

UMSL CHEMIST



Volume 30
Fall 2012

Department of Chemistry and Biochemistry
Lawrence Barton, Editor

TABLE OF CONTENTS

Chairman's Message (Christopher D. Spilling)	1
Alumni Information.....	2
Obituaries, Alumni Council, Graduates, Chem. Club, CGSA.....	8
Faculty and staff. Randa Schneider	10
Lectures, Fellowships and Awards	15
Editor's Column (Lawrence Barton)	17
Contributors 2012.....	22
Information update.....	23

Chairman's Message (Christopher D. Spilling)

I am extremely happy to announce that the first phase of the Benton Stadler renovation is back on. The University Administration decided to fund the project by budget reallocation. The Board of Curators approved the financing at their December meeting on the UMSL campus. An architectural firm is being selected. The plans developed a couple of years ago will be reviewed and updated. It will probably take about 2.5-3 years before construction is complete. As a reminder, the plans called for a new three story undergraduate teaching lab building for Chemistry, Physics and Biology. The building will be built perpendicular to Benton Hall towards Natural Bridge Road.



Joyce Corey and Rudi Winter, with Lol Barton, at the reception held in their honor on April 21, 2012

The UM system has a new President. Tim Wolfe has been in position for about 9 months and has visited the UMSL campus several times. Hal Harris retired in September 2012 after 42 years of service. He was awarded a Founders' Professorship which means he will teach in the Department for the next three years. The faculty had a nice celebration for Hal at Jim Chickos' house. We were fortunate to get Hal's position back and are

FIFTY YEARS OF GREAT CHEMISTRY.

The Department of Chemistry and Biochemistry will celebrate the UMSL Jubilee on April 20, 2013 from 3 – 5 pm in the atrium of the Science Complex. Please save the date and plan to attend this event, meet your former classmates and the faculty and see how the campus, the facilities and the department have grown and developed. The program will include a reception with refreshments, a pictorial presentation on the 50-year history, tours of the complex, student research posters, and some remarks by senior faculty and distinguished alumni. Please let us know if you plan to attend. Contact Michelle Haley, 314-516-5311 or haleyvm@umsl.edu.

currently searching for an assistant professor in biophysical/bioanalytical chemistry. It appears that the joint positions between Arts and Sciences and Education are being discontinued, so the secondary school teacher training aspect of Hal's role will not be replaced in the department.

We were fortunate to add some new equipment through generous donations from local industry including a Shimadzu Liquid Chromatography Mass Spectrometer, a Waters Corporation MALDI-Time of Flight Mass Spectrometer and an Inductively Coupled Plasma Optical Emission Spectrometer. We are also excited to be planning the event Fifty Years of Great Chemistry, to be held on April 20, 2013.

Unfortunately, on the down side, we lost some great friends and former colleagues in 2012. Bob Murray died in March and we intend to honor him at the Banquet in conjunction with the Robert W. Murray Lecture, to be held on March 13/14. We also lost Randa Schneider, our long time office colleague and also Lois Brunngraber, widow of our former colleague, the late Eric G. Brunngraber. They will all be missed.

There is certainly cause for optimism in the department and on the campus. In addition to all the good news you can read about the department in this volume, the planning/construction of the new building will be mirrored on the campus as a Wellness Center s to be constructed.

Things on the student front are going very well. We have a 15-year high in enrolment in introductory chemistry and overall student credit hours were up 15% for the fall. We had 44 students in the PhD program in the fall 2012 semester and we expect the academic year total PhD graduates to be between 9 and 12 which would be a record for us.

I wish you all the best. We look forward to seeing many of you in April at our Jubilee Celebration and we hope you will keep in touch with us.

Alumni Information

1960s

Robert A. Nicolotti BS 1968 retired from his position as Manager of the Environmental Health Laboratories for Saint Louis County. He tells us he has 20 years worth of incomplete honey-do tasks. Bob and his wife Shirley have three married children and four grandchildren, living in Winston-Salem, NC, Glen Ridge, NJ and Chicago, IL.

Steven Mestemacher BA 1969 retired in January 2012 after 38 years with DuPont. Steve, who received a PhD degree from Washington University in St. Louis, published many papers and patents during his career with Dupont. His primary research area was in polyamide polymers, an area in which he invented several new products, most notably Pipelin® resin for the safe handling of hydrocarbons in industrial applications, such as the oil and gas industry. Steve and his wife Joyce live in Parkersburg, WV and have been very supportive of the department over the years.

Douglas G. Nuelle BS 1969 his wife Tonya and son Dylan are doing well. Dylan at age ten has become quite the drummer and wants to move to England because he likes the accent! Doug is still practicing orthopedic surgery. He is healthy and happy in the mountains of North Georgia and he has even been riding a Harley Davidson Motorcycle!

1970s

John R. Kolb BS 1970 keeps in touch with us and we appreciate that. He chided me for the lengthy feature on him last year so no news this time!

Harold Messler BS 1970 is someone we see often, either at University functions, ACS events or of course at Chemistry Alumni Council meetings. When we last spoke he was off to do some hunting in northeast Missouri.

Harry W. Orf BS 1971, who is now Senior Vice President for Research at Massachusetts General Hospital, received an honorary degree at the Decemebr 2012 commencement. He also presented a lecture to the department on December 14, titled "Seizing Serendipity and Preparing for Opportunity's Knocks".

Kenneth O. Henderson, BS 1973, who had been Vice President of Technology at Canon Instrument Co., State College, PA until his retirement in January 2009, attended the reception for Joyce Corey and Rudi Winter. He completed his tenure as an ASTM Committee D02 officer December 2011 but is still active in Committee activities primarily with regard to replacing liquid in glass thermometers with digital thermometers in test methods and with test methods to measure petroleum viscosity. In order to do this, he started a consulting business named *McEinri Associates LLC*.

Patricia J. Armbruster BS 1973 attended the reception for Drs Corey and Winter in March. Pat retired recently after teaching chemistry, AP chemistry and college chemistry for 24 years. Pat and her husband David A. Armbruster BS 1973 who is Scientific

Affairs Manager at Abbot Laboratories in Abbott Park, IL. live in Lake Villa, near Chicago. We understand they are planning to return to St. Louis on Dave's retirement!



Harry W. Orf, BS 1971 with former mentor and faculty member here, **Eric Block**, who is now **Carla Rizzo Delray Distinguished Professor of Chemistry at the University at Albany**.

Michael J. Finkes BS 1973, MS 1978 was recognized with a 2012 Distinguished Service Award at the Chancellor's Report to the Community in May. We quote from the written program "He holds the positions of second vice president and chair of the Alumni Associations Student Engagement Committee. He is responsible for the successful execution of the annual Dinner with 12 Strangers Program. The dinner has helped hundreds of UMSL students plan their life after graduation, and it encourages alumni to connect with students develop their career paths and goals. Finkes also re-launched the UMSL Alumni Student Connection Mentoring Program".



Michael J. Finkes BS 1973, MS 1978 with his wife **Linda**

Jerry Rubenacker BS 1974 tells us he has done well although he has been out of chemistry for some time. He did work with inorganic catalysts for petroleum refining for a while in Chicago around 1980, but at that time preferred a smaller city and went back to school in physics at Montana State. He got to do some teaching which he loved doing but he finally found a niche in computer programming. So, he says, things have been good, if not exactly the path he would have expected back in the 70's. He

is now a "Senior Software Engineer" of at all things a large income tax preparation company in KC.

A. Greg Wall BS 1974, MS 1981 continues to teach biochemistry in the summer for us as he also continues to teach at the McKinley Classical Leadership Academy, a gifted magnet school, in the city.

Paul Blystone BS 1975 is self employed as a business Advisor in San Francisco. He conducts business and technical development services for biotech, cleantech and environmental industry clients worldwide. He is well traveled, happily married to his wife Kathryn and in good health.

Dan Claudy BS 1975 tells us that he occasionally jokes that after working for 28 years at Mallinckrodt, and leaving shortly after their acquisition by Tyco, he can't seem to keep a job. He worked at Wyeth Pharmaceuticals for almost five years until they announced the closure of the plant where he worked. He then took a position with a small, specialty chemical manufacturer in Pasadena, TX and about five years later, they decided to eliminate their entire Quality Assurance department. He now works for the largest Carbon Black manufacturer in the world, Columbian Chemicals, Franklin, Louisiana where he is Quality Assurance Manager. Columbian is part of Birla Carbon and Birla Carbon is part of the Aditya Birla Group. Dan lives in New Iberia, LA.

James J. Grib BS 1976, MS 1982 continues as Adjunct Professor at Southwest Illinois College, volunteers at the Missouri Botanical Gardens in their research area, tutors High School chemistry and does some home remodeling.

John J. Chaber BS 1976 is Senior Director, analytical development at Ariad Pharmaceuticals Inc., in Cambridge, Massachusetts.



Anis Ashraf, PhD 1982 and Razia Ahmed, PhD 1980 at the reception for Drs Corey and Winter.

R. Thomas Solsten BS 1976 who obtained a PhD degree in Pharmaceutical Chemistry at University of Arizona was in touch with us recently when he joined our LinkedIn group. After many years with Monsanto in St. Louis, he moved to Tucson, in 1998. He tells us he is doing well in Tucson but is with my third company since moving here in 1998. First a start-up, Systems Integration Drug Discovery, then big pharma *Sanofi-Aventis* and

now he is an Analytical Chemist at Ventana Medical Systems, part of the Roche Diagnostics Group. His son Tommie is an engineer at IBM in Tucson.

Steven Harrison BS 1977 has spent his entire professional career at *Carboline* in St. Louis. He tells us he has been blessed with challenging assignments and has worked in all aspects of the business; technical support, sales management, quality control, and marketing management where he spent most of my career. After UMSL he did spend a year in the Saint Louis University Biochemistry department and completed 18 hours of graduate work towards a PhD and was on the "alternate list" for medical school, but never was admitted. So he went to work in industry and later went back to school at Lindenwood University and got an MBA, which in hindsight was a good career move for him at *Carboline*. He is now Senior Marketing Manager and served for a 10-year period as Marketing Director.

John W. Seibold BS 1977 was a Quality Assurance Leader for Anheuser Busch/InBev but retired and now is working as the Quality Manager at Firmenich, Inc an international producer of perfumery and flavor chemicals based in Switzerland with a small production facility in St. Louis.

Mary Hitt BS 1978 (also BA Biology) is Associate Professor of Oncology at the University of Alberta, in Edmonton, Alberta, Canada. Mary who did undergraduate research with Jim Chickos when she was here, obtained a PhD in biochemistry from the University of California-Berkeley and did postdoctoral research at the Royal Postgraduate Medical School in London and McMaster University, in Hamilton, Ontario,

Mark J. Pozzo BS 1978, MS 1983, is an Associate Research Fellow, Group Leader in Conjugation and Polytide Process Development for the Biotherapeutics Pharmaceutical Sciences Group at Pfizer Inc., in St. Louis. One of his colleagues in the group is **Steve Kolodziej**, BS 1987, PhD 1992. For 2012 Mark year won the **Pfizer Sustainable Science Award**. It involves donation of \$1,500.00 to a charitable institution that supports sustainable science, aka green chemistry. Mark selected the Robert W. Murray Lectureship for the contribution and for that we are very appreciative. This was most appropriate since Dr. Murray was heavily involved in green chemistry in efforts to replace Cl-containing bleaching agents for wood pulp with oxygen-containing bleaches.

Dolores Vermont MS 1979 attended the event honoring Rudi Winter and Joyce Corey with her husband George who was with Mallinckrodt Inc. and a good friend of the department. Dolores worked in Joyce's research lab during her time at UMSL. Dolores is retired from Monsanto and is now tutoring high school and college students in chemistry and physics.

1980s

Razia Ahmed PhD 1980 was at the reception for Joyce Corey and Rudi Winter. She is retired and lives in Peoria, IL and is a member at Peoria Area Peace Network. She did her PhD work with Tom Jones when she was here.

Donna G. Friedman PhD 1980 was named to the class of 2012 ACS Fellows and honored at the ACS meeting in Philadelphia in

August. Donna is a Councilor for the St. Louis Section of the ACS and Professor of Chemistry at the Florissant Valley Community College.

Charles Thierheimer BS 1980, MS 1984 took "early retirement" from Hewlett-Packard in September 2005 after nearly 19 years and then spent almost six years with Cascade Microtech Inc. He recently resigned his position in Beaverton because after living and working there (75 miles from Corvallis) during the week for more than 5 years, he had had enough being away from his family during the week. He is now back with HP again as a contract worker. His daughter Marisa is 16 and a junior in high school and son Rick is 17 and a senior in High School) worked for a chemistry professor at Oregon State University during the summer. His wife Cindy works for the Oregon Nanoscience and Microtechnologies Institute. They celebrated our 30th anniversary in May.

Michael Hauser BS 1981, MS 1986, Chemistry Professor in the Physical and Engineering Sciences Department at St. Louis Community College - Meramec, has been chosen as the winner of the Faculty Lecture Award. This award is given to a full-time faculty member who has demonstrated excellence in instruction, enthusiasm for teaching in the community college, and evidence of concern for community college students. The winner delivers a lecture that relates the mission and role of the community college to some aspect of American society, national or local. Mike has done remarkably well. After graduation he went to Monsanto and completed his MS degree here in the evenings. Then he began to do some teaching part-time in the evenings at Lewis and Clark Community College.



After 11 years at Monsanto, and having seen success in the classroom, he took a risk and resigned his industrial chemist position and took a temporary appointment at the Meramec campus of the St. Louis Community College. He knew there would be a permanent opening but was not guaranteed it. Needless to say he got the job and he has done very well there. Transfer students we receive from Meramec always speak

very highly of him. We are very proud of him.

