have become more involved in university service activities. During the current academic year, I am serving as the Faculty Senate President which has turned out to be an exciting challenge and an opportunity to learn more about how a university functions. The legislative theme for the year is “What is the role of research at WWU?” and one outcome I am hoping for is the establishment of a campuswide Research /Creative Activities Day to celebrate scholarly accomplishments by students and faculty.

Bernadette L. Davidson
Department Secretary
My twenty years of active naval service as a Hospital Corpsman, 2 years as part of a sales team, and 2 years of front office work with a private golf club has prepared me to be on the front line of service to the students, faculty, and staff of Western Washington University’s elite Chemistry Department. It is a pleasure being here and I hope to meet you through one form of communication or another. Check out our website! I’m the grandmother looking one!!! (Ed Note: Bernadette joined the department in March 1998. She is also a WWU Alumna, BA-Political Science, so she easily switch-hits between the administrative and student perspectives.)

Dennis Fitch
Stockroom Manager
I’m new on the block, replacing retiring Ruth Schoonover 4 years ago. My background includes a bachelor’s degrees in Zoology and English, Washington Teacher Certification, and certificated training as a technical writer and editor.

Before coming to WWU, I managed support for all science labs at North Seattle Community College for 3 years. Prior to that, I taught Science, English, and Drama for 12 years, mostly at Oak Harbor High on Whidbey Island. In addition to directing plays, I also coached football, wrestling, and track.

The core of my assignment looks like this—in addition to running the stockroom and buying and storing supplies, I also: provide labs with what they need, keep an eye on building-wide safety, train and supervise student workers, and manage hazardous waste.

I’ve also tackled several other projects designed to improve safety, communication, or efficiency, wrote or revised prep instructions; began writing a stockroom worker’s handbook; simplified the way
JOE CROOK RETIRES?

Yes, it's true, more or less. I retired from active teaching at the end of Fall quarter, 1995, after 25 years at Western. However, that did not stop Denice from assigning me the task of writing a career retrospective and extolling the pleasures of grandchildren, foreign travel, and seeing North America through the steering wheel of a big, gas-guzzling Winnebago. So, here we go.

I graduated from the University of Nevada – Reno with a BS in chemistry in 1958, about the same time Rosalind and I married. For the next several years, she supported us both until I earned my Ph.D. from the Illinois Institute of Technology in 1964. In the course of my doctoral research, I learned more about the hydrogen bonding properties of hydrazines than most folks would care to know.

Following an NSF postdoctoral at the University of Colorado, I joined the chemistry faculty at San Jose State in 1964 as the youngest of the Young Turks. After two years, we were lured to Cleveland State University, where I was heavily involved in developing a Ph.D. program in clinical chemistry and teaching physical inorganic chemistry.

In 1970, the chemistry department at Western was searching for a department chair. After four years of Cleveland winters, nothing could have sounded more appealing to us, and so I applied. By the time the interviews were over, I knew this was where I wanted to spend the rest of my career – assuming the department would have me. And that's the way it worked out.

After five years, I resigned as department chair to spend more time teaching and on curriculum development. A few years later, Jack Weyh and I collaborated on educational software development and programming, a series of projects that kept us very busy in the late 1980’s and early 1990’s. Jack, Don King, and I continue to work in this area somewhat, and thanks to the programming skills of Kris Bruland, the four of us recently released a windows version of the Inorganic Qualitative Analysis program that some of you used during your years at Western.

In between programming projects, Rosalind and I spent two sabbatical years at the University of York in northern England, where I collaborated with Roger Mawby on studies of the organometallic chemistry of ruthenium.

Somewhere along the line, the Young Turk became part of the Old Guard, and it was time to retire. Since then, I have returned to curriculum development as an author and editor for Chemical Education Resources, where my task has been writing general chemistry experiments that use computers for data acquisition. The workweeks are definitely shorter now, but I am in the Emeritus office most days of the week.

All four children (Laura, Brenda, Linda, and Brian) are doing well, and we are enjoying our three granddaughters. And we have done some traveling, most recently to England, Hawaii, and frequently to Boston to visit the most distant daughters and granddaughter. All in all, retirement is a good thing, and I recommend it to you all.

Oh, yes, I was kidding about the Winnebago....

waste is managed; mapped and labeled the stockroom to make it easier to locate chemicals and supplies; improved availability of spill kits, first aid kits, gloves, and other protective gear; devised a system for safer storage of chemicals; updated the chemical inventory; developed databases for tracking orders; reorganized the stockroom resource library to make it more user-friendly.

Future projects include: converting our system of requesting and finding supplies from hand-written cards to computer network; bar-coding chemical containers; updating our Chemical Hygiene Plan and Safety Information Book; developing a system for more consistent review of safety within the building.

Outside of work, I spend most of my time playing with my one and only child, Emily, a 7th grader, who lives with her mom in Oak Harbor. Other interests include dabbling as an amateur actor, singer, writer, and magician. And you might find me involved with sports, cooking, poetry, photography, movies, entertainment trivia, computers and the internet, or music (blues, jazz, classic and alternative rock).

George Gerhold
Professor and Associate Dean of the College of Arts and Sciences

George did not submit an article for the newsletter, but the editor can report that George continues to split his time between the department, where he teaches in the general and physical chemistry sequences and the physical/inorganic chemistry labs, and the College of Arts and Sciences, where he has served as Associate Dean since 1981. George also continues to travel extensively in connection with his rock-hounding activities.

Armando Herbelin
Former Instrument Technician

Armando joined the department in the summer of 1993 immediately after earning his BS-Chemistry degree from Oregon State University and just in time to participate in the department’s move to the new building. As the chemistry department’s first instrument technician, he was a much-needed staff addition with our move to more sophisticated instrumentation and the resulting work to keep the equipment in operational order and to instruct students on the use of modern instrumentation. In particular, the Bruker 300 MHz NMR seemed to suck up more than its share of Armando’s work time but he also managed to find some personal time to take advantage of the area’s natural assets by mountain-biking and hiking.

In the fall of 1997, Armando left the department in order to enter the Analytical Chemistry PhD Program at the Univ of Washington. His research advisor is Dr. Jarda Ruzicka and his research topic is “Flow Injection Analysis, Improvements to Gradient Titration Methods.” In June 1998 Armando married Sharon Maley, a graduate student at Oregon State University that he met through a mutual friend on one of his return trips to his undergrad research lab. Sharon has since completed her PhD on “Mechanistic Studies of Polyhalogenated Benzenes” so there is
Denise Hougen
Department Manager
With the retirement of Ruth Schoonover I have become the senior staff member in the department—a depressing thought since when I arrived in July 1980 I was a fellow undergrad student. How did I manage to move on to “Chemistry Mom” status so quickly? I am also the only remaining staff member who experienced Haggard Hall and can fully appreciate the safety and comforts of our new chemistry building.

Since the last newsletter of 1992, my work life has been dominated by: 1) preparing for the move to the new building (ordering almost $1 million in new equipment, arranging for transportation resources and student workers to move the department—chemicals, glassware, equipment, faculty and admin offices), 2) moving to the new building (co-managing with Ruth Schoonover the 9 week moving process), 3) helping to solve start-up problems in the new building during the first year of operation (where success was measured one-day-at-a-time if the instructional and research labs were in operation) and 4) attempting to catch up work projects (such as the restart of our “annual” newsletter) postponed during the new building startup. However disruptive the new building project was to normal operations, I’m truly enjoying the product, especially since my office now has a window and when I breathe the building air I can’t tell which experiment is occurring in the organic lab!

I have managed to squeeze some vacations in during the last seven years; the highlight being a three week trip to Australia in September 1995. Otherwise most of my free time is filled with reading or gardening at home and attending the many music, drama and sports events of our niece and nephews. Joe and I still live in the house in Whatcom Falls Park, which was not the usual peaceful haven this summer, given the petroleum pipeline explosion in June which made the national news. Our house is located about 300 yards from the pipeline break and we spent the 3 weeks immediately after the explosion with security camped out next to the house, maintaining the complete closure of the park.

On a brighter note, I am particularly enjoying this fall on campus, since our oldest nephew is a WWU freshman and available quite frequently as a lunch date, since his aunt buys! I also enjoy continued contact with our alumni, through visits to the department or by e-mail. Please keep in touch.