Joan Twillman BA 1981, who is retired from teaching chemistry at St. Charles West High School, is employed by the University of Missouri Columbia as a Mentor for Physics First. She tells us she is mostly a professional volunteer for extracurricular science for high school students. She is Director of the St. Louis Area Science Olympiad.

Anis Qureshi Ashraf PhD 1982 was delighted to return to St. Louis for the reception honoring her PhD advisor Rudi Winter in April. Anis is Research Director of Polyorganix in Missouri City Texas, in the Greater Houston area.

Colleen B. Jonsson BA 1983 presented a seminar to the department in April titled *Strategies to discover small molecules as probes for biological systems and drug discovery*. She is Professor of Microbiology and Immunology and Director of the Center for Predictive Medicine at the University of Louisville.

Gregg J. Lumetta BS 1982, PhD 1987 was a member of the 2011 Class of ACS Fellows. Gregg, who is a member of the Radiochemical Science and Engineering Group at the Pacific Northwest Laboratory, has been very active in the ACS, having served as the Chair of the Division of Industrial and Engineering Chemistry. I quote from a press release in 2011 "Lumetta serves as a member of Technical Expert Group for DOE's Office of Environmental Management and is focus area lead for the Transuranic Recycle Technology Focus Area of the Sustainable Nuclear Power Initiative at PNNL. He also served as PNNL technical lead for the Department of Homeland Security Threat Awareness and Characterization Thrust Area".

Jerry Orlando BS 1982 is a Project Manager at PBS Engineering + Environmental in Portland Oregon. He holds a MS degree in Technology and Human Affairs from Washington University in St. Louis. He has worked in Oregon since 2000 and was previously with Oregon State University and North Creek Analytical.

Dennis Parazak BS 1982, PhD 1996 was in the department in November. Dennis is in the San Diego area with Hewlett Packard and he still enjoys singing and strumming his guitar but was most excited to describe his work. He has recently returned to doing more ink chemistry after 2 years of doing some coated paper formulation and quite a bit of work as a coated paper test engineer working with the HP Inkjet web presses. In this job, he prepared diagnostic print files that are used to evaluate print quality and image quality of new inks and coated glossy paper formulations used on the web press, feeding back the results to HP engineers, coating and ink formulators and our manufacturing partners. In addition, he would modify the print parameters of the press to optimize the settings for the different coated and uncoated papers. He has returned to formulating inks for the web press. This involves selecting pigment dispersions that have good colloidal stability and proper color space and formulate them into inks that yield durable, vibrant images while being able to fire drops having volumes of < 10 picoliters reliably for long periods of time without losing print quality from nozzle outs. It's quite complicated, but very interesting work, interacting with multi-discipline teams of mechanical, electrical and computer science engineers.



Mike Provance BA 1988 and Bill Lesko BS 1988, MS 1994 and the reception for Joyce Corey and Rudi Winter

Debbie (Leibrecht) Biggs BS 1983 is Director of Operations for the Encina Wastewater Authority in San Diego, CA.

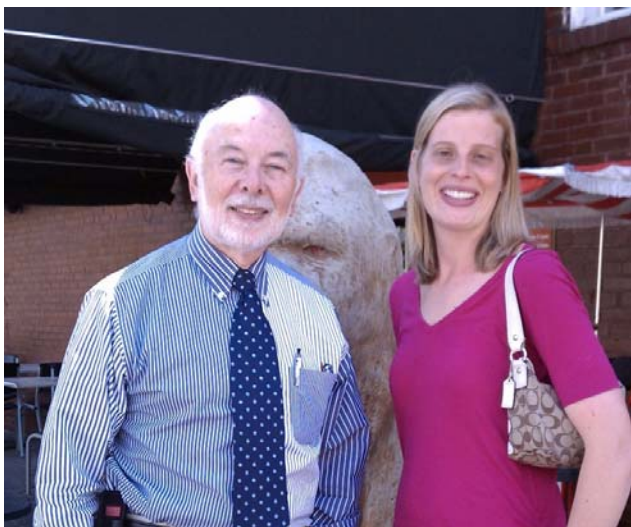
Barbara A. Brown BA 1984 retired from the School of

Optometry and is now working part-time there and also has increased her activity at the *Overland Family Eyecare Center* and is now seeing more patients.

William Lesko BA 1988, MS 1994 is Hazardous Waste Disposal Manager at Nestle-Purina Petcare, in St. Louis. It was great to see Bill at the April reception for Drs. Corey and Winter.

Dawn L. Shiang BA 1983, PhD 1988 is taking advantage of a (very!) early retirement program and will be leaving Dow Chemical Co in Midland MI, in 2013 after 23 years. Bill (**William R. Shiang** BS 1984, PhD 1989) likely will retire closely thereafter. They've recently bought 140 acres of land near Eminence, Missouri that is mostly wooded, with a large hayfield and also pond/lake/meadow areas. They will practice sustainable farming. There are several springs on the property and they will raise trout, chickens, and perhaps a goat or two, along with taking advantage of the existing orchard and extensive raised-bed gardens. They plan to become very involved with the local community including mentoring local kids and outreach.

Stephen A. Kolodziej BA 1987, PhD 1993, Associate Research Fellow at Pfizer, Inc., in St. Louis gave the Distinguished Alumni Lecture this past April. Steve, who spoke on "How a few careful decisions led to my career in chemistry", attended the event honoring his mentor Rudi Winter, in April.



Hal Harris with Rachel (Andrews) Kupper BA 2006

1990s

Todd R. Boehlow BS 1991, PhD 1997 is now a Chemicals Specialties Chemist with Ascend Performance Materials in Pensacola FL. Formerly he was with Equinox in Albany GA and prior to that Monsanto/Pharmacia/Pfizer in S. Louis.

Jack Hammer BA 1992 is now teaching at the Joseph A. Foran High School in Milford, Connecticut. Following graduation in 1992 he received a PhD degree at Yale in physical chemistry under the direction of Professor Kenneth Wiberg in 1999. He spent almost ten years in industry with Neurogen Corporation and more recently as a Senior Scientist with Rib-X-Pharmaceuticals. In industry he did data mining, machine learning techniques, ligand-based drug design, structure-based

drug design, drug properties modeling and statistical analysis. He also holds a BM in violin performance from UMKC and I recall first meeting him when he came into the department one day and asked if he could leave his violin in the office while he took a laboratory class! He finds teaching has allowed for a nice work-life balance (he has two young daughters), and he loves working with teenagers. He tells us that his experiences in the UMSL chemistry department were absolutely pivotal in setting the trajectory for his professional life. He had had a couple of chemistry courses before enrolling at UMSL, but it was in the department at UMSL where he became enthralled with the subject.

Karen A. (Jansen) Regina BS 1993 is now Analytical Chemistry Lab Manager at Washington University School of Medicine.

Melinda McCann BS 1993 is a *Corn Weed Control Platform Lead* at Monsanto, in St. Louis.

Steve Rooney, BA 1994, MS 1996 flew in for one day to attend the reception in honor of Joyce Corey and Rudi Winter. Steve did his MS degree with Joyce. He is AP and Honors chemistry at a private school in Dallas (Episcopal School). He has also started new courses there including Chemistry of Medicine, Scientific Design and analysis and Forensic chemistry electives. It was great to see him and also wonderful that he made that very quick trip here to honor his mentor.



Joyce Corey with Steve Rooney BA 1994, MS 1996

Patricia Chernovitz PhD 1995 is an Instructor of Chemistry at Metropolitan Community College - Kansas City and a Professor of Science and Mathematics at Grantham University.

Hong Fang PhD 1995 who lives in Little Rock, AR with her husband, former UMSL postdoc Weida Tong, and works with him at the National Center for Toxicological Research, part of the FDA, was proud to tell us that their daughter Lillian is now a student at Caltech.

Hong Gu PhD 1995 is Vice President of Operations for China Gateway Pharmaceutical Development Co, Ltd. His company provides professional services for pharmaceutical companies.

Cecilia Marzabadi PhD 1995 was promoted to Full Professor of Chemistry at Seton Hall University.

Elizabeth Amin BA 1996, PhD 2002, was awarded tenure and promoted to Associate Professor in the Department of Medicinal Chemistry at the University of Minnesota-Twin Cities.

James A. Gray BS 1998 is a Project Manager at Centocor Biologics-Johnson and Johnson in St. Louis.

Esther Askew BS 1999 is a Senior Regulatory Compliance Analyst at Covidien in St. Louis

Andrew G. Breite BS 1999 was at the event for Rudi Winter in April. Andy did undergraduate research with Rudi when he was here. He is Senior Project Manager at VitaCyte in Indianapolis and obtained an MBA degree from Butler University.



Colin White PhD 2007 and Aileen Bongat PhD 2009 were married in May 2012.

2000s

Aaron Burns BS 2000 is now a Senior Scientist with Pfizer, Inc., in San Diego. He completed his PhD in organic chemistry at the University of Minnesota-Twin Cities and a postdoctoral fellowship at Stanford University.

Melissa (Stuchell) Brereton BS 2000, who went on to receive a PhD in biochemistry from the University of Utah, completed a postdoctoral fellowship at Washington University, is now with Dynalabs, LLC in St. Louis

Axia Sun MS 2000 moved to Tampa Florida in 2010 and is now a Senior Scientist with American Clinical Solutions, a toxicology laboratory. She does LCMS methods development and validation and she tells us she is currently working on some exciting projects that will be blockbusters in the future! She was proud to tell us that among the people she supervises is a PhD level scientist.

Shiyue Fang PhD 2001 is Associate Professor of Chemistry at Michigan Tech in Houghton, MI. He has an active research program and a research group which includes two postdocs, four graduate students and two undergraduate students. He was proud

to tell us about his new NSF EAGER grant to initiate a new interdisciplinary project using Atomic Force microscopy for genome sequencing. The project is running smoothly, he says.

Jennifer Doucette BS 2001, MS 2010 is now a Senior Research and Development Analytical Chemist at Covidien in St. Louis. She was previously with Fleming Pharmaceuticals also in St. Louis.

Derick Kaspar, BS 2001 is a Senior Research Chemist at Covidien in St. Louis. He obtained a MS degree in chemistry at St. Louis University. His picture was featured in the St. Louis Post Dispatch in an article about Covidien spinning off its pharmaceutical business and taking the historic name Mallinckrodt again.

Angela (Schmitt) McKnight BS 2001, MS 2004, is a Regulatory Affairs Specialist at Steris Corp. in St. Louis. She had been with Covidien/Mallinckrodt.

Henghu Zhu PhD 2001 has been very helpful in keeping us in touch with the Chinese community of recent graduates of the department. He still lives in St. Louis with his family and is an Educational Consultant for international business.

Robert Fritchey BA 2002 is Quality Assurance Supervisor at Virbac in St. Louis. He was formerly with Mallinckrodt in St. Louis.

Viktoriya (Sedelkova) Gruden BS 2002, MS 2005 is still with the same company. Her employer KV Pharmaceuticals was bought by Neshor Pharmaceuticals in August 2011. Now she works for Neshor as a chemist but the company is still under a consent decree. She and her husband Marion Gruden BS 2003 have two children, their daughter Michelle who is now 5 years old and a son, Alexander who was born last April. Viktoriya is very busy with the kids, especially with Michelle and her activities (swimming, ballet) and of course with her school (she is in kindergarten) in addition to her own day job!

Mario Gruden BS 2003 is now a Senior Supply Chain Planner at Covidien in St. Louis. He was formerly with Monsanto and sigma-Aldrich. Following graduation from the department he obtained an MBA degree from UM-St. Louis.

Kristofer J. Masgio, BA 2003 is an R and D analytical Chemist at Mallinckrodt in St. Louis.

Kristina (Alderman) Thompson BA 2005 went to Vi-Jon in St. Louis as a Formulation Chemist in April. She spent almost 6 years as a Research Chemist at Spectrum Brands which is owned by United Industries. The new position turned out not what she had expected so in November she took a new position as Chemist at Zoltek in St. Louis. We heard in April that she is back with Spectrum Brands and is happy to be back there.

Rachel (Andrews) Kupper BA 2006 is a chemistry teacher at Bay High School, in Bay St. Louis, MS. She and her husband live in Long Beach, MS. She had lunch here with Hal Harris earlier in 2012.

Lindsay (Mangum) Nooter BS 2006 came in to see the editor recently. She had just joined the Chemistry Alumni Group on LinkedIn.

Shu Yao, BS 2006 obtained a PhD at the University of Wisconsin-Madison in 2012 and is now a postdoctoral fellow at the University of Calgary, Alberta, Canada.

Chloe W. Bryant BA 2007 is pursuing a PhD degree in Pharmacology and Physiology at the Saint Louis University School of Medicine. Prior to going to graduate school at SLU in 2009 she was with Monsanto in St. Louis. She tells us that she will finish graduate school, which is going well, this next year and is also getting married next year too!



The Janet Braddock-Wilking Laboratory

Cherise Pruitt BS 2003 is Quality Systems Manager at McNeil Consumer Healthcare, in the greater Philadelphia area. She had been with Sigma Aldrich following graduation but spent time with Glaxo Smith Klyne and Olympus before taking up her current position in June 2012.

Hui Zhao, PhD 2007 who is with Tate and Lyle, and had been in Schaumburg, was joined by her family in January. Her family is doing well and especially her daughter. They like the town and its proximity to downtown Chicago.

Colin White PhD 2007 was married in May to Aileen Bongat PhD 2009 and we include the picture.

Jesse Elgin BA is working for Steris Corporation in St. Louis

Archana Parameswar Ph.D 2008 from the Demchenko laboratory is a post doctoral research associate at Washington University. She has been active in the ACS St. Louis Section younger Chemists committee.

Adele Pacquette BS 2008, who is a graduate student at the University of Illinois – Champaign Urbana, came into the department during the fall and spoke to the Chemistry Club on here research in the area of low carbon footprint energy sources.

John Schmitz BS has been a Project Manager at Covidien in St. Louis since August 2012. He has been with the company since 2007, and was previously a Production Supervisor and more recently a Production Superintendant.

Nathan Birhanu BS 2009 was in the office in May on a break from his position in the Peace Core – he had spent more than two years in Lesotho. He was about to return to the Peace Corps for one more year, this time in Ethiopia.

Jozo Barac BS 2008 had been with Monsanto working on the Roundup product line since graduation but is now with Nestle-

Purina in St. Louis.

Robert Barron BA 2005 is House Manager at HavenHouse in St. Louis. He had been with Covidien since graduation until he moved to his present position last year.

Saibal Bandyopadhyay PhD 2008, a postdoctoral fellow at the Ohio State University came to see the editor with his wife Chandrani, a graduate student there this fall. They are both are looking for post-Ohio State positions.

Sean Whitemore BS 2008 continues as a graduate student close to completion, also at the Ohio State University, in the research group of Professor Stambuli. Sean was co-author on his second paper in the journal *Organometallics* in 2012.

Nikkilina Crouse PhD 2009 is Medical Science Liaison at Teva Neuroscience in St. Louis. She had formerly been a postdoc at Washington University School of Medicine.

Rachel M. Gruber, BS 2010 had just started a part time internship with a start up pharmaceutical company called Apertus and also held an internship through the St Louis Community College Biotechnology Certificate Program at the BRDG building near the Danforth Center on olive Boulevard in St. Louis. She was to graduate in fall 2012 from the SLCC with a certificate in biotechnology.

Justyce J Jedlicka, BS 2010 had been with *Chemia Corporation* through graduation doing cosmetic chemistry but left and is now working with the Research Biotech Division at Sigma-Aldrich. She is also serving as the President of the St. Louis Chapter of the Society of Cosmetic Chemists (SCC) and was in the process of setting up the Annual Symposium when last we communicated in August.

Maria L. D. (Udan) Johns PhD 2010 is a Research Scientist at EMD Millipore in the Missouri Research Park in St. Charles County. She was formerly a postdoctoral fellow at the Washington University Medical School.

Girija Katragadda MSBB 2010 is now with Bayer Crop Science in North Carolina.

Kristen R. Sachs BS 2010 has been with Pfizer Pharmaceuticals in Chesterfield, MO, since July 2010.

Poonam Kaur BA 2010 is an Analytical Chemist at *Afton Chemical* located in East St. Louis. IL. She was previously with Covidien in St. Louis.

Katherine Cibulka BA 2012 is a Lab Analyst at Covidien

Sarah Hensel BS 2012 is a Chemical Technician at Mallinckrodt.

Robert W. Murray 1928 - 2012

Robert W. Murray, Curators Professor of Chemistry Emeritus at the University of Missouri-St. Louis, died March 13. He was 83 and had been ill for several weeks. He joined the faculty at the University in 1968 after a very successful ten-year career at Bell

Laboratories. He was born in Brockton, Mass. and received degrees from Brown University, Providence, R.I., Wesleyan University, Middletown, CT, and Yale University, New Haven, CT, where he completed his PhD degree. He served in the U.S. Navy from 1951-54 and later in the U.S. Naval Reserve as a Lieutenant Commander. During the 1960s the family lived in the town of Warren, N.J. where he served as mayor, president of the board of health and a member of the board of education.

At UMSL, Dr. Murray was very active in campus and University of Missouri System affairs and was the prominent senior faculty member on the campus in those early years of the institution. He served as chair of the chemistry department from 1975 to 1980. In 1981 he was the first chemist in the UM System and only the second faculty member on the St. Louis campus to be appointed Curators' Professor. He was a visiting scholar in Karlsruhe, Germany and Cork, Ireland. He received numerous awards including the American Chemical Society St. Louis Award in 1974, the American Chemical Society Midwest Award in 1989, the University of Missouri Presidential Award for Research and Creativity in 1990 and the I. H. Weldon Medal of the Canadian Pulp and Paper Association in 1994. In May 2001, Professor Murray was presented with the St. Louis Academy of Sciences Peter H. Raven Lifetime Achievement Award.



Dr. Murray was well known for his research in the area of oxidation chemistry, particularly that involving ozone, singlet oxygen, hydrotrioxides and dioxiranes. His many contributions have helped demonstrate the relevance of oxidation chemistry to environmental and health issues. Dr. Murray's more recent work centered on the chemistry of

dioxiranes. He devised an experimental procedure for producing solutions of dimethyldioxirane $\text{Me}_2\text{C}(\text{O})_2$. Dimethyldioxirane, DMD, referred to in the literature as "Murray's Reagent," is a remarkable reagent and has found substantial applications by others around the world.

He received federal funding for his research at UMSL every year from the time he arrived in 1968, and gave approximately 300 invited lectures in the U.S. and Europe. Over the years, he was known as a compassionate and understanding teacher of organic chemistry to graduate students, chemistry majors and health science majors. Dr. Murray assumed Curators' Professor Emeritus status in 1999. He is survived by his wife of more than 60 years Claire (nee Murphy), six children, 15 grandchildren and 7 great grandchildren. His son, William, precedes him in death. Although the Murray family was a large one, and Bob was very active and successful professionally, he and Claire were active in politics and were very generous with their time. They volunteered for many activities, including hosting visiting students and helping neighbors. Bob and Claire were very proud of their Irish heritage. The Robert W. Murray Lectureship was established in 1997.

Arnold B. Grobman 1918 – 2012.

Arnold Grobman, former chancellor who in 1975 expanded the institution's academic mission to include the colleges of optometry and nursing, died in July in Gainesville, Fla. He was 94. He served as UMSL's chancellor from 1975 to 1985. An advocate of the "urban university," he convinced the faculty at the time that UMSL had to reach out to the community, and the community would in turn reach out to them. The term, urban university, was used to describe an institution of higher education that was socially involved and served as a resource for the citizens of a city or region. During Grobman's tenure, the university purchased the buildings and land that made up the Marillac College campus, creating the South Campus and instituted the Chancellor's Report to the Community, an annual luncheon still practiced. Grobman was born and raised in Newark, N.J. He earned his bachelor's degree at the University of Michigan in Ann Arbor and a master's degree and doctorate in zoology at the University of Rochester in New York. He held numerous positions over his long and distinguished career, including a researcher studying the effects of radioactivity for the Manhattan Project in Oak Ridge, Tenn. He served on the faculty of the University of Florida in Gainesville. He also served as director of the Florida State Museum from 1952-1959, laying the foundation for its development as a major university research museum. In 1959, he became the founding director of the Biological Sciences Curriculum Study in Boulder, Col., a group developing secondary school biology textbooks promoting the teaching of evolution and lab fieldwork. He was the author of several books, including "Our Atomic Heritage," and "Urban State Universities." He authored dozens of scientific articles, many of them focusing on reptiles. The salamander *Plethodon Grobmani*, a Missouri hellbender, was named after him. Grobman is survived by his son, Marc Grobman of Fanwood, New Jersey and daughter, Beth Grobman and grandson, David Burruss of San Jose, Cal. His wife of many years, Hulda, preceded him in death. Services were held in Gainesville.

Lois M. Brunngraber 1925 - 2012

Lois M. Brunngraber widow of our deceased colleague Eric Brunngraber, a former resident of Kirkwood for 35 years, passed away in Fountain Valley, CA. A longtime member and volunteer at Eliot Unitarian Chapel in Kirkwood, Lois previously had been employed at C.V. Mosby Publishing Company in Creve Coeur, where she was a manuscript editor. Her husband, Eric G. Brunngraber, PhD, professor of biochemistry at UMSL and research scientist at the Missouri Institute of Mental Health (originally the Missouri Institute of Psychiatry), passed away in 1987. Lois was instrumental in endowing the Eric G. Brunngraber Fellowship in 2000; the only fellowship dedicated to undergraduate research in the department. Survivors include son, Eric H. Brunngraber of Des Peres, MO; daughter, Carol L. Daus of Huntington Beach, CA; son, Dr. Edward Brunngraber of Altadena, CA; seven grandchildren; and two sisters.

The Chemistry Alumni Council

The Chemistry Alumni Council continues to be active and met regularly during the year. The bulk of the work was the planning for the event at which Rudi Winter and Joyce Corey were honored. The event, which was held in the foyer of the J. C.

Penney Building on April 21, was a huge success. There were more than 100 in attendance and they came from far afield and included many students who were very close to the two honorees. **Bill VanArsdale** BA 1978, PhD 1984, Rudi's second doctoral student who came all the way from Houston with his wife Laurie, made some remarks to those assembled and reminisced about his mentor. **Jean (Huhmann) Vincent** BA 1992, PhD 1997, who worked with Joyce from undergraduate research through her PhD degree, also spoke about her time with Joyce. Other alums made long trips to honor their mentors including Rudi's first PhD student **Anis (Qureshi) Ashraf** PhD 1982, who came in from Houston and **Steve Rooney** BA 1994, MS 1996 with Joyce, who flew in from Dallas. Speakers at the event in addition to Bill and Jean were Chris Spilling, and Chancellor George. The editor introduced the others who came in from out of town including **Razia Ahmed** PhD 1980 from Peoria, **Pat Armbruster** BS 1993 from the Chicago area, **Andrew Breite** BS 1993 from Indianapolis, **Ken Henderson** BS 1973 from State College, PA, **Lisa McChesney Harris** BA 1986 from the Chicago area and **Tom Reinsel** BS 1982 who joined us from Columbia, MO.



Adele Pacquette BS 2008, a graduate student at the University of Illinois, spoke to the Chemistry Club in October.

Graduates, Dec. 2011 through Dec. 2012

DECEMBER 2011

Nicholas A. Ahlmeyer BS
Jay Kishan Bhattarai MS
Matthew Davis MS
Dimitri Lipkind PhD
Saeedeh Negin MS
Hemali Premathilake PhD
Matthew Stockel MS

Nicholas J. Bardol BS
Katherine Cibulka BA
Darrell Hasty MS
Christina Nguyen BS
Eden M. Ogbe BA
Eric Smailys MS
Shana Elise Terrill MS

Robert Ayres BSBB
Erwin Bankston Jr. BSBB
Angela Lanemann BSBB
Saranya Rajavallaban MSBB

Matthew Ban BSBB
John Harrington BSBB
Charlene S. Makita BSBB
Aldijana Sacic BSBB

Chris. M. Schrimpf MSBB
Charlene S. Makita BSBB

Nick Sullivan MSBB

MAY 2012

Michael John Dalton BS
Dae-Gyue Chris Han BS
Xiaohong Feng, MS
Doug W. Hammerstroem, MS
Rebecca Diane Martin BA
Justin Robert Mitchell, MS
Benjamin M. Ruck, MS
Elena Vasilieva, MS

Megan Flecke BA
Sarah L. Hensel BS
Paul Michael Gontarz, MS
Matthew James Keene, MS
Jonathan E. Mattingly BS
Geeta S. Paranjape PhD
Abeera Sharma, MS

Victoria Jane Anderson BSBB
Priyanka Shirish Bapat, MSBB
Charles Gardner BSBB
Netiggya Harsh, MSBB
Samira Hasanovic, MSBB
Anureet Kaur, MSBB
Nguyen Phuong Pham BSBB
Son Nguyen Hong Vo BSBB

Astha Ahuja, MSBB
Megan Boyle BSBBKermit
Louise Denise Givens BSBB
Mahalia L. Harrell BSBB
Xinliang Huang, MSBB
Ryan Charles Nevitt, MSBB
Ryan M. Sheridan BSBB
Aaron M. Wilkerson BSBB

AUGUST 2012

Elizabeth T. A. Vaughan BS
Alemu Koke Azanaw BS
Sudeshna Roy PhD

Sitaram Acharya PhD
Mahesh Paudyal PhD

Lauren Fishback MSBB
Soo-Youn Kim MSBB

Manasa Kandakatla MSBB
Amita Pranjal MSBB

DECEMBER 2012

Brittany K. Cange MS
Elizabeth A. Hood MS
Saeedeh Negin PhD
Sneha C. Ranade PhD
Christian C. Rix MS

Lindsey E. Graham BA
Sarah E. Johansen MS
Binod P. Pandey PhD
Mohini Ravula MS
Jennifer A.-L. Scott MS

Jason Atkins MSBB
Swati K. MSBB
Joshua R. Nickelson MSBB
Madhulika Sharma MSBB
Christina M. Touchette MSBB

Meredith K. Jacques MSBB
Christopher R. Limmex MSBB
Mohit B. Patel
Rohan Tayal MSBB

Alysia N. Battle BSBB
Radiosonic M. Marianao BSBB
Kellie N. Radack BSBB
Panfil H. Shah BSBB

Mellisa A. Marcus BSBB
Elizabeth A. Norton BSBB
Stephanie E. Schatz BSBB

Note: BB indicates Biotechnology and Biochemistry

The Chemistry Club

2012 was another good year for the ACS Student Chapter **UMSL Chemistry Club** (Faculty Advisor, Michael Nichols). Breaking News! Look for UMSL was the spotlight chapter in the Nov/Dec issue of *In Chemistry!* The Chemistry Club continued its involvement in many activities this year including career development, social functions, and demos at the ACS Chemistry High School Day at UMSL. The club was recognized for



Graduate student picnic 2012

exceptional service by the ACS with a Certificate of Achievement. National Chemistry Week 2012 included liquid nitrogen ice cream making on the back patio and interactive events on campus. The week kicked off with the club hosting alumni and former Chem Club VP **Adele Pacquette** (BS Chemistry 2008) for a presentation on her graduate research at the University of Illinois. Additional Fall activities included a Halloween trick or treat for kids in the neighborhoods surrounding UMSL and a brewmaster tour of the Ferguson Brewing Co. The Chemistry Club will participate in the development of a special brew for next year commemorating the UMSL 50th Jubilee. Officers for 2012-13 are Erin Lowry (President), Laura Perry (Vice-President), Kourtney Joiner-Grant (Treasurer), Erin Martin (Secretary), Devon Brandon (SGA Rep), and Hung Nguyen (Public Relations/Historian). 2011-12 officers were Allison Saettele (President), Laura Perry (Vice-President), Son Vo (Treasurer), Erin Martin (Secretary), Dae Gyue Chris Han (SGA Rep), and Erin Lowry (Public Relations/Historian).