Don King
Associate Professor
Don did not submit an article for the newsletter, but if you read Jack Weyh’s article, you pretty much know what Don is doing, since they teach in the same areas (general and analytical) and work together on the same scholarly pursuits. During the summer of 1999, they also shared teaching responsibilities in the accelerated general chemistry program (Chem 121 + 122) and as instructors of the “PC Interfacing” workshop for the 2YC3 Summer Instrumentation Institute for Chemistry Faculty, held at WWU during the last week of July. On the homestretch, both of Don’s sons are married—one living in Eastern Washington and one living in Northern California—and his first grandchild will arrive next spring. Jack should be able to supply Don with grandfather tips, since he has six grandchildren himself.

George Kriz
Professor
I am at the beginning of my 33rd year as a member of the chemistry faculty at Western—what a terrific job! I find that, even though my colleagues are aging and slowing down, that I feel just about as good as ever!

Together with my colleagues, Don Pavia and Gary Lampman (and Randy Engel—WWU MS alum), I have continued to work as co-author for our successful series of organic chemistry textbooks. Our original “macroseale” laboratory textbook is now in its fourth edition (it’s now called “small scale,” rather than “macroseale”). Our microscale organic laboratory textbook just came out in its third edition earlier this year. Right now, we are working on the third edition of Introduction to Spectroscopy (AKA “The Pumpkin”). For those of you wondering about whether or not the collection of loose pages, or the paperback, is ever going to get published as a lecture textbook, all I can say is that I’m working on it—it’s slow going when all of the other projects are also being pushed.

My teaching continues to include the entire spectrum of organic chemistry courses. In addition, I teach organic spectroscopy and a relatively new course, Advanced NMR Techniques. My research has recently focused on natural constituents of the South American longa tree. We seem to have found some unusual compounds, and structure-proof has been quite challenging.

Perhaps the biggest news in my professional life is that the 17th Biennial Conference on Chemical Education will be coming to Western in the summer of 2002. This is the most important national meeting of chemical educators. There will be something on the order of 2000 participants on our campus. I am scheduled to be the General Chair of the meeting. My duties will be so involved that I have been granted professional leave for the 2001-2002 academic year so that I can devote my full attention to the preparations for the meeting. If any of you want to help out, please give me a call!

And yes, I still spend time with my family, I still sing, I still help with the dishes, and I still stay up on Sunday nights to watch The George Michael Sports Machine. Best wishes to all of you!

Gary Lampman
Professor
I have now assumed my position as the senior faculty member in the chemistry department! It doesn’t seem possible that I have now served the department for over 35 years. My old office in Haggard Hall is now a corner of the library! Haggard Hall served us so well for a number of years, but it became quite unsafe. As some of you know, it was called “Hazzard Hall” in the final years of its use. Our “new” building is serving us well, although we are already having space problems. You “old timers” will remember the time when we had two organic series offered each year. We now have three series starting each fall, and another one starting winter term.
George Kriz and I have also offered Chemistry 351 and 352 during the 9 week summer session (each as a 4.5 week accelerated course). We now offer four chemistry 354’s in the winter, two in the spring and one in the summer quarter. We formally had two in winter and one in spring! I am happy to report that there is a new organic chemist in the department. Jim Vyvyan joined us recently and is very much welcomed in the “college of organic chemistry.”

My research interests still revolve around reactions of Vitamin B12 model compounds. I have been blessed with a number of excellent undergraduates and graduate students over these 35 years. Earlier, I had students working in the area of small ring compounds, mainly cyclobutane rings. I have enjoyed a long associated with my colleagues, George Kriz and Don Pavia, in collaborations on writing organic laboratory books. We have enjoyed the collaboration with Randy Engel in these projects. Our microscale book is now in its third edition while our original “bucket scale” book is now called “Small Scale Approach” because we downsized the amounts of chemical used in the procedures. Our spectroscopy book that many of you remember as “The Pumpkin” is now going into its 3rd edition.

Finally, I need to update you on my family. Marian and I celebrated our 25th anniversary a few years ago. We continue to be active at St. Paul’s Episcopal Church where we sing in the choir. Both of us are in the Whatcom Chorale. We traveled to Germany, Austria and the Czech Republic last summer for a choral trip with the Chorale. We also periodically travel to England for visits with our old friends there from seminester days. Our daughter, Beth, now known as Liz, finished college at Durham University in England. She is now back in Bellingham working in a job she loves, namely growing plants! Our son, Karl, finished high school, tried college for awhile, and is now living in the Spokane area.

Plan on visiting us sometime when you are back in the Northwest. You can always contact me by snail-mail or by e-mail: lampman@chem.wwu.edu. Please drop us a line!

Dee Dee Lombard
Former Department Secretary
After almost seven years of devoted service in the Chemistry Dept, Dee Dee left us in April 1993 for the likes of the Philosophy Dept, just in time to miss out on our move to the new building—a very smart “move” on her part! The new position offered a reduced appointment which created a better fit with her family responsibilities. (Daughter Taylor is 17 and in 10th grade; son John Cooper is 13 and in 8th grade—yikes! two teenagers!!)

As Philosophy’s sole staff member, Dee Dee single-handedly keeps all the faculty, majors and students in line while still participating in chemistry social activities, once again proving that no one ever really leaves the Chemistry Department.

Ruth McCrea
Former Department Secretary
Ruth transferred from the WWU Engineering/Technology Dept to the Chemistry Dept in June 1993 upon the departure of Dee Dee Lombard for the Philosophy Department. Ruth survived an anxious introduction to the department when she was immediately left to keep the Haggard Hall administrative office running on her own while Denise was involved with the move to the new chemistry building. After faithfully serving the department for four years, Ruth left WWU in June 1997 at the same time her daughter Jenny (B.A./Park/Recreation Mgmt) and her son Keith (BS-Chemistry) graduated from WWU. She remains in the Bellingham area as an independent businesswoman and recently celebrated her 35th wedding anniversary with her husband Corky while also continuing to participate in chemistry social events.

An update from Ruth herself: “I left the great Chemistry Dept with tears in my eyes (sad to leave the best department on the campus) and butterflies in my stomach (leaving a secure job) to run my own business as a Mary Kay Consultant in June of 1997. I earned a FREE ’98 Pontiac Grand Am in August of 1997 and was promoted to Sales Director in June of 1998. I returned to the Chemistry Dept for two weeks in March 1998 to help the department through a temporary secretary vacancy period. I continue to build my Mary Kay business and just picked up my new 2000 Red Grand Am. I stay in touch with my friends in the Chemistry Dept and enjoy getting together with Denise for lunch and hearing the latest news of the department and WWU.”

John A. Miller
Professor
After completing an eight-year stint as Director of Science Education in 1993, I returned to full time teaching in chemistry and the science education program. I again have the pleasure of teaching the one quarter organic course on a regular basis and I occasionally teach in the elementary science methods program as well. For the past four years my main commitment has been the supervision of our secondary science teachers and working with graduate students in our M. Ed. Natural Science/Science Education program for which I also serve as the advisor. This graduate program has increased dramatically in size. At one point we had sixty students, but today the number of graduate students number twenty-three which is a more manageable size.

The most interesting activity during the past three years for faculty in the interdepartmental science education program has been our move to the new teaching facility Science, Mathematics, Technology (SMATE) building. The facility is one-of-a-kind on the North American Continent. It houses two fully equipped teaching laboratories, a six thousand square foot resource learning center, computer classroom plus other assorted support system.

I also enjoyed the opportunity to co-author, along with some of my other colleagues in science education and Dr. N. Vaidya of India, a new methods book, Science Teaching for the 21st Century. This methods book is to be used for science teacher education in the India subcontinent. In addition, I did research with Lockwood Gibbs, one of my graduate students on the misconceptions of acid-base theory that high school students develop. This particular research has proved to be a real education for the researchers.

On a personal note, my wife and I are still avid bird hunters and into fly-fishing. The purchase of a motor home by my wife in 1995 and my winning of a S-10 pickup in 1997 only enhanced our enjoyment of these activities. In August of this year we went to Idaho to fish the North Fork Clearwater River and one of its tributaries,
the world famous Kelly Creek. This fishing trip was coupled with a blue grouse hunting expedition at Pateros, Washington where I had the fun of watching the development of my new hunting dog, another Welsh spring spaniel pup.

Joe Morse
Professor

An introduction to Joe Morse. Unless you have graduated in the past three to six years or attended Alumni Life Member events, you haven't likely met me. So I'm new but I'm old. I joined the Chemistry Department in the fall of 1993 after 25 years on the faculty of Utah State University where I was a member of the Department of Chemistry and Biochemistry and, for the last seven years there, Director of the University Honors Program. (For those of you who have been paying attention to such things Western's president, Karen Morse, also joined the University in 1993 from Utah State and a background in inorganic chemistry—it isn't entirely coincidental.)

My graduate work (Michigan) was in inorganic chemistry and that is where my heart and principal interests remain. I continue to find the idea of modifying the properties of transition metals through the rational selection of ligands to be an intriguing area of study. So my laboratory work has ranged from the synthesis of highly fluorinated phosphine ligands to studying the variance in physical and chemical properties which those (and other) ligands induce in transition metals. I have not established a laboratory research program at Western but do bring considerable experience to my classroom and to the senior laboratory that I have been teaching here.

My recent publications nearly all have something to do with how better to teach science, something which had begun before I left Utah. My interests in that endeavor somehow entangled me with the excellent science education group at Western and I have been happily engaged with them since 1994, as Director of the program since 1996.

I try to practice what I preach so my classes are unconventional in some respects. My students do a lot of group work and talking in class. My examinations are as much (or more) conceptual as they are computational and are entirely essay or short answer in format. All my lecture notes are available on a web site (accessible through the department's site) so students don't have to write very much down in class to have complete notes. I am persuaded that my students today perform better and understand and retain more than they did even a few years ago and I attribute much of the improvement to changes in my instructional methods.

I have also taught a course in Western's Liberal Arts Options program and/or in the Honors Program each year at Western and find that taking a scientist's perspective into some different kinds of courses to be exciting for me, at least. In the LAO program I am currently teaching a Humanities GUR called "The Nature of Genius" in which we seek to grasp what this might mean through study of the lives of Newton, B. McCleintoo, R. Feynman, and E.O. Wilson.

For fun I sing in the Whatcom Chorale (with Gerry Prody, George Kriz, and Gary Lampman) and with the Festival Chorus in the Bellingham Festival of Music. John Whitmer and I did the one-day Seattle to Portland bicycle ride this year as well as a round trip over the North Cascade highway and I joined a bunch of mathematicians to do the mountain bike leg of the Ski to Sea race in May. Never a dull moment.

David Patrick
Assistant Professor

I joined the faculty in 1996, after attending graduate school at the University of Utah. Before coming to Western, I spent a year at Cambridge University in England studying the properties of liquids near surfaces using computer simulation. This line of research has continued at Western. Currently I advise two undergraduate research students working on projects involving computational chemistry. A second part of my research uses scanning tunneling microscopy (STM) to study properties of thin films and ordered materials. This research involves 3-4 students, at both the undergraduate and graduate level. An STM was built by Western chemistry students during 1997 and is housed in the Chemistry Department.

I teach analytical and general chemistry, as well as an upper division course in computational chemistry. My wife Baltach and I have two girls aged 4 years and 3 months.

Don Pavia
Professor

Over the past few years I have been the department's de facto webmaster. Our website address is "http://atom.chem.wvu.edu/dep/wwuchem.html". If you look at the website you will find pictures of our new building, inside and out. In the faculty/staff pages you can find mug shots of all your favorite instructors and staff.

We have been in our new chemistry building for five years now, and it really is a dream compared to old "Hazard Hall"! The ventilation system actually works! In fact, it is probably one of the most sophisticated systems I know of in any undergraduate teaching laboratory. Everything is under computer control and the airflow adjust interactively to any changes that might occur. Our building does not have the typical chemistry laboratory smell!

Our new building is completely networked and we have several servers. As a result of a grant proposal authored by David Patrick and myself, we have now installed 22 new 300 MHz Pentium II computers with 17-inch monitors in our student computer lab. Five SGI Indigo II XZ UNIX workstations (obtained by an NSF grant) are also available for specialized chemical applications. We have purchased PC Spartan Pro and HyperChem molecular modeling software for our students to use. Molecular modeling and computational methods are becoming emphasized in our program as early as the general and organic chemistry courses. Also available to students in our computer lab are various spreadsheet, graphing, and structure-drawing programs. The computer age is upon us!

We also have a new science lecture building, located next door to the new chemistry building and equipped with multimedia-equipped lecture rooms. Computer applications (screen above) can be used simultaneously with the chalkboard (below). I am now using a combination of chalkboard, computer video (PowerPoint slides), network accessible software, and the internet for my lectures. I do not have to take any computer applications with me to lecture, since the classrooms and the chemistry networks
are all connected to the campus grid. All computer materials that I use in lecture are available to students before or after class on the Internet via the department's web page. Look for "Course Related Materials" and "Instructor's Course Pages" if you would like to see some of the course material. Several instructors have material posted there. (You will need to install PowerPoint viewer or PowerPoint itself as a Netscape helper or mime application.) PowerPoint slides, syllabus, sample exams (with answers), and problem assignments are all available there. There is also a computer-interactive model set for students in the organic chemistry classes using the Chime Netscape helper.

I continue to work with professors Kriz and Lampman on new writing projects. We are currently preparing a third edition of our organic spectroscopy book (many of you knew it as "The Pumpkin"). Just finished this year, cooperating with Randy Engel (M.S., WWU, and now at Edmonds CC) was the third edition of our microscale laboratory text. The fourth edition of our microscale laboratory textbook (also with Randy) was published in 1998. This book has been in publication continuously since 1976! We continue to work on our lecture text, and it is now custom-published for use in our classes by Harcourt Brace.

My wife Neva keeps busy teaching and tutoring high school math and science courses and keeping track of our three children. Morgan, age 19, is now a college sophomore at PLU in Tacoma. Kevin, age 17, is a senior at Squalicum High School, and Bronwyn, age 13, is an eighth grader at Whatcom Middle School.

Gerry Prody
Associate Professor

The past few years have brought many exciting changes to the biochemistry program here at WWU. Three years ago, we hired an additional biochemist, Spencer Anthony-Cahill, and his input has greatly improved our program. He instigated a new physical biochemistry course set to replace the traditional P-Chem, and has integrally woven molecular modeling into Chem 471, protein biochemistry. Also, his wife Yvonne is a fabulous cook, a great addition to our pot-lucks.

Since Spencer has been teaching 471 and 474 (biochem lab) and occasionally 472 (metabolism), I have been teaching Chem 121 (general chem for science majors) and really enjoy it. All my lectures are based on PowerPoint slides which the students have access to ahead of time. Also, students are required to participate during lecture. Each student gives me an index card at the beginning of the course and I randomly call on people throughout the lecture. This past quarter was especially successful. Students literally buzzed during class, discussing problems, or drawing structures on the board. I also use the card system in 473 where "the cards" have a notorious reputation among students. But they do stimulate active learning.

In April I will be going back to UC Davis for a year sabbatical. I will be working with John Labavitch and Carl Greve (my best friend) in the Plant Physiology Department there. My project is to isolate and characterize two enzymes thought to be involved in fruit ripening in tomatoes. I can't wait to get started. Also, I will rejoin my old early music group, and, perhaps more importantly my old wine-tasting group. It will be great to see all my old friends again, and the work should lead to a lifelong collaboration.

Thank you to all of you who wrote letters supporting my application for promotion. Unfortunately, that wasn't approved. Hopefully, my new research project will help me accomplish that great feat. Come by and see me when you are in town. Or send me an e-mail. I'd love to hear from you!

Sal Russo
Professor

Since 1990 I have been teaching a course in biophysical chemistry which emphasizes the application of physical techniques to biochemistry. The 1993-94 academic year was spent on sabbatical leave in the laboratory of Dr. Mary Caruthers in the Chemistry and Biochemistry Department at the University of Colorado in Boulder. This provided an opportunity to gain experience in the synthesis and characterization of oligonucleotides and their dithioate derivatives. Dithioate oligonucleotides are important because of their applications to antisense therapy. This work was continued at WWU by graduate student Sharon O'Reilly who studied the abnormal electrophoretic behavior of these compounds.

I have a long-term interest in the mechanisms responsible for the irreversible inactivation of enzymes. These processes include deamination of asn residues, hydrolysis of asp-X peptide bonds, destruction of cysteine residues, and formation of incorrect structures. This project has been carried out by undergraduates Ross Taylor, Matt Kaeberlein, Julia Whitford, Josh Boldman, and Eric Kobet.