Chemistry Graduate Student Association (CGSA)

The CGSA was established in 2010 to work for the benefit of graduate students and it appears to have been a great success. It is now an officially recognized campus student organization. Members publish a newsletter, participate in the Relay for Life, sell tee shirts and hold various events and activities including a picnic, BBQs, float trips, pizza parties, a wine trip and most recently they held a pot luck holiday luncheon in December.

The Faculty

James K. Bashkin has now completed one year as a regular faculty member in the department. He recently was inducted into the National Academy of Inventors and was issued his 10th and 11th U.S. Patents. Dr. Shahrzad (Fanny) Hakami Kermani, Pharm. D., finished her year as a visiting scholar in the Bashkin group in November 2012 and returns to France. Two STARS students, Jimmy Lam and Preethi UmaShanker, carried out research with the Bashkin group in 2012, as did visiting Italian scholars Salvo Pistorio and Maria Jose' Scuderi (both of whom are now first-year Ph.D. students at UMSL). The Bashkin group

was awarded \$351,909 for "Pre-clinical Development of a Broad Spectrum Antiviral Compound to Treat Human Papillomavirus Infection" by NIH (NIAID) and NanoVir, LLC in August of 2012. Former Bashkin group member **Girija Katragadda** (M.S. BCBT 2010) accepted a position at Bayer Crop Science in North Carolina. During the year the group published papers in the journals *Biochemistry*, *Analytical Biochemistry* and *Biochimie* and presented papers at the 47th ACS Midwest Regional Meeting in Omaha NE, the 28th International Papillomavirus Conference, San Juan, Puerto Rico, the DNA Tumor Virus Meeting in Cincinnati, OH, the 243rd ACS National Meeting in San Diego, San Diego, CA, and the 26th Annual Gibbs Conference on Biothermodynamics in Carbondale, IL. Jim's undergraduate research student Melissa Thornton just heard that her project has been accepted for presentation as a poster at Undergraduate Research Day at the Missouri Capitol on March.

Eike B. Bauer was proud to tell us about his undergraduate and graduate student researchers. Undergraduate student Erin Martin coauthored a paper that recently has been accepted by *ChemPlusChem*. Erin presented her research at the State Capitol at the Missouri Undergraduate Research Day this year as an UMSL ambassador (competitive selection process) and performed summer research in 2012 at the Max-Planck Institut für Eisenforschung Düsseldorf in Germany sponsored by the RISE program of the German Academic Exchange Service. She also received a poster award at the Undergraduate Research Symposium here in April. Graduate student Pushkar Shejwalkar's poster at the Research Fair of the College of Arts and Sciences in April won a Sigma Xi poster award. Brian Love joined the group for summer research 2012. He is a high school researcher from Wentzville Holt High School. Eike was promoted to Associate Professor and awarded tenure this past year.

Alicia M. Beatty was granted tenure this past year so she tells us it looks like we're stuck with her. She attended the Second Biennial Gordon Research Conference on Crystal Engineering, serving as a Discussion Leader. The field of Crystal Engineering has only been in existence for 30 years or so, and she is excited that the community finally has its own GRC. She helped to organize *Missouri Inorganic Day* here at UMSL, which was a rousing success due to the large number of graduate student talks. She also had a very active research lab, with one full-time Ph.D. student, **Stephanie Cowin** BS 2011, one part-time Ph.D. student, Matt Fischer, and 5 undergraduate students. As a consequence she has been keeping Nigam Rath very busy with X-ray diffraction data collection! Her undergraduate researchers Jon Mattingly and John McGuinness were awarded Undergraduate Research Awards by the College of Arts and Sciences, which is a tribute to their hard work and dedication. A new graduate student, Carl Oberle, starts research in her lab beginning in January, 2013, so she and especially her students are looking forward to an expansion into a neighboring lab.

James S. Chickos is now the old-timer in the department both in years of service and age, among those who are not formally retired. He continues to be very active in his research on the measurement, estimation and collection of thermodynamic data of organic compounds. In 2012 he published 6 articles and has another 2 in press. He currently has two PhD students and has had a few undergraduate and high school students working in his laboratory. He is spending the Christmas holiday with his

daughter Sarah and her family, husband Tom and daughter Kaitlin, in Virginia. Sarah is an attorney and works for the US Patent Office. His other daughter Mary hopes to become a CPA and continues to play violin in the St. Louis Philharmonic Orchestra. His son Aaron is also an attorney and a graduate of London School of Economics and lives and works in London.

Valerian T. D'Souza had left for vacation in India before I could remind him to give me something to include herein. His main focus these days is teaching and he is current in the process of developing a proposal related to improving student success in chemistry 1111. He also serves as the Webmaster for the department and this year the University changed the program we use to maintain the web site so that provided work for him.

Alexei Demchenko, who joined the department in August 2001, continues his successful research work in synthetic carbohydrate chemistry. During 2011-2012, his research group, *Glycoworld*, published 22 articles, presented 12 posters at conferences, and delivered 29 invited talks and universities and in symposia. In 2012 Professor Demchenko became an Associate Editor of the **Journal of Carbohydrate Chemistry**, and is continuing to serve as a Member-at-Large of the Executive Committee of the Division of Carbohydrate Chemistry of the ACS and on a number of Editorial Advisory Boards. In 2011-2012, he successfully renewed his grants from the NSF and the NIH and received a grant from Pfizer St. Louis. Currently, the core of the Glycoworld consists of a Research Assistant Professor **Papapida Pornsuriyasak** (UMSL Ph.D., 2006) and six graduate students. A visiting student from Denmark, Mads Heuckendorff, and six undergraduate researchers are also acknowledged for their significant efforts and valuable contribution to the overall success of the Glycoworld in 2011-2012. Also he provided us with some information on his former graduate students. **Dr. Medha N. Kamat** (Ph.D., 2006) is at Millipore, in St. Charles, **Dr. James T. Smoot** (Ph.D., 2008) is at Tate & Lyle (Chicago, IL), **Dr. Archana R. Parameswar** (Ph.D., 2008) is a post-doc at WUSTL Department of Chemistry, **Dr. Aileen F. G. Bongat** (Ph.D., 2008) is at the Louis Pasteur Institute in Paris, **Dr. Laurel K. Mydock** (Ph.D., 2010) is continuing as a post-doc at WUSTL Medical School, **Dr. Sophon Kaeothip** (Ph.D., 2010) moved to RIKEN (Japan) after spending one year at the University of Georgia with Geert-Jan Boons, and **Dr. Hemali Premathilake** (Ph.D., 2011) is currently taking care of her newborn son and is getting ready to accept a suitable position somewhere in Florida.

Cynthia Dupureur in March returned to Caltech to celebrate her postdoctoral advisor Jackie Barton's 60th birthday, give a research talk, and catch up with colleagues. Also in the spring, alumna **Lori (Bowen) Gwyn** (PhD, 2005) accepted a faculty position at Southwestern Oklahoma State University, her alma mater. This fall Dr. Dupureur and PhD student Elena Vasilieva attended the Gibbs Conference in Carbondale, IL. In October, Dr. Dupureur spoke at the Midwest Regional ACS meeting, held this year in Omaha, NE. This year's group "Movie Night" feature was Contact, around the customary international potluck feast. Dr. Dupureur remains Program Director for the Biochemistry and Biotechnology Program.

Chancellor Thomas F. George continues to maintain an active research program (on the side) in laser/materials/nanophysics. This summer he traveled to Bosnia where he presented a seminar



Dr. Spilling, 2012 Murray Lecturer Dr Valentino Stella, of the University of Kansas and Dr. Gokel, after the Murray Lecture

on his work on nanostructures at the University of Sarajevo, where he interacted with university officials in developing cooperative programs with UMSL. On this same trip, he also visited officials at the University of Dubrovnik in Croatia to develop cooperation with UMSL. He also presented jazz concerts at both Sarajevo and Dubrovnik. Later in the fall, he visited Gulf University for Science and Technology in Kuwait, where he participated in their commencement and 10th anniversary celebration – UMSL is a very active partner with them.

George W. Gokel moved to UMSL from the Washington University School of Medicine in 2007. His first student recruited at UMSL, **Saeedeh Negin**, had passed her exam and submitted her dissertation and was to be hooded on December 15, 2012. Two other students working in Dr. Gokel's lab are enrolled in the Biochemistry Biotechnology program. They have discovered a new reagent to transform or transfect cells to implant new genetic material. They are coauthors on a communication that appeared recently in the *Journal of the American Chemical Society*. Dr. Gokel, Jason Atkins, and Mohit Patel have founded *Genetix Fusion LLC* and are currently seeking funding. Mohit, representing the company, competed in, and made it to the semi-finals in, Washington University's Olin Cup competition this fall. Mohit will compete again at a meeting in Texas in two months. The Office of Research Administration and IT Enterprises have provided great help in developing a business plan and in providing space for the nascent company. Genetix Fusion LLC is in the process of preparing its first transfection kits for sale. It has already discussed distribution with local companies.

Harold H. Harris "sort of" retired on September 1, but he is still teaching physical chemistry as a Founders Professor and is in his office nearly all day, every weekday. He also advises students, acts as liaison with secondary school chemistry and physics teachers, and writes his "Picks" for the *Journal of Chemical Education* (<http://www.chemedx.org>) His plan to become a professional tennis player once he had more time to practice does not seem to be progressing as quickly as he hoped, so he has bought a set of golf clubs for an alternative second career. He and Mary will be spending half of December and half of January at a place they are renting in Naples, Florida.

Bruce Hamper has joined the faculty as Assistant Teaching Professor after 25 years of agricultural and medicinal chemistry research with Monsanto and Pfizer in St. Louis. He has been teaching introductory chemistry and conducting research. He recently completed a collaborative project with Drs. Chris

Spilling and Wes Harris for development of chelating resins capable of removing potentially toxic aluminum from IV solutions. Together with undergraduates Michael Mannino and Melissa Mueller, he has set up a laboratory for investigation of continuous flow chemistry processes, molecular recognition and separation science. Bruce also continues to perfect and restore a '59 Austin Healey Sprite in hopes of attaining optimal fuel economy in a fun commuter vehicle.



Bob Dittrich BS 1976 and Dr. Stine at the Murray Lecture Banquet.

Wesley R. Harris continues to handle responsibilities in the department and in the Graduate School where he is Associate Dean. In grad school, he tells us, they are working with the science department chairs to establish several professional science master's degree programs. If any alums have any comments or suggestions, he would be very happy to hear from them (wharris@umsl.edu). He and his wife Marion were planning to spend Christmas in San Diego with their son, Jonathan. Wes has started a new research project related to plant sciences and just published his first paper ever in the *Journal of Agriculture and Food Chemistry*, "Computer Simulation of the Interactions of Glyphosate with Metal Ions in Phloem". He never expected to be citing references in the journal *Weed Science*, but it has been very interesting.

Stephen Holmes in May helped organize and sponsor *Missouri Inorganic Day*, which was held at UMSL. Two posters by Holmes students (Philip Ferko, grad. student; Hung Nguyen, undergrad.) were presented. He traveled to Greece (Ouranopolis, Chalkidiki) in June to present an invited seminar at the 4th Workshop on Current Trends in Molecular and Nanoscopic Magnetism and then vacationed for one week in Istanbul and Athens. He mentored and trained a STARS (Students and Teachers as Research Scientists) high school student (Alexander Noddings) during the summer with assistance of **Philip Ferko** (Holmes group grad. student, B.S., UMSL, 2010); Alex was awarded the 2012 LMI Aeroscape Inc. Award for Excellence in Research for project title "Syntheses and Characterization of Hydridotris(3-phenylpyrazol-1-yl)borate Complexes of Fe^{II}, Co^{II}, and Ni^{II}". This is the second time in two years of STARS mentorship the Holmes group has received this recognition from LMI and the STARS program. Steve presented at the Gordon Research Conference, *Electron Donor-Acceptor Interactions*, in August and was awarded an NSF grant of

\$360,000 to study "Low-Coordinate Building Blocks for Cyanide-Based Single-Molecule Magnets" in August. He also received a UMSL A&S Grant in January (\$12,500). His research group published three papers, submitted two others, and is working on another three (and counting) his work was selected to appear in the "Quantum Molecular Magnets" virtual issue (*Inorganic Chemistry*, *Journal of the American Chemical Society*, and *Journal of Physical Chemistry*). In October, he presented an invited lecture ("Tuning Magnetic and Optical Bistability in Fe/Co Squares") at the 12th International Conference on Molecule-Based Magnetic Materials (Orlando, FL) and also served as session chair/discussion leader. He was nominated to serve on Editorial Board of journal *Polyhedron* in November. In December he was selected to serve on the UM System Advisory Committee for 2012-2013 Presidential Award for Innovative Teaching and the Presidential Award for Intercampus Collaboration. With assistance of Chancellor George (via scholarships and tuition remission), he successfully persuaded a former 2012 ACS SEED high school student from enrolling at SLU, to attend UMSL, and major in Chemistry (Hung Nguyen). He is currently working towards collecting data for his undergraduate (honors) thesis in the Holmes group and was nominated to serve as Chem Club Treasurer.