My wife, Judy, our cat, Emma, and I moved to a different house on Alabama Hill in 1998. In June 1999 we had a close-up view of the pipeline explosion, but fortunately the wind carried heat and ashes away from our house so we did not evacuate the premises. Our daughter, Amy, works for Mountains to Sound Greenway and our son, Alan, is an architect in Seattle. I enjoy jogging with Joe Crook and hiking in the Cascade and Rocky Mountains. I also regularly attend contra dances at the Fairhaven Library. They are lots of fun and a good contrast to the cerebral rigor of chemistry. In addition, I serve as part of the worship team and choir at First Presbyterian Church.

Jim Vyvyan
Assistant Professor

I joined the WWU chemistry department in the fall of 1997, and the last two years have been somewhat of a blur! The newsletter has given me a chance to pause, catch my breath, and reflect on all that has happened recently. Let me first provide you with a little background on my path to Bellingham. My wife, Cathy, and I are both natives of Wisconsin, and after I graduated from the University of Wisconsin-Eau Claire, we moved to the Twin Cities for graduate study at the University of Minnesota, where I earned my Ph.D. in 1995. Then it was off to Holland, Michigan for a Dreyfus Postdoctoral Fellowship at Hope College for two years before taking the position at Western.

I quickly settled into my teaching duties at WWU, which are primarily in the organic chemistry lecture/lab series. I am also in the rotation for teaching organic
spectroscopy, organic reactions and this year I am excited to teach a brand new course in medicinal chemistry. My research laboratory is also bustling with activity. We work in the broad field of synthesis, from developing new synthetic methods and strategies to the total synthesis of biologically active natural products. My group over the past two years has consisted of, on average, three graduate students and three undergrads.

The personal side of my life has been even busier and better—if that's possible! Last summer Cathy and I joyfully welcomed James Robert Vyvyan III, who was born August 29. He scoots all over the place and just about has walking figured out. Of course I am bound by the laws of new parents to tell you that he is the cutest little boy you have ever seen! We also bought a house this spring, and have spent quite a bit of time over the summer doing projects around the house, many of which involved child-proofing.

As Wisconsinites, we are naturally Green Bay Packers fans, and try to see as many games as possible. We hope James Robert's first words are "Mom" and "Dad", but we have also been working on important phrases like "Go Packers!" and "more bratwurst please."

Charles Wandler
Instrument Technician

Hey I'm Charlie! I've been at Western since Fall 1996 and the instrument technician since Fall 1997. I'm the guy that works on all the equipment around here, especially when the NMR breaks down!!! Now there's a story for you there. But I won't get into that, though Ryan Looper '99 grad could give you some good info on that debacle!!! I haven't checked the bulletin board lately.......we'll skip that one too. Let's see....ummm......I am also the filler-in guy. When anyone leaves I fill in: lectures, lab coordinator, stockroom attendant, mail delivery person, and my newest job LOGO MAN! I am the official point of information regarding Western's original logo and the new centennial logo. See me and I can show you the official logo guide and help you in your logo formatting decisions. In my spare time I am an assistant coach for both cross country and track here at Western. Did I tell you that I am running my first marathon in June? Talk about crazy. When I'm not running or doing chemistry stuffs, you can probably find me in Phoenix, eating fajitas and drinking margaritas by the pool. (Ed note: We thought he was involved in running while in Phoenix!) (Real Ed Note: The above was written by Charlie's ghost writer, Bernadette Davidson, since he is tied up in hand-to-hand combat with the mnr. Charlie is an alum of Eastern Wash Univ (BS-Chemistry) and has a MS-Chemistry Degree from the Univ of Wash.)

Jack Weyh
Professor

For the past eleven years Joe Crook, Don King and I, along with programmer Kris Brueland, have been preparing computer-based instructional materials for use in general chemistry. To date we have prepared eleven programs, the latest of which is a Windows 95/98/NT version of Inorganic Qualitative Analysis. Qualitative Analysis contains digitized video images of known and unknown samples used by students to learn the descriptive

Ruth Schoonover Escapes
(well...retires)

You wanted to know what I have been doing since the last newsletter (that was a long time ago). The big event was that I retired from good old Western in September of 1995. I don't miss getting up at O'Dark Hundred to get to work but I do miss the people. However, I find all kinds of things to keep my days busy.

In August of 1995 I became president of a national organization that has a membership of more than 13,000. I spent my year as president traveling for the organization and I was rarely home on a weekend. When I left office in August of 1996, I accepted a major chairmanship; they bought me a computer, and I make about eight trips a year for the organization.

In July of 1997, I was the host for the annual national conference for the National Association of Scientific Materials Managers in Tacoma Washington. It was a busy week but enjoyable. It was nice to be able to show off the Puget Sound area and the weather cooperated. We could actually see Mt. Rainer.

My parents live close to Bellingham so I spend more time helping them than I did while I was working. Dad (age 94) decided that he was getting too old to run his farm so he told me that I had to become a farmer. I spent most of last summer on a tractor. I hope that I don't have to do that again for a while. I will still have to haul some hay next summer and there are always fix-it jobs.

Bill and I have been traveling whenever we can get away. In November of 1997, we took a cruise through the Panama Canal and enjoyed it so much that we took another cruise last February. That trip we flew to Santiago and cruised down the coast of Chile, around Cape Horn to the Falkland Islands and then up to Buenos Aires. Spent a few days (longer than expected) in Buenos Aires and then flew home after only a few hours in Rio de Janeiro. You may think that your passport expires on the date that it says it does but in Brazil it expires six months before that. Brazil would not issue us visas to spend a few days in Rio as we only had four months before our passports expired. We had to get new passports in Buenos Aires in order to fly to Rio just in time to catch our flight home. The cruise was great and the stops were very interesting. We are presently looking into a trip from Athens to Istanbul and a trip to China with a cruise on the Yangtze River. We hope to do one of those trips this next year.

We have started to make some flights with the military (an option available as part of Bill's military retirement benefits) and will probably make more. We fly for free on a standby basis on whatever forms of air transport are going; Last April we went to Hawaii for a week. In September we flew to Puerto Rico for two days of sun and reading. We are planning to let the military take us to Hawaii again in January and we are discussing going to Alaska for solstice. The last couple of Christmases, we have been in Florida but this year we are going to Mazatlan for two weeks.

I thought retirement was going to be easy, but there are just not enough hours in a day or days in a week to get everything done that you want to do.
chemistry of selected inorganic ions or to solve randomly generated unknowns. If this description has piqued your interest you can download a demo version of the program from our department website (www.chem.wwu.edu/dept/). We invite you to try it and let us know what you think.

We are starting year seven in our new building and the facility is terrific. One of the big changes that occurred in general chemistry when we moved into the new setting was to include a computer and interface system at each student station in all the general and analytical labs. We wanted to instill in our students, early in the program, the belief that a computer is an integral tool for modern chemists. Students use the interface to control experiments and collect data. A spreadsheet is used to treat the data. We have been very fortunate to have grants support from the National Science Foundation and the C.V. Wilder Educational Endowment for this program. The interface system is from LabWorks. For the last seven years Joe Crook, Don King and I have been writing laboratory experiments for this system. The experiments have been published and are available for use in schools with LabWorks systems.

Fall 99 is the beginning of year thirty two for me at WWU. Time certainly goes by quickly when you are having fun.

John Whitmer
Professor

Time does indeed fly. It's hard to believe that I've been at Western for over 30 years, but longevity is not that rare in the department now. Fortunately, Chemistry has a very talented group of younger faculty, as some of you more recent graduates are well aware, and you certainly will be hearing more of their activities in future Chemistry Newsletters. We've been in our new building for 6 years, so if you've not been on campus recently, it's well worth a visit to see our remarkable facilities, visit familiar faculty, and meet more recent ones.

Some of you may recall being in my general or physical chemistry courses. And who could forget P-Chem, that 'great white whale' (apologies to Melville) of the chemistry curriculum? In recent years my interest in molecular spectroscopy and vibrational analysis has shifted more to the Department's contribution to the preparation of high school science teachers. Last year, for example, from January to June, seven Western student teachers had visits from me about once a week in their high school science classrooms. This was a new experience and satisfying except for the almost daily drive to one or more schools around Whatcom county, carefully scheduled around other teaching responsibilities. In spite of some general concern about the teaching profession nationwide, there are many good things going on in local high school science classrooms.

On the personal side, bicycling and travel are still activities enjoyed most when I'm off campus. Recently, my wife and I have made almost annual summer trips to Alaska where our 2 sons have worked for the past few years. Even managed to hike the Chilkoot Pass Trail on the one hundredth anniversary of the Klondike Gold Rush, but once is enough on that one! Costa Rica is a great place, as are Egypt, Kenya, Morocco, Tanzania, and Turkey if you can sidestep the earthquakes. Still, it's hard to beat the Pacific Northwest.

It's been good to see local Chemistry alumni from time to time in and around Bellingham. But it would be especially gratifying to hear from alumni who are settled and working afar. Drop us a line, an e-mail, or just drop in when in the area. We'd be delighted to show you what's new—and plenty is.

Mark Wicholas
Professor and
Chair, Chemistry Department

I continue my passion for travel with what I hope will be a relaxing beachfront vacation in Costa Rica during Christmas intercession. I'm not sure I know how to relax on a beach without getting bored, but I'm going to try it. I'll even try snorkeling, something I have never done. Recent trips have brought me to Thailand, Morocco, Peru, Bolivia, Jordan, principally for adventure and hiking. I still dabble in research—it's still inorganic and organometallic chemistry—and recently published a paper with two WWU undergraduates in the journal Inorganic Chemistry. I can't believe that I have been department chair since 1982 and have maestrositically signed up for a final four year term ending in 2003, but it's true. By then I will be ready to retire!

Bill Wilson
Professor and Director of WWU
Scientific Technical Services

I continue to teach 1/2-time in the areas of physical and analytical chemistry, namely the senior and graduate courses in p-chem and instrumental analysis. I also contribute some specialty courses in atmospheric and environmental chemistry. My other 1/2-time activities are centered on what is now called Scientific Technical Services which encompasses the machine and electronic shops and the instrument center.

Research-wise I continue with work on the glaciers and snowfields around Mt. Baker interested primarily in the distribution of organic materials that originate from the fallout of atmospheric aerosols. A complicating factor is the existence of cold-loving algae and associated microorganisms that metabolize a wide variety of organics in situ. As a result, a major part of the project involves the field of microbiology. In addition, the relatively high concentrations of chromium and nickel in the dunite petrology of the Twin Sistren mountain range have some potential for releasing the heavy metals into the various branches of the Nooksack River. In recent years, we have been studying the mobilization of Cr and Ni through plant types known as heavy metal accumulators. Finally, I continue to work with NASA Ames Research Center in Mountain View, California, where I am associated with a high altitude group that measures nitrous oxide and methane in the lower stratosphere with airborne flow through tunable diode laser spectrometers mounted on modified U-2 aircraft, now known as ER-2's.

Watch for the Debut of "Faculty/Staff Expatriates" in the Next Newsletter
New Western Foundation Chemistry Funds

Since our last newsletter (Fall 1992) three new Western Foundation funds have been established by friends and alumni to benefit the Chemistry Department and its students.

Jerry Price/Nancy Sherer Scholarships

Established in 1996 by Jerry Price and his spouse Nancy Sherer (along with matching funds from Georgia-Pacific Corporation) the fund was originally structured to supply two $1,500 scholarships—the Price/Sherer Scholarship and the Verna Alexander Price Scholarship (in honor of Jerry’s mother)—for a period of 10 years. Jerry is an alumnus of the department (BA, 1968; MS, 1970) and the manager of Quality Control, Pulp and Paper Chemistry, at Georgia-Pacific in Bellingham. In Fall 1999 Jerry and Nancy added an additional gift (again matched by Georgia-Pacific) to the fund in order to convert it into an endowment, which will now permanently fund one scholarship each year, beginning with $1,000 for 2000/2001.

Ruth Watts Science Scholarship Endowment

Established in 1993 by a gift from the late Mrs. Catharine C. Stimpson and Dr. Arthur Watts of Bellingham in honor of their sister Ruth Watts, a PhD chemist who received her degree from the University of Chicago. The endowment initially provided an annual $500 scholarship for a woman majoring in science, preferably chemistry, who "demonstrates the ability to do advanced research and the ambition to go "upward and onward" even though the reward may not be commensurate with the effort." Since its establishment in 1993, the endowment has grown in size (in particular, with annual gifts from Dr. and Mrs. Watts); it now provides an annual $1,000 scholarship.

Sara Bras Weihe Equipment Endowment

This endowment was established in 1995/96 by a gift from Karen (Weihe) Hulford (along with matching funds from Georgia-Pacific Corporation) in honor of Karen’s aunt, Sara Bras Weihe. Karen is an alumnus of the department (BA Chem, August 1969) and is employed at Georgia-Pacific in Bellingham as Industry Group Manager, Chlor-Alkali Ethyl Alcohol Group. Karen established the endowment to provide annual funds for the purchase of small equipment for the department.

Thank You

We wish to thank the following alumni and friends of the department who have made donations to our various Western Foundation funds during the 1997/98 and 1998/99 academic years. Employers that matched donations are noted in brackets following the donors' names.

Steve Abe
Charles Albertson
Francis & Julie Arzberger
James & Gail Assink
Dawn Balseh
Kirsten Ballweg
Brent Barber
John Bartlett
Joel & Rebecca Barton
Alfred & Laurie Belanger
Dan & Michelle Bickford
Roger Blackman [Dow Chemical]
Diane Brighton-Giles
Jeffrey Brink
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Greg & Kim (Folger) Bruce
Gary Burtoth
Linda Buck
Laura Cazares
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Lawrence & Janet Connors
Mae & Lisa Cooper
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Thomas & Cynthia Hinds
Amy (Nordlund) Holtzelaw
Mark & Elizabeth Hovander
Karen Hulford [Georgia-Pacific]
Eric Jacobson
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William & Trudy Kindler
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George & Carolyn Kriz
Tom & Lisa (Hammond) LaGrandeur
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Robert Matson
Jeff May
Richard Maynard
W. Dan Miller
Rockie & Mary Morgan
Hannah Morris
Joe & Karen Morse
Susan Neff
Susan Nelson
Amy Nobles [ARCO]
David & Barbara O'Keefe
David Olausen
Eugene Oliver
Dennis Olson

CHEMICAL VIBRATIONS
Donations Welcome

Tax-deductible donations to any of the Chemistry Department’s Western Foundation funds are greatly appreciated. They directly enhance the undergraduate and graduate programs in the department by funding items such as our undergraduate scholarship program, chemicals & supplies for student research projects, small equipment for the upper division and research labs, scientific software for the student computer lab and the department seminar program.

Many of you will be contacted by the Western Foundation during the annual drive, either by letter or during the phonathon. Below are listed our current Western Foundation funds (along with their WF fund numbers) for your consideration. The foundation also provides on-line pledges at their web site (just look in the index for the Western Foundation from the WWU home page: http://www.wwu.edu).

Chemistry Fund (230008). Our primary fund to which most donations from the annual fund drive are made and which we use to fund the widest variety of department needs. During 1998/99 the following needs were funded: equipment and chemicals for undergraduate research projects (those for which we have no outside grant funds), new software and licensing renewals for our in-house student computer lab, scholarships for outstanding chemistry and biochemistry majors (see page 3 of the newsletter for this year’s recipients), support for our seminar program and the annual reception for our scholarship/award recipients and graduating seniors.

Holzman Chemistry Endowment (330038). Established in 1987 with a generous gift from George and Sara Holzman, endowment proceeds are used to support the graduate program. (Their son, Tom Holzman, was in the graduate program during the 70s.) During 1998/99 proceeds from the endowment provided funding for recruitment efforts and graduate student research projects not funded by outside grants.

Knapman Scholarship Endowment (320026). Established in 1988 by Faculty Emeritus Fred Knapman and his wife Frances, the endowment originally sponsored two annual $1,000 scholarships. The endowment has grown to the point that it now provides two $1,500 scholarships each year. Professor Emeritus Joe Crook is one of the reasons for continued growth of the endowment. At his Fall 1995 retirement, he requested that department faculty and staff make donations to the Knapman Endowment in lieu of giving him a traditional retirement gift from the group. His request resulted in over $1,000 in donations to the endowment.