Rensheng Luo tells us that the four NMR spectrometers are running well in 2012. He is collaborating with colleagues in the FDA on natural products chemistry and has two publications in 2012. He tries to collect as much NMR data for users as possible, as well as explore and develop new experiments on the new 600 MHz spectrometer. For example, 2D EXSIDE and HETER2DJ are useful experiments for stereochemistry of small molecules by measuring heteronuclear coupling constants. Triple resonance three or four dimensional experiments are used for structural and dynamic studies of biological macromolecules. We are not able to implement any of these new experiments on our old spectrometers. As a guest instructor, he presented lectures in three undergraduate and graduate courses. On the personal side, his daughter, Dee Luo, has started college at the University of Pennsylvania.

Michael R. Nichols Associate Professor continues to investigate Alzheimer's Disease (AD)-related research and is also involved in collaborations with Alexei Demchenko, James Bashkin, and Cindy Dupureur. This year Dr. Nichols coauthored an AD-related paper in *Mol Phys* with Chancellor Thomas George and continued research on the amyloid- β protein and inflammation yielded publications in *ACS Chem Neurosci*, *Biochem Biophys Acta*, and *J Neuroimmune Pharmacol*. The lab saw the graduation in May of **Geeta Paranjape** with her PhD. Current lab members are Shana Terrill (4th year), Sanjib Karki (3rd year), and Ben Colvin (2nd year). Other student researchers this past year in the lab were Michael Mohan (Biology BS 2012), **Lisa Gouwens** (BCBT MS 2011), **Ben Ruck** (Chemistry MS 2012) and John Heuvelman (BCBT BS program). Conferences attended by Mike and the lab members included the American Society for Neurochemistry (Baltimore), FASEB Neuroimmunology (Phoenix), Berg Symposium (Wash U) and ACS Midwest (Omaha).

James J. O'Brien and his collaborator, spouse Leah O'Brien, who is Professor of Chemistry at SIU-Edwardsville, implemented a Bruker 125M High Resolution Fourier Transform Spectroscopy (FTS) system from an NSF award in late summer

and have been taking remarkably good emission spectra from hollow cathode plasmas where they make different diatomic species (e.g., ReN, WO, CuF). Ultimately the FTS is intended to be coupled with the Intracavity Laser Spectroscopy method for doing absorption measurements. Jim became Chair-Elect of the St. Louis Section of the American Chemical Society for 2103. Leah received two awards from the ACS this year (ACS Fellow & the 2013 Distinguished Service Award for 2013 from the St. Louis section). Their older daughter Christine is in graduate school at Vanderbilt University in biomedical engineering and younger daughter Emily is in Environmental Engineering at Missou where she is doing undergraduate research.



Keeta and Steve Holmes in Hawaii

Nigam P. Rath was invited to present a webinar on *Crystallography Experiments for the Undergraduate Laboratory* in August 2012 that was attended by a large international audience. He is teaching the graduate course in chemical crystallography this semester. The two diffractometers and teaching keep him well occupied. He coauthored 20 publications in 2011.

Christopher D. Spilling continues as Chair of the Department. In addition, he is serving as the 2012-2013 Chair of the University Senate. Despite this increased service load, his research continues to go well. He co-authored three articles in 2012 and graduated his 15th and 16th PhD students, **Mahesh Paudyal** and **Surendra Roy**. Mahesh is currently a postdoctoral associate with Prof Falck at the UT Southwestern Medical Center in Dallas Texas and Sudeshna is a postdoctoral associate with Prof Jeff Aube at the University of Kansas. Spilling's current research group is now a little smaller and consists of Surendra Dawadi, **Ben Martin** BS 2007, **Mercy Kirru** BS 2009 and **Jeremy Rideneour** BA 2008. He attended the International Conference on Phosphorus Chemistry in Rotterdam, Holland in early July and his students attended the Midwest Regional Meeting of the ACS in Omaha, Nebraska. Chris stayed in town for Thanksgiving and hosted colleagues Keith Stine and Alicia Beatty for dinner. The Spilling family is well. Andrew (21) is a senior at Embry Riddle Aeronautical University, Robert (19) is in the US Army serving with 101st airborne in Ft Campbell, KY and William (14) is a freshman at Chaminade College Preparatory School.

Keith Stine completed a year in which he had an active crew of researchers in his laboratory including four graduate students (Abeera Sharma, Jay Bhattarai, Binod Pandey, and Allan Alla) and Dr. Yih **Horng** Tan continuing as a postdoctoral associate. Additionally, Manasa Kandakatla, an M.S. degree student in

Biochemistry and Biotechnology spent time in his lab. His lab also hosted two students in the STARS program for the summer of 2012. Research on a number of fundamental and applied aspects of nanoporous gold continues, including collaboration with Professor Demchenko's lab on using the material as a support for carbohydrate synthesis. The project was refunded by NIH for a fourth year. In the past year, his group published a paper in the Royal Society of Chemistry journal *Journal of Materials Chemistry*. Other papers appeared in *Journal of Carbohydrate Chemistry* and *Microchimica Acta*, an analytical chemistry journal. A collaborative paper with the Demchenko lab on HPLC assisted synthesis appeared in *Organic Letters*. He presented a talk at the special symposium *Glycoscience at the Crossroad of Energy, Health, and Materials* at the recent ACS meeting in Philadelphia, to which he traveled along with Professor Demchenko. A major chapter titled *Brewster Angle Microscopy* was published in the edited multivolume set *Supramolecular Chemistry: from Molecules to Nanomaterials*, published by Wiley. Dr. Stine organized a day long presentation of hands-on science activities at the Missouri State Fair this past summer for the Missouri science outreach organization SCOPE. A number of graduate students from the chemistry department helped to make the event a success. He also completed his first year as a member of the Life Sciences panel of the University of Missouri Research Board.

Janet Braddock-Wilking's graduate student, **Teresa Bandrowsky**, BS 2008, attended at the 44th Silicon Symposium in St. Catharines, Ontario, Canada, and presented a paper on their work. **Dr. Sitaram Acharya**, a December 2012 PhD graduate student in the research group defended his dissertation in July 2012 and is now doing postdoctoral research with Professor Tracy Hanna at Texas Christian University. Janet was an invited speaker at the 4th Asian Silicon Symposium in Tsukuba, Japan in



Our women faculty colleagues: Alicia Beatty BS 1989, Jane Miller, Cindy Dupureur, Joyce Corey and Janet Wilking BA 1985.

October 2012 where she presented some of the recent research in her group. Janet and Bruce Wilking had their 25th wedding anniversary in June and traveled with their sons, Alex and Kevin to Glacier National Park, Montana and to the Canadian Rockies in Alberta and British Columbia, for a family vacation in July.

Chung F. Wong This year, graduate student Paul Gontarz in Chung's lab submitted his first paper for publication. He is also a popular collaborator in the lab with several undergraduates - Jennifer Berger, Melissa Mueller, and Peter Gontarz - and a graduate student, Aaron Wilkerson from the Biochemistry and Biotechnology program, working with him on genomics projects. Two other undergraduates - Pankil Shah and Chris Dae-Gyue Han - also spent time in the lab working on projects related to computer-aided drug design. In summer, a senior visiting scholar, Erol Eroglu from Akdeniz University in Turkey, joined Chung's group for about two and a half months. Former summer undergraduate intern, Jagdeesh Chandrasekhar, successfully passed his third-year preliminary examination for his graduate study at the University of Illinois at Urbana-Champaign. Congratulations! Former postdoctoral fellow, Zunnan Huang, started a faculty position at the China-America Cancer Research Institute of Guangdong Medical College in China. Former graduate student, Sneha Bairy from the Biochemistry and Biotechnology program, joined the Center for Cellular and Molecular Platforms in Bangalore as a senior research fellow.

Zhi Xu is currently taking sabbatical leave from the University to develop technology for non-invasive blood glucose detection.



The Chemistry Club at the Ferguson Brewery.

Emeritus, Retired, Adjunct and Former Faculty Members

Lawrence Barton has developed an activity pattern that has not changed in the past few years. The department and associated professional activities, golf, gardening and travel describe his major activities. He continues to have lunch almost every day with Hal Harris and Rudi Winter. In addition to undergraduate advising, the UMSL CHEMIST, the Chemistry Alumni Council, the Alumni Association and the ACS cover much of his time in the department. He was elected to the Board of the UMSL Retirees Association this year and was also named to the 2012 Class of ACS Fellows. If he is not on the golf course, traveling or working in his yard, he can be found in his office in the department. He and Pat traveled to two ACS national meetings this year, and in September purchased a small condo in Fort Myers, FL. The idea is to spend a little more time there although he will not give up any of his department activities, for the time being anyway. A highlight of the year was a trip to Normandy where he and Pat spent a week in the cottage owned by friend

and former colleague Jim Riehl. His golf game went well in 2012; he and son Andrew finished third in the Glen Echo Invitational Tournament and for a short time, his handicap dropped to 14. The last time it was 14, he was 16 years old!

Eric Block, the editor, and their wives had dinner together at the ACS meeting in Philadelphia in August. Eric, who is Carla Risso Delray Distinguished Professor of Chemistry at SUNY-Albany, is doing well professionally although he and Judy have had a tough time recently. She was diagnosed with esophageal cancer but she looks very good and her spirits and energy remain high. They were planning an 11-day Caribbean cruise in the New Year to celebrate their 46th wedding anniversary.

Joyce Y. Corey said it has been a relatively quiet year for her but that is only because she always works so hard! She has now been "retired" for five years but is in her office 6 days a week. Old habits really die hard. She completed another chapter for a book that will be published next year and has started another writing project to keep busy. In mid-June she attended the 44th Silicon Symposium at Brock University in St. Catharines, Ontario, with **Teresa Bandrowsky**, BS 2008 who works with Janet Wilking. The symposium was organized only 3 months before it was held so it was the smallest of all the Silicon Symposia since she started attending the 2nd one, and thus, quite intimate. It may have been small but the science was good and Teresa gave a very nicely received talk. Almost as soon as she got back to St. Louis she left for her annual stay in Maine. Her other travels took her to France for two weeks in September where she stayed (and traveled) with friends who were in the lab in Montpellier when she was on sabbatical there at the University of Science and Technology of Languedoc in 1982. She told me, and I quote "Without doubt the most important event during the year was the reception held at the end of April for Dr. Winter and myself and sponsored by the Chemistry Alumni Council. I must admit that I dreaded the event and had very reluctantly agreed to having my arm twisted, but I had a wonderful time seeing students from the past (and some from the present) and I am truly grateful to those who came and contributed something to the event with a few words in the *Memory Book*. **Jean (Huhmann) Vincent** PhD, 1996; BS, 1992; reflected on her time working with me with her usual good humor (and prodding). **Steve Rooney**, BA 1995, MS, 1996 flew in from Texas for one day and came with a really dramatic and funny entrance to the reception as he had arrived a bit late. **Yana Levchinsky Grimmond** BS, 1997, MS, 1999 and **Brian Grimmond** PhD, 1999 regularly visit the department Thanksgiving week and we had a good time catching up. Yana is climbing mountains in her spare time and is halfway through her goal of climbing 42 of them. Go Yana! I also visited **Vincent Chang** MS, 1979 who is at Abbott Labs outside of Chicago. We always spend a day at the Art Institute whenever I visit and this time it was interesting to see the Impressionist paintings rearranged and spread out over more space as a result of moving the collections since 1900 into the new Modern Art building".

David L. Garin marked his 45th year of connection to the department in September 2012 and continues for another term as President of the UMSL Retirees Association. After some restricting eye surgery, he is back to biking with recent sojourns in Chicago, Washington, DC, and Los Angeles.

Jane A. Miller was at the reception to honor Joyce Corey and Rudi Winter in April and she looks well.

Rudolph E. K. Winter continues to be a regular fixture in the department. He helps Joe Kramer run the Mass Spectrometry Facility. He is excited about the equipment we received recently including an LC-MS system from Covidien (through the auspices of former adjunct professor, Dr. Raghavan Rajagopalan) and a MALDI-TOF Mass spectrometer from Monsanto. He was also delighted with the reception held in April where many of his former students were in attendance. He certainly enjoyed seeing them and had a wonderful time.

Former Staff Members

Gordon Kersmann was in the department from Brownsville, TX for a visit in June 2012

Randa Manassa Schneider, 61, a member of the Chemistry Department office staff from 1981 through 2000, died at her home in Quincy, IL, on Sept. 27, 2012, after a long battle with cancer. In the department, although serving as Clerk Typist, Secretary and finally Word Processor, her skills were in using computer programs to draw chemical structures, to design



publications and to assist faculty members in preparing research proposals. She was born in Lebanon and came to the US with her family in 1977 to join her brother Elias who was a soccer star at Quincy College. The other family

members had left Lebanon during the problems there, and were refugees in Jordan for a time until her brother was able to help them come to the US. She obtained a BA in Art at Quincy College where she met Michael Schneider, a student there. Mike came to UM-St. Louis to enter the doctoral program in Psychology in 1981 and that was when Randa joined the chemistry department. She and Mike moved back to Quincy in 2000 where Mike had obtained a position. Randa was an avid participant in using Facebook and over the years was able to reconnect with many long-lost relatives and friends. She had an active interest in genealogy and spent much time looking for ancestors on both sides of her family. She enjoyed making contact with other relatives with similar interests. Randa was well known in the family for her needlepoint (once winning a blue ribbon for an embroidered picture) and cross-stitch. She was very interested in quilting and left several beautiful projects waiting to be completed. Many relatives and friends benefited from her skill with knitting needles and crochet hooks. She enjoyed cooking, much to the delight of her husband, family and friends.