Price/Sherer Scholarship Endowment (320172). See “New Funds” article for details.

Progressive Chemist Scholarship (220101). Established in 1991 by a group of local ARCO employees (including several department alumni). With matching funds from ARCO, it has funded an annual $1,000 scholarship to an undergraduate or graduate chemistry student who “shows initiative and motivation to study and contribute within the field of chemistry.” The fund balance was not large enough to sponsor a 1999/2000 scholarship but with increased donations we hope to reinstate the scholarship for the 2000/2001 academic year.

Watts Scholarship Endowment (320065). See “New Funds” article for details.

Weihe Equipment Endowment (330030). See “New Funds” article for details.
Verna Alexander Price Scholarship

Jennifer Oakesmith has been awarded a $1,500 Verna Alexander Price Scholarship. Last year she was the recipient of the department’s Progressive Chemist Scholarship. A chemistry major, Jenny is a member of the Phi Eta Sigma National Honor Society and Jim Vyvyan’s organic research group. She has also served the department as an instructional lab assistant for the analytic and organic programs. After graduation in June 2000, Jenny will pursue graduate studies in order to enter the field of medical research.

Ruth Watts Science Scholarship

Rebekah Main has been awarded a $1,000 Ruth Watts Science Scholarship and a $500 Chemistry Fund Scholarship for a total award of $1,500. A chemistry major, Bekah is a member of Mark Bussell’s surface chemistry research group and at the American Chemical Society (Puget Sound Section) Undergraduate Research Symposium in April 1999, Bekah (and another co-author Brian Woodruff) received the award for “Best Poster Presentation.” Also, in March 1999 she made a research poster presentation at the 217th National Meeting of the American Chemical Society in Anaheim, CA. Bekah was previously honored by the department as the 1996/97 Outstanding Freshman/General Chemistry Student and was honored again this year as the 1998/99 Outstanding Analytical Student. After graduation in June 2000 Bekah will pursue a PhD in either the field of surface chemistry or chemical engineering.

Chemistry Fund Scholarship

Anna Mowry has been awarded a $1,500 Chemistry Fund Scholarship. A biochemistry major, Anna is a member of Spencer Anthony-Cahill’s protein chemistry research group and has also been awarded a “Jean Dreyfus Boissevain Undergraduate Scholarship” provided by the Dreyfus Foundation. The Dreyfus scholarship will provide salary and supplies for the summers of 1999 and 2000 for Anna to continue her work in the Anthony-Cahill lab. Following graduation in June 2000 Anna will take a year off and then continue her studies by attending a bioscience graduate program.

Tuition/Fee Waiver Scholarships

Jessica Lange has been awarded a $375 Tuition/Fee Waiver Scholarship and a $375 Chemistry Fund Scholarship for a total award of $750. A chemistry major, Jessica is a member of the Phi Eta Sigma National Honor Society, an officer of the WWU ACS Student Affiliates Chapter, and serves the department as an instructional lab assistant and evening lab support assistant. During the previous year she conducted environmental chemistry research in the lab of Devon Cancilla (environmental chemist at Huxley) and during 1999/2000 will be conducting organic research with Gary Lampman. After graduation in June 2000 Jessica plans to work in the chemistry field for one or two years and then decide whether to pursue graduate studies in chemistry or seek a masters in secondary education.

Brian Woodruff has been awarded a $375 Tuition/Fee Waiver Scholarship and a $375 Chemistry Fund Scholarship for a total award of $750. A chemistry major, Brian is an officer of the WWU ACS Student Affiliates Chapter and has served the department as an instructional lab assistant. He is a member of Mark Bussell’s surface chemistry research group and at the American Chemical Society (Puget Sound Section) Undergraduate Research Symposium in April 1999, Brian (and another co-author Bekah Main) received the award for “Best Poster Presentation.” Also, in March 1999 he made a research poster presentation at the 217th National Meeting of the American Chemical Society in Anaheim, CA. After graduation in June 2000 Brian plans to take a year of additional classes in mathematics and neurobiology and then apply to graduate school in either surface chemistry, materials science or neurobiology.
Looking Back

From the November 2, 1993 issue of the WWU Western Front:

New Chemistry Building Celebrates Open House with Symposium

Speakers at the Oct. 29 chemistry symposium addressed a standing-room-only audience of students, faculty and professionals interested in the future of the chemical and biological sciences. The symposium, part of the opening celebration for Science Facility I, Chemistry, focused on applications of academic education in the work-a-day world.

Speakers Deborah Schindele, Lynne Parr Galligan and Harry Gray told of what students might do with their educations, where they might find work and how they could prepare themselves to compete in a tough job market.

Schindele, Director of Strategic Planning at the Washington biotechnology company, ICOS, said biotechnology firms are looking for people with interdisciplinary backgrounds in biology, physical chemistry and chemical computation. Schindele said today's biotechnology involves all disciplines in chemistry. One project she discussed involved organic, protein and physical chemistry, biochemistry and spectroscopy. "I would love somebody who had a really solid base in chemistry, because it's the hardest to pick up," she said.

Galligan, a Western alumna and methyl fluids division general manager for Dow Corning Corporation, agreed. "The day of the narrow background is gone," she said. Chemistry is a great building block, a cornerstone of industry, but that industry requires only a limited number of specialists. Students need to get involved and volunteer, take internships or take a job away from home to expand their experience base. People with new skills are in high demand so workers need to constantly upgrade their skills.

Advice from Harry Gray, a chemistry professor and director of the Beckman Institute at California Institute of Technology, received applause. "There aren't many jobs out there in anything, so you may as well do something you like," Gray said.

Each speaker offered a different perspective of post-education occupations. Deborah Schindele concentrated on therapeutic applications of biotechnology and the vital role chemistry plays, while Lynne Parr Galligan discussed career avenues other than research and lab work during her presentation.

Galligan said there is great concern for the number of students in the sciences. She said even though they're not hiring now, business and industry are going to need a lot more scientists, biologists and chemists, especially with the growing concern for the environment. "PR firms are hiring chemists to help them figure out how to say things to people," Galligan said. Another need for scientists is in waste control and management. Companies today are focusing their time, energy and innovation on how to not create problems. "It's no longer OK to make a brand new chemical for a fancy application if for every pound of good material you make, you also make 20 pounds of stuff you have to throw away," she said.

Industry and business require basic research. Harry Gray centered his talk on the opportunities for graduates in research, especially in the areas of energy and the environment. Gray said there are three big problems the world has to solve in the next 20 years: low-temperature carbon-hydrogen bond activation, water splitting and protein folding; all of which are related to energy alternatives to fossil fuels. "We need young people to go into this field (chemistry) and solve these three problems," he said. Gray ended by challenging the audience to think about how to update the curriculum. "You've got a new chemistry and a curriculum that is 50 years old. It's not anybody's fault. Science has been moving so fast in the last 30 years it's left behind the curriculum."

Other News

Research Students Sweep Symposium Awards

At the annual ACS Undergraduate Research Symposium, Puget Sound Section, held this year at Central Wash Univ. on April 24, 1999, undergraduate student researchers from WWU captured all three symposium awards. Four research faculty and 23 research students attended the meeting. Five students presented talks and six posters from five research groups were also presented.

"Best Oral Presentation" went to Emily Peterson, a member of Jim Vyyvan's research group. "Best Research" went to Patrick Kohl, a member of David Patrick's research group. "Best Poster Presentation" went to Beka Main and Brian Woodruff, members of Mark Boswell's research group.

John Miller Honored As WSTA Higher Education Science Teacher of the Year

In October 1998 at their annual conference, the Washington Science Teachers Association (WSTA) honored John Miller (WWU Chemistry/Science Education Professor) as the 1998 WSTA Higher Education Science Teacher of the Year. The intent of the award is to "support and applaud individuals who exemplify excellence, who serve as positive role models for others, who keep abreast of state-of-the-art knowledge which results in exemplary education achievement on the part of their students, and who demonstrate strong peer support."

Irvin Slesnick, a science education colleague of John Miller, states, "For as long as I have known him, he would arrive at work at about the time the night hawks were going home and stay—usually helping students in an office with an open door—into the late afternoon. Few college educators have affected so many teachers in so many different ways as has John Miller."
Distinguished Master's Thesis Awards

Each year the Western Association of Graduate Schools (WAGS) selects one thesis for their Distinguished Master's Thesis Award. The competition is open to recent recipients of the MS degree in all disciplines from the nearly 100 WAGS member institutions. Each institution nominates one thesis; WAGS selects five finalists from the nominations, then an awardee.

During the 1990s our research programs produced four of WWU's nominees. All four were then selected by WAGS as finalists and two as eventual award recipients.

In 1993 Vangie Christensen was an award recipient for her thesis, "Studies of Tobacco Ringspot Virus and its Associated Satellite in Tobacco Protoplasts," completed in the research lab of Gerry Prody.

In 1994 Anthony Diaz was selected for his thesis, "An Infrared Spectroscopy and Temperature Programmed Desorption Study of Mo/Al2O3 and Rh/Al2O3 Catalysts," completed in the research lab of Mark Bussell. This marked the first time that these from the same university had been selected in two consecutive years to receive the award.

Paul Aegerter was a finalist for the 1994 award with his thesis, "Thiophene Hydrodesulfurization over Alumina-Supported Molybdenum Carbide and Nitride Catalysts: Adsorption Sites, Catalytic Activities and Nature of the Active Surface," completed in the research lab of Mark Bussell.

Robert Baker was a finalist for the 2000 award for his thesis, "The Order of Things: Construction of a Scanning Tunneling Microscope to Study Molecular Order, Phase Segregation, and Dynamics in Ultrathin Organic Films," completed in the research lab of David Patrick.

Newly Minted Alumni

Congratulations to our graduation class of 1998/99. Our master's group was rather exclusive with one graduate. The bachelor's group was somewhat larger. Numbering 40, they are the second largest graduation class in the history of the department. Graduation honors and immediate post-graduation activities as known to us are in parentheses behind each graduate's name.

MS Chemistry — Robert Baker (relocated to Boulder CO)

BA Chemistry — Seung Yoon

BA Education: Chemistry/Math — Molly Eilers

BA Education: Chemistry/Biology — Eric Wallace

BS Biochemistry — Joshua Boldman, Heidi Carpenter (Embryologist, B'ham IVF & Infertility Care), Hawkins DeFrance (Research Associate, Cell Tech Chiro Science, Bothell), William Dirks (Magna Cum Laude, Outstanding WWU Honors Program Graduate, 2nd major in Math; PhD Program in Applied Math, Cornell), Daryl Kaiser (Quality Control Lab Technician, Immunex, Bothell), Eric Kobet (Cum Laude, Lab Assistant, Biochem/Molecular Biol Dept, Oregon Health Sciences Univ), Thomas Lange (Magna Cum Laude, Univ Wash Medical School, Therese Leiggiere (Research Associate, Dendreon, Seattle), Eric Lewis (Post-Bac Research with Gerry Prody), Jennifer Martinez (Research Associate, Molecumetics, Bellevue), Joseph Mouguous (Outstanding Chem Dept Graduate; PhD Program in Molecular & Cell Biology, Univ Calif-Berkeley), Peter Muetting-Nelson (Lab Technician, Fred Hutchinson Cancer Research Center, Seattle) and Angela Vilhauer (PhD Program in Microbiology & Immunology, Louisiana State Univ Medical Center).

BS Chemistry (and ACS Certification) — Anne Beirne (Cum Laude, 2nd major in Manuf Engr Technology; Research Engineer, G.E. Plastics, Scheneectady, NY), Andrew Brackley (R & D Specialist, Simpson Select, Portland OR), Eric Bradford (Lab Technician, Tosco Refinery, Ferndale), Heather Callery (married Shawn Barreau June 26, 1999; Lab Technician, Georgia Pacific, B'ham), Jessica Cobbe (Position at Fred Hutchinson Cancer Research Ctr, Seattle), Karen Cray (PhD Program in Physical Chem, Univ Colorado-Boulder), Gregory Cruikshank (Extractives Chemist, Environmental Chemistry), Brian Diaz (MS Chem Program, WWU), Kelly Dunham (MS Program in Biotechnology, Georgetown Univ School of Medicine), Michael Groff, John Gunderson, Jeff Keillman (Research Associate, Molecumetics, Bellevue), Rachel Landingham (Lab Technician, St. Joseph's Hospital, B'ham), Ryan Looper (Cum Laude; completed WWU MS-Chem degree Sm' 99 then entered Colorado State Univ-Ft. Lewis PhD Program), Erin Mitchell (MS Program in Chemical Engineering, Univ Arizona), Meredith Morgan (PhD Program in Chemistry, Duke Univ), Elise Pham, Blake Purnell (Magna Cum Laude, Outstanding Physics Dept Graduate, 2nd major in Physics; PhD Program in Physics, Univ Calif-Santa Barbara), Robert Schmid (PhD Program in Biochemistry, Duke Univ), Douglas Scott (MS Chem Program, WWU), Charles Trimm (Cum Laude, Chemist 1, Georgia Pacific, B'ham), Suzanne Tweed (Quality Control Chemist, Pascal Co, Bellevue), Paul Wadlow (Field Chemist, Easco, Auburn) and Matthew Wright (Merchandizer, Dreyers/MDK Distributing, B'ham).
Responses to the August 1999 Chemistry Dept Alumni Questionnaire provided us with the details for our first Alumni Reports feature. Because of the size of the response, our regular newsletter alumni features—Chem Careers and Alumni Focus—will not appear again until the next newsletter issue.

If you have any noteworthy information—further education, employment news, personal/family news—to share with your fellow alumni in the next Alumni Reports, please submit it to us prior to August 2000 via e-mail, phone, snail-mail, or the old-fashioned way, during a personal visit to the department.