The Robert W. Murray Lectureship

This departmental function continues to be one the two major events of the visiting speaker program and also involves the

major social program in the department. On the evening prior to the lecture, a banquet is held, typically at the Glen Echo Country Club, and guests and alumni join the faculty in honoring the speaker and Dr. Murray. The 15th Annual Robert W. Murray Lecture was given by **Dr. Valentino Stella**, University Distinguished Professor of Pharmaceutical Chemistry at the University of Kansas. He spoke on March 19 on "The Case for Prodrugs". The 16th Annual Lecture will be given on Friday March 15 2013, by **Dr. David W. C. MacMillan**, James S. McDonnell Distinguished University Professor of Chemistry, Chairman, Department of Chemistry and Director of the Merck Center for Catalysis at Princeton University.



Erin Martin receives the Outstanding Junior Award from the St. Louis Section of the ACS.

Scholarships and Fellowships

The Charles W. Armbruster Undergraduate Chemistry Scholarship was established following the events in August 2008 when Dr. Armbruster was awarded the Chancellors Medallion spoke at Commencement and was honored by alumni, colleagues and friends in a reception. The Scholarship is given to incoming Missouri resident undergraduate students in the Department of Chemistry, transferring from other universities and community colleges. The award for 2012-13 went to **Anna Thibaut**.

The Lawrence Barton Scholarship: This Scholarship is designed primarily for junior chemistry majors who are first generation college students and who have some financial need and was established after Dr. Barton stepped down from the department chair position in 1998. Contributions to the endowment continue to be excellent and this has allowed the provision of more than one scholarship in recent years. For 2012-13, scholarships went to **Ahmed Mohamed** and **Matthew Queensen**.

The M. Thomas Jones Memorial Fund: was the first endowment that recognizes performance by graduate students. It was initially funded through contributions from family, friends and colleagues of Dr. Jones and recently his widow Patricia Jones and family have made substantial contributions to allow us initially to endow it and to improve it. Currently it is used to fund an annual award for the top graduate student seminar in each semester. The graduate students vote on this award and for 2011-2012 awards were made to **Priyanka Ogirala** and **Mahesh Paudyal**.



Jean (Huhmann) Vincent BA 1992, PhD 1997 as Chris Spilling looks on at the reception for Joyce Corey and Rudi Winter in April.

The Barbara W. Brown Fellowship for Women in Chemistry: This Fellowship is designated for women students over the age of 24 and **Barbara (Willis) Brown** (BA 1984) established it. The 2012-2013 fellowship went to **Melissa Mueller**. Again, this is the only fund that is dedicated to the support of women students and you can designate your contribution to this fund if you wish.

The Eric G. Brunngraber Undergraduate Research Fellowship: This Fellowship has existed since the late 1980s but was endowed more recently by the family of the late Dr. Eric G. Brunngraber, and we are delighted that they continue to add to it. We were so sorry to hear that Eric's widow, Lois M. Brunngraber passed away earlier this year. The award is for undergraduate research. If you are interested in supporting this important aspect of the department's activities, you may designate your contributions to this fund. For 2012-13 the fellowship went to **Michael Mannino**.

The William and Erma Cooke Memorial Scholarship: This, the major endowed award in the Department, was one of the first such endowments on the campus. It is designed primarily for sophomores. It was endowed by Dr. Dorothy C. Cooke, in honor of her parents William and Erma Cooke, in 1989. Dorothy received her BS degree in chemistry in 1971 and is now a physician. She was always most appreciative of the support she got from the department and especially when she did research with Dave Garin. The Scholarship has provided support for two students annually now since 1992. In 2012-2013 fellowships went to **Erin Martin** and **Andrea Sullivan**.

The Linda and Michael Finkes Chemistry Scholarship is relatively new and was endowed through the generous contribution of **Linda** BA political science 1970 and **Michael J. Finkes** BS 1973, MS 1978. The recipient for 2012-13 was **Allison Saettele**.

Other Departmental Student Awards

Undergraduate

The award for the **Outstanding Student in Introductory Chemistry** went to **Hung Nguyen** who received a certificate and the *Handbook of Chemistry and Physics* from the Chemical Rubber Company. The **Award to the Outstanding Student in Sophomore Chemistry** went to **Daniel Simmons**, the **American Chemical Society Award for Analytical Chemistry** went to **Jonathan Mattingly** who received a certificate and a one-year subscription to *Analytical Chemistry* and the new **ACS Award in Inorganic Chemistry** went to **Jonathan Mattingly**. The **American Chemical Society-St. Louis Section's Outstanding Junior Award** went to **Erin Martin**. The award was presented at the annual Awards Night during the ACS St. Louis Section's Chemical Progress Week. **Jonathan Mattingly** received the **Alan F. Berndt Outstanding Senior Award** and the **American Institute of Chemists-Student Award Certificate**. The 2012-13 Undergraduate **Chemistry Aid to Education Awards** were given to **Erin Martin, Melissa Mueller, Robert Pace, Anjelika Pratt, Matthew Queensen, Jordan Rabus, Allison Saettele, Jennifer Smith, Andrea Sullivan and David Switzer**. Finally a **Certificate of Commendation for Outstanding Service** **Allison Saettele** and **Erin Lowry**.

Graduate

The 2011-12 **Graduate Student Research Award** went to **Saeedeh Negin** and the 2011-12 **Graduate Teaching Assistant Award in Memory of Jack Coombs** was awarded to **Philip Ferko** and **Sarah Johansen and Holly Scheibel** were both honored with the **Outstanding MS Student Award**. **Binod Pandey, Sudeshna Roy, Abeera Sharma, Pushkar Shejwalker and Shana Terrill** were winners in the **2011-12 Graduate School Fair Research Poster Competition** and **2011 Graduate School Dissertation Fellowships** were awarded to **Scott Hasty, Saeedeh Negin and Sudeshna Roy**.

Distinguished Alumni Lecture

The 25th Annual Distinguished Alumni Lecture was presented by **Stephen A. Kolodziej** BA 1987, PhD 1983 on April 30. Steve is an Associate Research Fellow at Pfizer, Inc., in St. Louis. He spoke on "*How a few careful decisions led to my career in chemistry*". The 26th Annual Lecture will be presented by **Kim Gorman**, BA 1993. Kim did research here with Wes Harris, and then spent three years assisting on the Human Genome Project at the Washington University School of Medicine, prior to joining the St. Louis city Crime Lab, where the Chief Criminalist was Harold R. Messler, BS 1970. There she was hired to work on the new technique PCR (genetic finger printing using DNA) and with the knowledge she gained, she struck out on her own after three years and founded Paternity Testing Corporation in Columbia, MO where she is President.

Editor's Column (Lawrence Barton)

I am continuing my version of the history of the department but I again begin with a few observations. Writing the UMSL CHEMIST continues to be a joy for me because it assures I will stay in touch with many of you. I hope more of you will stay in touch in the future so please don't hesitate to e-mail me, call me or write to me.

Departmental History, from 1990 - 1995

The last decade of the twentieth century was one of change for the University and the Chemistry Department. We had just completed the first full year in the new research laboratories. Bugg Lake had been restored by the engineering company Sverdrup and a fountain installed. The following year when the Bald Cypress trees had begun to grow, the memorial to Eugene R. Corey was dedicated. Further north construction of the extension of the Thomas Jefferson Library was nearing completion and plans for the Computer Center building were being made. The latter was constructed thereafter and dedicated in March 1993. In 1991 I was called to the Chancellor's office to meet with her, physics chair Bernard Feldman and Assistant to the Chancellor Betty Van Uum. The campus had heard that our "proposal" to the Department of Energy to fund the Center for Molecular Electronics had been successful, and the administration wanted to discuss the ramifications. The plan was, in fact, the brainchild of our former colleague Tom Jones with major support from Chancellor Barnett. It was eventually funded as a Congressional earmark as a result of the efforts of Congressman William L. Clay. This led to several months of planning a new building, etc., for which bids were accepted for construction in December 1994 from the Henty Company. Actual construction was delayed for about a year due to environmental concerns, but the first stone was laid in 1996 and the building was occupied in 1997.

There were several personnel changes during this period. Rumors abounded that Chancellor Barnett would be leaving. I recall writing to her suggesting she reconsider! She departed, however, to become President of the University of Houston in the summer of 1990, and that left our chemistry faculty colleague Tom Jones, her deputy, here in limbo, so it seemed. During fall 1990 Tom met with the faculty at a department meeting to talk about the establishment of the Center for Molecular Electronics and the provision of \$35K seed money. Little did we know that there was a plan for him to follow Chancellor Barnett and become Deputy President in Houston in December. A memorable farewell reception was held for Tom in December, 1990. A search was established for a new chancellor. Dr. Blanche Touhill, Vice Chancellor for Academic Affairs, served as Interim Chancellor after Dr. Barnett's departure. During the search, department chairs met with the candidates. The two finalists were Dr. Touhill and Thomas F. George, Dean of Natural Sciences and Mathematics at SUNY-Buffalo. That is when I got to know Dr. George, whom I would meet again by chance in July 1992, when I was attending a boron chemistry conference at Washington State University. At the time he was Provost there and our growing friendship had consequences more than ten years later in that I played a role in bringing him to St. Louis in 2003!

Tom Jones had been assigned to the Chancellor's office in 1988 and we were allowed to recruit for a replacement for his faculty slot. So in the academic year 1989-90 we established search committees for this position and also to replace Eugene Corey. The result was that we hired Lee Brammer from Brookhaven National Laboratory and Keith Stine from UCLA. Lee, from the northeast of England, was a Bristol University graduate and had done his graduate work with Guy Orpen. He followed this with postdoctoral fellowships at the University of New Orleans with Edwin Stevens and Brookhaven National Laboratory with Thomas F. Koetzle. Keith, from New Jersey, was a Fairleigh-Dickinson University graduate who did his PhD research at MIT with Carl W. Garland and postdoctoral research with Charles Knobler at UCLA. We were also very pleased to be able to offer continuing contracts to Nigam Rath as Research Assistant Professor; this turned out to be a wonderful development in the department.

In early 1992 the University established an attractive early retirement program. Three colleagues - Charlie Armbruster, Jane Miller and glassblower Bob Cabaniss, took advantage of it. For Charlie it was hardly a change, for he stayed with us for another six years, carrying the heaviest teaching load in the department, both in the academic year and in the summer. He also served as the pre-med advisor for the College of Arts and Sciences and Coordinator for the Advanced Credit Program. He did not want to give the impression that he had retired, so he accepted the title Adjunct Professor rather than Professor Emeritus, with its obvious connotation. Jane Miller became Professor Emeritus and Bob Cabaniss continued on a temporary basis for us. A very well-attended Alumni Reception in honor of Charlie was held one Saturday evening in the foyer of the J. C. Penney Building in April 1992. Jane still had some College of Education



Steve Kolodziej, BA 1987, PhD 1993 with his wife Mary and Alexei Demchenko

responsibilities to complete, and a retirement reception was later held for her in the Chancellor's residence in April 1993.

In 1991-92, as my fourth term as chair came to an end, the Chair Review process finally involved two candidates, Jim Riehl and me. I was eventually appointed for a fifth term and whether this had anything to do with later events I am not sure, but during the following academic year Jim decided to look for positions elsewhere. This was very unsettling for me as he was clearly one of the most valuable colleagues I had ever had and his departure would be a major loss to the department. But Michigan Tech made a very attractive offer to Jim to become department chair and he took it at the end of the 1992-93 academic year. We were

immediately authorized to seek a replacement in that Dean Terry Jones approved it on the understanding that we paid for candidate travel and found startup funds elsewhere! In March 1994, Zhi Xu, a postdoc with Paul Bohn at the University of Illinois-Champaign-Urbana, accepted our offer. Zhi had done his undergraduate work in chemistry and had also obtained a master's degree in electrical engineering at Tsinghua University, Beijing, China. He followed that with a PhD degree with John Yates at the University of Pittsburgh. He was the first person to be hired to participate in the Center for Molecular Electronics and startup funds came from the building fund. He took up his appointment in 1994, first occupying space where Jim had been in the Research Wing and eventually in the Center.



Bill VanArsdale BA 1978, PhD 1983 with his wife Laurie at the reception honoring Joyce Corey and Rudi Winter in April.

In April 1993 we interviewed for an NMR Specialist. We were buoyed by our success in building a first-rate NMR Facility using NSF funds matched by Center for Molecular Electronics building funds. One of the candidates was **Janet Wilking**, BS 1985, who had received her PhD degree with Peter Gaspar at Washington University in St. Louis and followed that with a postdoctoral fellowship at Harvard with Andy Barron. She had gone there with her husband Bruce Wilking, a colleague in the UMSL Physics Department, who at the time was on sabbatical leave at Harvard. By 1993 Janet was back in St. Louis as a postdoc at Mallinckrodt, having spent some time temporarily in Joyce Corey's lab here. We eventually hired Janet for the NMR position as a Research Assistant Professor and that turned out to be very successful for the department and for her. NMR applications in the department expanded dramatically as she collaborated with several colleagues. I recall my own foray into 2D NMR when we presented some results, co-authored by Janet, in Kansas City in 1994!

The other "hole" in the department was the regular faculty slot occupied by Charlie Armbruster, who was still with us and teaching freshman and organic chemistry to more than one third of the students taking chemistry courses. But we needed more options for research for our students and we were allowed to use some of our "Center for Eminence" funds to recruit for a synthetic organic or bioorganic chemist in the fall of 1994. We did not hire anyone during the following academic year but in December 1995 we made an offer to Chris Pigge who would eventually join us in the fall of 1996. I leave that for the next installment of this "history".