1950s Graduates


1960s Graduates


1970s Graduates


1980s Graduates

Kevin Ellis ’80. Building Official for the City of Maple Valley. Diane (Hackerth) Glinn ’80. Executive Vice President of Davis Moore & Associates (consulting and administration) for Seattle. Julie Reimer ’80; MS Env Science ’89 Louisiana State Univ. Scientist/Materials Technology at Weyerhaeuser. Debra Gordon ’81; MS ’83 WWU; PhD ’88 Univ Arizona; PostDoc at Brandeis Univ; JD ’98 Univ Arizona. Attorney with Lewis and Roca LLP, Phoenix. Received Aigier Award upon graduation from law school for the most outstanding scholarly and professional contribution by a graduating student. Roger Koops ’81; MS ’83 WWU; PhD ’90 Univ Calif-Riverside. Product Quality Assurance Manager with Pharmaceuelles, San Francisco. Gregory Moehring ’81; PhD Inorg Chem ’87 Purdue Univ. Professor of Inorganic Chemistry at Governors State University, Illinois. Recipient of 1999 Governors State Univ Faculty Excellence Award. 1998 publication in Inorg Chem, “Structural Determination and Acidolysis Reactions of Ortho-Mealated Rhenium Tetrahydride Compounds Prepared From ReH4 (PF6)2 with Benzylic Imine.” 1999 National Science Foundation $100,000 Course, Curriculum and Laboratory Improvement (CCLI) Grant for “A Regional WWW-Based FT-NMR for Chemistry Curriculum Improvements.” Dutch Van Deventer ’81; MS ’83 Univ Kentucky, PhD ’86 Univ Texas. Scientific Product Director with Pathogenesis Corporation, Seattle. Gina Yilitalo ’81; MS ’90 WWU. Employed at NOAA/Natl Marine Fisheries, Seattle. Kelli Arnzen ’82; MD ’86 St. Louis Univ. Dermatologist, Virginia Mason Clinic, Seattle. Married to ’83 WWU Grad Joseph Erickson. They have two children, a seven year old son Blake and a seven month old daughter Clara. John T. M. DeLorie ’82; BS Chem Engr ’97 Univ Wash; MS Engr ’98 Univ Wash. Employed at The Seattle Times as an Environmental Engineer. Lives in Seattle with his wife Gail and daughter Rose; 15 year member of the Alpental Ski Patrol. Kimberly (Eggers) Depew ’82; MS ’95 Univ Michigan. Employed by the Seattle Public Schools as a Secondary Math Teacher. Jon Elkin ’82; Masters from Seattle Univ ’97. Employed by Filenet as a Software Engineer. Lives in Renton. Deborah (Stacey) Engels ’82. Bellingham homemaker married to fellow chem alum Jeff Engels. Janet Mendel-Hartvig ’82; PhD ’97 Univ Oregon, MD ’97 Univ Oregon. Radiologist at Oregon Health Science University, Portland. John Peterson ’82; MS ’91 WWU. Lab Manager with Engler Food Labs, Moses Lake. True (Do) Thon ’82, MS ’85 WWU. Professional employment...
since graduation has included: Researcher, NeoRx, Seattle; Lab Tech, ARCO Refinery, Ferndale; Chemist, Georgia Pacific, Bellingham; Part-time Lab Instructor, WWU Chem Dept. Now focusing on her family. Truc and her husband Jerry have a 7 year old boy and a 4 year old girl. Enjoys outdoor activities—hiking, biking, jogging and snow shoeing. Nan Knitter-Jack ’83, MBA ’92 Seattle Univ. Project Manager, Virginia Mason Research Center, Seattle. Married to Jay Gordon Jack. They have a three year old daughter Cierra Dawn Knitter-Jack. Mike Leachy ’83. Regional Sales Manager (since April ’98), Northwest Territory (semiconductor market and laser processing systems) for GSI Lumonics. Rod Osborne ’83; BS Chem Engr ’85 Wash State Univ. Materials and Processes Engineer with Boeing. Ann E. Schmierer ’83; PhD ’98 Univ Wash. Senior Fellow at Univ Wash. Married (first time!) in July ’98 to W. Craig Jones. Chris Bjurke ’84; MD ’90 Univ Southern Calif (USC). Physician for Group Health Cooperative, Puget Sound. Edwin Chapman ’84; PhD ’92 Univ Wash. Assistant Professor at the University of Wisconsin-Madison. Brian Feldman ’84. Internet Market Development Manager with WWR Scientific. Ray Gross ’84; PhD ’86 Univ Kentucky. Scientist at Neurorine Biosciences Inc, San Diego. Kathy Gunderson ’84. Self-employed as an environmental chemist. Lives in Raymond. Eric V. Jacobson ’84; MEd ’91 WWU. Logistics Simulation Program Manager with the US Air Force in Germany. Air Force officer from 1985-1989, and now is a reservist. He is divorced with a five year old daughter and enjoys cycling and traveling. Thomas LaGrandeuer ’85, PhD ’94 Indiana Univ. Technical Specialist for intellectual property law field with Banner and Witcoff, Ltd. Married to fellow chemistry alum Lisa Hammond; they have a 1½ year old daughter named Ina Rose. Jeffrey McCauley ’85. Industrial Chemist with Chemco Water Tech (a division of Nalco Chemical Co). Lives in Liberty Lake. Scott Mokler ’85; PhD ’90 Oregon State Univ. Test Process Integration Manager with Intel Corp, Oregon. E. MacLeod “Mae” Sawyer ’85. Check out Mae’s web site “in My Mind” http://HOME.RMCIL.NET/MACLEOD. Anne Sobba-Higley ’85; MD ’90 Creighton Univ. Physician (Ear, Nose and Throat), Wenatchee Valley Clinic. Board-certified otolaryngologist. Robert Waddle ’85; MS ’89 Oregon State Univ. Environmental Quality Manager for the City of Everett. Peter Bazuna ’86. Tour Foreman, Georgia Pacific, Bellingham. Karen Halley ’86; MS ’90 Oregon State Univ. Employed at Amerislim Pharmaceuticals Biotech, Piscataway, New Jersey. Ruth (Gleim) Kelly ’86; MS Civil Engr ’90 Univ Maine. Married with 3 children; lives in Sebasco Lake, Maine. Daniel E. Smith ’86; MS ’91 Oregon State Univ. Lab Instructor/Computer Support, Food Science Dept, Oregon State Univ. Peace Corps Volunteer in the Democratic Republic, ’91-93. Dan and his wife Susan Kolar have a 3 year old daughter, Annie. Larry Wiiitkens ’86; MS ’88 WWU; PhD Medicinal Chem ’93 Univ Wash. Director, Drug Metabolism Research for Pharmacia & Upjohn, Kalamazoo, Michigan. Bill Cantrell ’87; MS Env Sci ’90 Huxley College, WWU. Environmental Consultant, Cantrell & Associates, Bellingham. Laura Cazares MS ’94. Environmental Scientist with Tetra Tech, Santa Barbara, CA. Rebecca Inman ’87. Environmental Specialist, Washington State Dept of Ecology. Lisa (Hammond) LaGrandeuer ’87. Chemist with Sphinx Pharmaceuticals in Massachusetts. See Tom LaGrandeuer ’85 for more details. Kimberly Magnruder ’87; MS ’90 WWU. Environmental Chemist with Anchor Environmental, LLC, Seattle. Married to fellow chem alum Gary Carlton. Scott Noygar ’87. Lab Supervisor with Unocal-Alaskan Nitrogen Products. Kenneth Self ’87. Chemist in the Radiochemistry Lab, Puget Sound Naval Shipyard. Hobbies include early medieval through Renaissance history. Spent two months last year in the British Isles studying Welsh poetry (mostly Dylan Thomas and Mabinogion). Has worked at the shipyard since 1988, first in the radiological monitoring division, then the nuclear chemistry branch and finally the radiochemistry lab. Anthony Barnack ’88; MS ’95 Oregon Graduate Inst of Science & Technology. Environmental Specialist for Oregon State Dept of Environmental Quality. He is now a father, Sam Barnack was born on March 17, 1999. Kathryn Birmingham ’88. MAT ’94 Oregon State Univ. Secondary teacher at St. Helens High School in Oregon. Son Sky is attending Reed College. She is involved with the Scappoose Bay Watershed Council. Currently in the process of implementing more projects—particularly in water monitoring—in her high school classes. Still continues to dabble in painting. Vince Brotherton ’88; MBA ’95 Seattle Pacific Univ. Stockbroker with Piper, Jaffray & Hopwood. Lives in Bellevue. Dawn Balch ’89. Quality Control Chemist for Borden Chemical, Portland. Kristine (Huling) Hermann ’89. Started out as a chemist at Abbott Research, then ran the chemistry stockroom at Shoreline Community College. Now she is married with two boys, Kyle 3 and Kurt 1, and is putting her chemistry degree to work figuring out how to keep her boys’ clothes clean! She also has become a gardening fanatic and is in the process of transforming her yard in Bothell. Mary Kelleher ’89. Chemist, Tosco Refining Co, Ferndale. Tuan Nguyen ’89; DDS ’93 Loma Linda Dental School. Self-employed; family dentistry practice in Bellevue.

1990s Graduates

Derin Brooks ’90; Masters from Western Seminary ’98. Minister of Music at the Moundford Free Methodist Church in Decatur, IL. Derin and wife Carrie are expecting their first child in November. Dawn Greenwell ’90. Lab Technician with Xerox. Will complete her MBA at Portland State Univ in Spring 2000. Amy (Nordlund) Holtzclaw ’90. Medical Technologist for Puget Sound Blood Center. Lives in Seattle. David Hoyt ’90. Scientific Technician with Weyerhaeuser, Federal Way. John Arthur ’91; PhD ’96 Univ South Carolina. Senior scientist at ISS Pharmaceuticals, Carlsbad, CA. Nancy (Meder) Duncan ’91; MS ’93 WWU. Research Program Manager with Oregon Health Sciences University. She and fellow WWU alum Rob Duncan have a 2½ year old daughter Rebecca. M. John Gass ’91. Lab Manager (Research Tech III) at the Fred Hutchinson Cancer Institute, Seattle. John and wife Anna are the proud parents of one year old daughter Alexandra. Shane Crowder ’92. Metal Testing Specialist at Intalco Alu-

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### In Memoriam

- Jeannie Bates  
  BS-Chem/Biol ’86
- Jeff Bradshaw  
  BS-Chem ’84
- Marvin Fritz  
  BS-Chem ’72
- Gil Leverett  
  BS-Chem ’87
- Robert S Miller  
  BA-Chem ’76
- Jay Nichols  
  BS-Chem ’82
- Gordon Ostrom  
  BA-Chem ’68
- Joyce Rideout  
  BA-Chem ’73
- Rex Robinson  
  BS-Chem/Biol ’84
- Tod Shiroyama  
  BS-Chem ’73
- John Tollefson  
  BA-Chem ’75
- Jim Verheyden  
  BS-Chem ’88