Donna (Palmer) Kramer BA 1999 joined the department as Stockroom Manager in the summer of 1990 replacing **Sal (Salvatore) V. Ciaramitaro** BA 1993, who had been filling in for us temporarily since Mike Rhoades had resigned in February 1990. Dave Herod, the electronics technician who was a UMSL physics graduate hired to deal with the NMR, resigned in March 1991 and was replaced by Gordon Kershmann. Gordon made an immediate impression. We had problems with the array processor on the Varian XL-300 NMR spectrometer, and replacement by the manufacturer would have cost us several thousand dollars. Gordon was able to locate a replacement board for about \$800.00! There was turnover in the office in the early 90s. Sylvia Stephens, who had been with us since 1988, resigned in August 1992 to move her family to Pennsylvania, where her husband had taken a position. Her position was filled by Lisa Johnson in May 1993. Lisa became Lisa Hoguet when she married Dan Hoguet in 1995. Her initial days in the department were marred when her car was stolen from the Benton Hall parking lot. Lisa stayed with us for more than six years, eventually taking Betty Eshbaugh's position as Supervisor of the Office staff. In the early 1990s some faculty members were becoming impatient that all our office personnel were not as competent with computers as they themselves were, and a major review of the office staff took place. There were widely differing opinions among the faculty, with some loyal to the old time regulars and some wanting immediate change. Eventually the problem was solved by natural attrition!

In the fall of 1991, President-designate George Russell visited the campus and made a joint presentation with Chancellor Touhill. Of major consequence to the department was the proposal that the campus seek funding for a Master Plan which would involve purchase of land around the campus. This would shift the priority order for capital improvements for the campus and result in a delay of the renovation of the undergraduate teaching laboratories in Benton and Stadler Halls. Eventually the Master Plan was adopted in August 1993 and a bond issue was launched to fund the master plan and the Benton/Stadler renovation was delayed. I recall writing to Chancellor Touhill and being told that any new money would be used for purchase of land. We were assured that the renovations would be next and in view of the argument that this was a unique window in which the land was available we dropped our opposition. That was probably a mistake, as future events would indicate.

There were many ups and downs for the department and the campus during the early 1990s. Student fees were increased by 12.5% in Feb. 1991, resulting in enrolment decreases. There were no salary increases for faculty and staff and our journal budget in the library was cut by \$33K as other budget cuts were endured across the campus. Fortunately we in chemistry were spared somewhat from some of the more draconian measures. The state had a program, the Missouri Research Assistance Act, which matched research funds obtained from private industry. The program was discontinued and I, with the help of State Senator Wayne Goode and Dr. Mark Burkholder of our History Department who was in the Academic Affairs office in the Central Administration, worked hard to reverse that decision. We were able to recover all the funds assigned at that time to colleagues, some of whom were in our department.

We had major initiatives in the department during this period to engage with the St. Louis chemical industry and we saw success

in these efforts. One interesting development occurred in November 1991 when Jim Riehl and I were invited by Terry Balthazar at Monsanto to come to talk about a proposal they had for a student and faculty internship program. We met with Terry and two of his colleagues, **Pete Kleine** BS 1978, MS 1982, and Bruce Hamper, who is now an Assistant Teaching Professor in the department. The program would have provided funding, positions for students at Monsanto, exchange programs for faculty, and other intangible advantages. We were disappointed when the Monsanto offer was refused by Chancellor Touhill who wanted to focus Monsanto support on the Bridge Program, a program which allowed inner city and inner suburban elementary school children to have experience on the campus. That year the campus was awarded the highly prestigious Anderson Medal for the Bridge Program!

One of our efforts to work more closely with industry was to establish what I called the Industrial Advisory Council, consisting of the senior research personnel we knew in the major companies and alumni who were particularly supportive and also had seen success in the companies. The group, comprised ideally of two individuals from each company, met with us regularly. In 1990-91 the group consisted of Dr. Shaaban Ben-Poorot, Vice-President, Bus. Dev. Environmetrics; **Ms. Phyllis Bennett**, MS 1979, Protein Technologies, Inc., Ralston-Purina; Dr. Paul Clifford, Manager, TCT Labs – St. Louis; Dr. Anthony J. Cutaia, Director Brewing Research, Anheuser-Busch, Inc.; Dr. Jack Damrath, Director of Research, Ethyl Corporation, Petroleum Additives Division; Dr. John Dimmock, Staff V.P., Dir. McDonnell-Douglas Res. Labs, McDonnell-Douglas Corporation; **Mr. Michael Finkes**, BS 1973, MS 1976, Monsanto Agricultural Products Co.; Dr. Alan Ford, Director, Environmental Sciences Center, Monsanto Company; Mr. Norman Gilbert, President, Missouri Analytical Labs, Inc.; Dr. P. Scott Glaspie, Manager, External R & D and Univ. Rel., Monsanto Company; **Mr. Lee Gori**, BS 1969, Standards and Procedures Specialist, Emerson Electric Company; **Mr. James J. Grib**, BS 1976, MS 1983, Director, Quality Assurance, Anheuser-Busch, Inc.; Dr. William Haynes, Director, External R & D and Univ. Rel., Monsanto Company; **Mr. Kenneth O. Henderson**, BS 1973, Ethyl Corporation; **Mr. Ross Larson**, BS 1972, Chief Chemist, Missouri Analytical Labs, Inc.; Dr. John MacDonald, Manager Organic Chemistry Laboratory, Ralston Purina; Dr. Franklin E. Mange, Corporate Vice-President, Petrolite Corporation; **Mr. Ken Owens**, BS 1981, Senior Engineer-Electronics, McDonnell-Douglas Corporation; **Mr. Mark H. Owens**, BS 1977, 1980, Mallinckrodt, Inc.; Dr. Carl Quicksall, Vice President, Sci. and Tech., Mallinckrodt Specialty Chemicals; **Mr. Bruce Ritts**, BS 1979, MS 1983, Research & Development Chemist, Petrolite Corporation; Dr. Carl Tenpas, Sigma Chemical Company; Dr. George Vermont, Director, Technology and Licensing, Mallinckrodt Specialty Chemicals; **Mr. Dale Vineyard**, BA 1978, The Seven-Up Company; Dr. James Wade, Research and Development, The Seven-Up Company and **Dr. Alan G. Wall**, BA 1974, MS 1982, Sigma Chemical Company. Alumni are indicated in bold; the list is probably incomplete. One of our earlier successes was the partial funding of the new Colloquium Room, the remodeled 481 Benton Hall, using funds principally from Anheuser Busch, via Tony Cutaia, and Emerson Electric, via Lee Gori. The first event we held there was the ACS St. Louis Award Symposium in honor of my receiving the St.

Louis Section Award. The speakers were **Dr. Dennis W. Wester**, BS 1970, Dr. Sheldon G. Shore, Ohio State University and our own Bob Murray.

We had great help from the Alumni Office on campus and with that help we had several meetings with alums from particular companies, either at their location or in the Alumni Center. In September 1992 we met with colleagues from Sigma Chemical and learned that Ron Harris, UMSL business grad from Sigma, would fund the Harris Fellowship in the department. We also attended a reception at Monsanto, arranged by **Mike Finkes**, at which Dr. John Mason, President of the Monsanto Fund, and Chancellor Touhill were in attendance. Just prior to this event Mike had arranged for the donation of two Varian EM-360 NMR Spectrometers by Monsanto. Dave Herod set them up in the room across from the organic lab, where we had the Varian T-60 instrument before it died, and what was once the Glassblowing Shop. We also had an alumni reception at Mallinckrodt that year. At the time there were 55 alums at Mallinckrodt, 30 of which had degrees in chemistry. The other reception we had with alumni in industry that year involved Sigma. We met at the alumni center and the faculty and University Relations staff met with about 15 Sigma employees who were chemistry graduates and with prominent Sigma officials, including Treasurer Kirk Richter BS Business Administration 1968.

Earlier, in April 1991, I had gone to McDonnell-Douglas with Kathy Osborn to meet **Greg Przygoda**, BS 1973, and selected faculty had met with John Dimmock, Staff Vice President, Research, McDonnell Douglas Research Laboratories. We also met with folks from Sigma, Monsanto and Ralston Purina. I recall our hosting Gene Fox, VP for R&D at Mallinckrodt and Bob Jansson, Director of Advanced Performance Materials Research at Monsanto. I also recall a daunting visit with Phil Needleman, Vice President for Research at Monsanto, which unfortunately did not achieve my objective! We hosted Ralph Churchill, VP and GM of the Tretolite Division of Petrolite and Mike Kellog from Monsanto in fall 1992. Along with the Graduate Dean, Doug Wartzok, we held further meetings with Calgon Vestal and Monsanto in the summer of 1992. Derek Redmore from Petrolite and Tony Ward and his supervisor visited us from what was to become Steris Inc. in spring 1994. We also hosted at lunch Curator Mary Gillespie, whom I had as a student in class in the 1960s. Two other curators visited us: Tom Smith in the 1980s and Connie (Silverstein) Burkhardt later during Gordon Anderson's term as chair. In the spring of 1994 I was invited to make a presentation to the Board of Curators. I focused on undergraduate research and was able to describe the merit renewal of our NSF Research Experiences for Undergraduates proposal that was spearheaded by Chris Spilling. I recall Woody Cozad, a curator typically critical of the faculty, expressing to those assembled that my comments "warmed his heart". I later was congratulated by Senate Chair Stephen Lehmkuhle for the presentation. He said he didn't realize what a good department chemistry was! During that period, I was able to obtain funds from Monsanto to support minority students and we were able to provide support for several chemistry majors. At that time, **Jim Baker** BS 1989 MS 1993, had a Union Electric fellowship – the only one on campus. This was designated for minority students.

Our interactions with industry during that period paid off for the

faculty. Several received research grants as a consequence of this departmental initiative. Drs. Spilling and D'Souza received funding from Monsanto, D'Souza, Wes Harris and Larsen received funding from Mallinckrodt and Jim O'Brien received funding through the Advanced Performance Materials group at Monsanto. Others such as Welsh, Stine, and Wes Harris obtained useful contacts in industry. Joe Feder, who had discontinued his teaching of biochemistry in the department, met with the faculty for a presentation about the new field, biotechnology. In 1991, Joe's colleague Dan Connolly had given a department seminar and took over from Joe the responsibility for the biochemistry courses. Another important opportunity for the department to promote itself was the reception to honor Al Heiniger at the Hyatt Regency on Jan 4 1991. Heiniger, a Vice President at Monsanto, was the ACS president in 1991. We had a nice display there, coordinated by Val D'Souza. In addition, we had been receiving funds from Monsanto since Charlie Armbruster had been chair, described as *Aid to Education* awards. During my term as chair we provided modest books and materials funding to successful continuing chemistry majors using the Monsanto funds. That funding ran out as the company morphed but we continued the tradition using our improving support from alumni and it continues today.

Among of the highlights in early 1990 was the seminar presentation given by the British chemist and Nobel Laureate D. H. R. Barton, who was at the time at Texas A & M. A couple of years later we hosted another British chemistry giant when F. Gordon A. Stone visited, invited by Lee Brammer. In 1990 **Harold R. Messler**, BS 1970, Chief Criminalist at the City of St. Louis Crime Laboratory, was our Distinguished Alumni Lecturer. We had previously established a category "Department Honors". The first two recipients were **Tom Bedard** BS 1991, who worked with Joyce Corey, and **Chris Mallory** BS 1991, who worked with Hal Harris. **Kim (Wien) Gorman** BA also completed her honors chemistry requirements, working with Wes Harris, but did not graduate until 1993. We began talking about an additional requirement in inorganic chemistry at this time and it was Rudi Winter who came up with the suggestion of establishing Chemistry 241, a two credit hour course to be required of all chemistry majors. The department curriculum committee, Bob Murray chair, nixed the idea but it would come up again, when the ACS redefined the foundation coursework requirements, and I recall teaching it for the first time in 1998. In the fall of 1991 we changed the instrumental analysis course to its current format, a two hour lecture course followed by a two hour laboratory course, as a result of a study done by Jim O'Brien and Hal Harris. It was around this time that we began talking about having a computerized stockroom inventory.

Bob Murray was honored with the *President's Award for Research and Creativity* in 1990. Another milestone in 1990 was the establishment of the first endowed scholarship in the department when **Dr. Dorothy (Cooke) Greco** BS 1971 established the *William and Erma Cooke Scholarship* in honor of her parents. The first award was made in 1992: \$1,000 to Anna Lindeberg. That year **Bob Lamberg** BS 1972 established an annual scholarship in the amount of \$1,000. In order to try to attract top quality first time, full time freshmen, with contributions from alumni we established four Armbruster Scholarships at \$500 per year for students with outstanding potential. The idea was to identify top student applicants and provide additional scholarship funds to attract them to and keep

them in the department. Our success rate was not good and only two of the initial eight scholars completed a degree in chemistry, **Lisa Meyerkord** BS 1996 and **Gary Nichols** BA 1996, BS 1997, PhD 2002. In 1991 our Distinguished Alumni Lecture was given by **Gary Jacob** BS 1969, who had received a PhD from the University of Wisconsin-Madison and was at the time Head of Glycosciences at Monsanto in St. Louis. The academic year 1991-92 represented the 25th Anniversary of our first graduating class in 1967. I recall attending a reception with Charlie Armbruster in the Alumni Center. During that milestone year we graduated our 550th baccalaureate, our 77th masters and our 40th doctoral graduates in the department.

Dave Garin chaired the St. Louis Section of the ACS in 1991 and later on was appointed Director of the Center for Science and Technology by then Vice Chancellor for Academic Affairs Roosevelt Wright. In the department, the momentum gained by Chancellor Barnett's initiative to establish engineering on the campus began to wane somewhat. The latest proposal was for a joint program with the University of Missouri-Rolla, but they would maintain almost absolute control over the program. Nevertheless, such a program was eventually established but dropped in favor of a joint program with Washington University because of lack of cooperation by the faculty members on the Rolla campus.

The department continued to reach out to our colleagues in the high schools and community colleges in the area. In 1990, the faculty met with community college faculty from the area and on Jan 18 1991 we hosted high school teachers at a meeting in the Hawthorn Room in the Student Center. At the time, outreach to high schools was coordinated by Bill Welsh and Charlie Armbruster. Collaboration with the School of Optometry developed, mostly via Dave Larsen and to a lesser extent Bill Welsh. Both participated in a Contact Lens Symposium on the campus. Later, in 1993 Hal Harris became a joint appointee in the School of Education and assumed Jane Miller's role as the faculty member responsible for mentoring students receiving accreditation to teach chemistry in the secondary schools in Missouri.

In early 1992, we received the sad news that former Chancellor Marguerite Ross Barnett had died on February 29. Her successor, Blanche Touhill, establish what has become a fine tradition: Founders' Day. The inaugural event was held at the downtown Marriott Hotel on Sept 26 1992. One of the more memorable ones was in 1994, when **Harry W. Orf** BS 1971 received a Distinguished Alumni Award. Three years earlier, in 1991, **Harold R. Messler**, BS 1970 had received one, this making three chemistry alums in all; **Ray Novak**, BS 1968 had received one in 1988. Also at the 1994 Founders' Dinner, Joyce Corey was recognized with the *Chancellor's Award for Research and Creativity*, Dave Larsen and Betty Eshbaugh, our secretary, were recognized for 30 years of service, Dave Garin and I for 28 years and Joyce Corey, Rudi Winter and Jim Chickos for 25 years of service at UMSL. The actual dates were not all correct! In 1992 our Distinguished Alumni Lecture was given by Temple University Professor **Susan A. (Jansen) Varnum**, BS 1982, PhD 1986.

We continued to develop the facilities and our academic programs during this period. The faculty-staff lounge on the second floor was converted to a student lounge. We had

proposals to the NSF pending for instrumentation; one for a new X-ray diffractometer and another for a new 300 MHz NMR spectrometer. I had visited NSF a couple of years earlier and was encouraged by the Program Officer to submit both proposals. We had plans to use building money from the construction budget and also from the instrumentation budget of the Center for Molecular Electronics as matches for these proposals. We also upgraded our old X-ray diffractometer and purchased a 500 MHz NMR spectrometer using building funds matched by funds from the Missouri Research Board. Chris Spilling spearheaded a successful application to the NSF Research Experiences for Undergraduates program and we were funded for three years and obtained some matching funds from the Monsanto Company. In the fall 1992 semester we started awarding MS degrees to qualified students who were in the PhD program when they had accumulated 30 credit hours and met other requirements. We awarded 8 such degrees in December 1992. In 1993 we discontinued the foreign language requirement for doctoral students.

In 1993, we installed the Bruker ARX 500 NMR spectrometer, and our proposals to purchase a Unity-Plus 300 Varian NMR spectrometer with a boron-free probe and solid-state capabilities, a new probe for the XL-300 and second X-ray diffractometer were funded. We remodeled the NMR Facility Laboratory in Benton Hall and located the new X-ray Diffractometer in the research wing. Although construction of the CME building had not started, a steering committee, of which I was vice-chair, distributed instrumentation funds to the faculty members associated with the Center. They were principally Bill Welsh, Jim O'Brien, Keith Stine and Lee Brammer and also to a lesser extent myself, Gordon Anderson, Jim Chickos, Joyce Corey and Hal Harris. Also in August 1993 a proposal to involve "retired" McDonnell-Douglas scientists Ian Brown and Dan Leopold in a program in conducting polymers joint with WU and CME was proposed to us by the administration. We told Chancellor Touhill that we didn't want it if it cut out any eminence funding. In July 1993 MetroLink opened and with the two UMSL stations access to campus was dramatically improved.

One of our alums **William L. (Bill) Neumann** PhD 1988, who was at Monsanto at the time, was our Distinguished Alumni Lecturer in 1993. Bill had been teaching organic chemistry in the evenings and in 1992 he did both semesters. Indeed he was very popular and his classes became so large that the classroom was too small. I am afraid we burned him out and in 1994 he took a leave from teaching for us. The department was becoming more prominent in the St. Louis Section of the ACS. Tom Jones and I had been chair in 1978 and 1980 respectively, but Dave Garin's term in 1991 was followed by the third alum to hold the position: **Donna Friedman** PhD 1980 chaired the Section in 1992, the other being **Phyllis Bennett** MS 1979 and **Harold Messler**, BS 1970. Shortly after Dave's term, Hal Harris held the position in 1994. Jim Riehl won the St. Louis Award in 1992 and **Greg Wall** BA 1974, MS 1981, was chair-elect in 1995.

As plans for the Center for Molecular Electronics building developed, our first CME speaker on Jan 29 1993 was the founder of the Center, M. Thomas Jones, and his presentation on fullerenes was followed by a nice reception in the Chancellor's residence. Faculty took opportunities for research leaves and sabbaticals in the early 1990s. Jim Chickos spent a year on leave

in Reading, England and Marseille, France. Joyce Corey spent some time working in the south of France while Hal Harris spent a summer at the Wright-Patterson Air Force Base in 1992. Rudi Winter was on sabbatical leave at LSU, Washington University, and also here for a semester. 1994 was a year for the five year Chancellor's Academic Review and Professor Jan Rocek from the University of Illinois-Chicago was the consultant. He had been a guest of Stuart Weidman, a colleague here from 1965 – 69, as a seminar speaker in the late 60s and the review went very well. Also in 1994 the award in honor of Jack Coombs, our first stockroom manager, recognizing outstanding performance as a teaching assistant by a graduate student, was established. The first awardee was **Robert Stockland** PhD 1999, and was presented in May 1995. The worst news in 1994 was that Bob Cabanniss, by then our part-time glassblower, was taken ill. He was diagnosed with lung cancer and had serious problems. He eventually had a lung tumor removed and at that time, **Ken Owens** BS 1980, who had lost his position at McDonnell-Douglas and was a contract employee at AVSCOM in St. Louis, filled in for Bob. We were promised replacement for the glassblowing position for 1997 and eventually Ken would be appointed to fill it.

Meanwhile on the campus the Master Plan was in full swing. We took over Logan College, by then Cardinal Newman College, across Florissant Road from the north campus; Mount Providence School, which was further north on the top of the hill, again across Florissant Road; and the Daughters of Charity property, adjacent to the South Campus. Student housing opened in 1995 when some apartments, University Meadows, were opened. There was a new Student Center being planned and in general the campus was rapidly expanding.

A new dean in the School of Nursing, Jerry Durham, helped us turn the corner in our interactions with the School. Much cooperation ensued and we added courses and part-time faculty to teach them. Only two years prior to that the School of Nursing faculty members had been balking at having their students take chemistry courses. In the 1994-95 academic year Bob Murray stopped teaching to focus on his research, providing the funds from his salary for replacement part-time faculty members to fill the void. During that year Bob conducted the chair review process in the department and I was appointed to what would be my final term as department chair, a position I held for 18 years. It was around that time we learned that funding for the Monsanto Postdoctoral position and also the Mallinckrodt Graduate fellowship would continue. The University began to provide computers for the faculty in 1995 and clearly a new era in technology had begun for us all.

The end of the lustrum 1990-95 was a time of major optimism in the department. We were still hopeful that the teaching laboratories in Benton and Stadler Halls would soon be renovated and we were planning new research facilities in the Center for Molecular Electronics building. We had installed new instrumentation including super-conducting magnet NMR spectrometers, a new X-ray diffractometer and had submitted proposals to upgrade the mass spectrometry laboratory. Our student total head count in the 1993-94 academic year was at a 15-year high, we had graduated more chemistry students than any other institution in the state, and our external research funding was at an all-time high, as was the number of faculty research publications. How our optimism was rewarded will have

to wait for the next installment, next year.

Thanks to our Generous Contributors 2012

Below we list the individuals, chemistry alumni and friends who made contributions to the department in 2012 and to the memorial funds in honor of Robert Murray, Tom Jones and Eric and Lois Brunngraber. The list and the amount we raised, especially during these difficult times, are both very impressive and we are most grateful for your support. If we missed out your name, we apologize and hope you understand that we are fallible. Recent gifts will appear next year.

3M Foundation
 Abbott Laboratories
 Joseph and Brenda S. Ackerman
 Alex M. and Diane S. Alexander
 S. Massoud and Elizabeth A. Amin
 Dennis M. and Marta K. Anglim
 David A. and Patricia J. Armbruster
 Sanford A. and Nancy Asher
 Rajiv M. and Marysusan Banavali
 Lawrence and Patricia J. Barton
 Dorothea M. Bean
 Katherine M. Block
 Paul G. and Kathryn C. Blystone
 Pauline A. Bobrowski
 Boeing Company
 Edward M. and Leslie L. Bovier
 Barbara W. Brown
 Eric H. and Ann M. Brunngraber
 Edward H. Brunngraber and Jacqueline R. Szmuszkovicz
 Charles L. and Shelley M. Capito
 Vincent H. and Sarah Y. Chang
 Todd Crawford
 Kevin R. Criscione
 Anthony D. and Carol L. Daus
 Anthony D. and Anna L. Daus
 Alexei V. Demchenko
 Sean D. and Renee G. Dingman
 Dow Chemical Company Foundation
 Jeffrey and Barbara Eiskowitz
 Shiyue Fang
 David Garin and Margaret Hermes
 Richard S. Gilman
 Scott J. and Sara T. Goldstein
 James K. and Pamela Grant
 Brian J. Grimmond and Yanina Levchinsky-Grimmond
 Hong Gu
 Harold H. and Mary E. Harris
 Kevin Henry
 Honeywell, Inc.
 Raymond and Virginia L. Houserman
 Clyde R. Hudson
 Patricia Jones
 Martin Kaplan
 Kendall Hunt Publishing Company
 John W. and Angela T. Koenig
 John R. and Judith D. Kolb
 John and Linda Komlos
 Roger T. and Mary Kopp
 Joseph P. and Donna A. Kramer

David L. Krombach
 Gloria P. Leech
 Rensheng Luo
 Donald J. and Denise M. Lutes
 Raj K. Malla
 Mallinckrodt
 Raymond G. and Linda L. McKay
 Michael C. Merriman
 Harold R. and Carolyn J. Messler
 Steven A. and Joyce E. Mestemacher
 Sharon J. Moran
 Mindy J. Nathan
 Victor L. and Alveta M. Nelson
 William L. and Jeanette A. Neumann
 Gregory P. and Phyllis C. Noelken
 Peter J. and Mary E. Noto
 Donald and Joan O'Neal
 John M. Parisi and Ellen S. Goldman
 Pfizer, Inc.
 Michael A. and Janet D. Place
 Ellen and Larry Polsky
 Mark Pozzo
 Madelon T. Price
 Gregory W. Przygoda
 Nigam P. and Suchitra Rath
 Estatira Razavi
 David M. and Brenda K. Regan
 William P. and Charlotte M. Ridley
 Bruce E. and Victoria M. Ritts
 Benjamin M. and Tracie L. Ruck
 Suzanne E. Saum
 David B. and Laura Seibel
 Miriam L. Shark
 Brian J. and Miranda C. Shaver
 William R. and Dawn L. Shiang
 Sigma-Aldrich Corporation
 Sigma-Aldrich Foundation
 Gary J. and Elizabeth M. Stangler
 Keith J. Stine
 Erland A. and Ellen Y. Suni
 Weida Tong and Hong Fang
 Anthony M. and Doris C. Trozzolo
 Leslie E. Tucker
 Ronald E. and Joan M. Twillman
 Angelo W. Vangel
 George B. and Dolores F. Vermont
 Carl T. Von Till
 Qingzheng Wang
 Neal B. and Carmen B. Weber
 Gary R. Weese and Aixia Sun
 Richard E. Wilhelm
 Fuqian Xie
 Hongping Ye
 Jay H. and Nancy S. Yedlin
 Xu Zhang and Bingli Yan
 Henghu Zhu
 Tim and Clara Zhu

Acknowledgments.

I wish to thank to **Patricia J. Barton**, BA 1978 and colleagues including Joyce Corey, Dave Garin and Rudi Winter for proofreading and **Drs. Eike Bauer, Jim O'Brien**, the UM-St. Louis photographer and others for providing photographs.

UM-St. Louis Chemistry Alumni Fund

Enclosed is my contribution of \$ _____ Yes I work for a matching gift corporation.

_____ I would like additional information
about bequests to the University

Designation for funds:

Chemistry Department Endowment Fund _____
Robert W. Murray Lectureship _____
E.G. Brunngraber Fellowship (undergraduate research) _____
Charles W. Armbruster Scholarship Fund _____
Lawrence Barton Scholarship _____
M. Thomas Jones Memorial Fund (graduate student support) _____
Barbara Willis Brown Women in Chemistry Scholarship _____
Outstanding Graduate Teaching Assistant Award Dedicated to the
Memory of Jack L. Coombs _____
Unrestricted _____
Contact me; I have ideas for a new scholarship/fellowship or other fund _____
I have included the University in my estate plan _____

Please make check payable to UMSL. "Chemistry Alumni Fund" and return to:

Lawrence Barton, Professor Emeritus
Department of Chemistry and Biochemistry
University of Missouri-St. Louis
St. Louis, MO 63121

INFORMATION UPDATE WINTER 2013

Please respond to this questionnaire. We have mentioned previously how important it is for us to keep track of what you are doing, both professionally and personally.

Name _____ UMSL Degree _____ Year _____

Current mailing address: _____

Employer: _____

Current Position: _____

Recent Activities and Other News:

News of other alumni:

