

UMSL CHEMIST

Editor: Lawrence Barton

Chairman's Message - Christopher D. Spilling

Last year I was happy to report that work had begun on the new Science Learning Building. Unfortunately, a series of days lost to bad weather and construction problems caused by hidden utilities have delayed the completion date by 3-4 months. However, the excavation appears to be complete and approximately half of basement level concrete has been poured. We expect to teach in the new labs in early 2016. Several of our faculty colleagues have been honored this past

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year. 15 years after the retirement of Bob Murray we have again a Curators' Professor in the department. Alexei Demchenko was appointed Curators' Professor in August 2104. Alexei was also the recipient of the 2014 St. Louis Award of the St. Louis Section of the American Chemical Society. The Award Symposium was held on Saturday October 18th in the department and was followed in the evening by the Award Banquet. Among the symposium speakers was **Steve Kolodziej** BA 1988, PhD 1993 and Professor Keith Stine. Several of Dr. Demchenko's current and former students attended the Symposium and the Banquet. Colleagues George Gokel and Zhi Xu were named Fellows of the National Academy of Inventors and Zhi Xu was selected as Inventor of the Year by Bar Association of Metropolitan St. Louis. Also, on the campus, colleague Janet **Braddock-Wilking** BA 1985 was named Inventor of the Year.

Similarly, several other alumni received recognition from the University in 2014. **Barbara Brown** BA 1984 and **Bill Shiang**, BS 1983, PhD 1988 received Distinguished Alumni

Awards at the Founder's Dinner held at the Ritz Carlton Hotel in Clayton in September. Also receiving recognition for 25 years of service to UMSL were Professors Jim O'Brien, Nigam Rath and Christopher D. Spilling at the same function. **Gary S. Jacob** BS 1969 received an honorary degree at the May 2014 Commencement Ceremony. He is the second alumnus within the space of two years to receive this honor. Gary was also appointed to the Chancellor's Council which now has three chemistry alumni in its membership (**Gary Jacob**, **Harry Orf** BS 1970 and **Michael Finkes** BS 1973, MS 1978).

We are so pleased that **Stephen S. Lawrence** BA 1982, PhD 1989, has generously provided funds to establish the Stephen S. Lawrence Endowed Scholarship in Chemistry and we are similarly delighted to announce the establishment of the Eugene and Joyce Corey Scholarship Fund, initiated by alumnus **Vincent Chang** MS 1979 and we look forward to reaching the target which will allow the Scholarship to be fully endowed.

Finally I am delighted to report that I completed my second (and final) year as Chair of the Faculty Senate and University Assembly in August 2014. I was replaced by my department colleague Keith Stine who has been a senator for several years and hit the ground running.



Gary S. Jacob BS 1969 with Chancellor George and Charlie Armbruster when Gary received his honorary degree in May, 2014

Alumni Information

1960s

Jon Benedictus BS 1967 is an alumnus from whom we have not heard for some time but his daughter Dana, who works at the University in the advancement department as Associate Director, Donor Relations, keeps us informed. She has also been very helpful in setting up the new scholarships (see later).

Gary S. Jacob BS 1969 was awarded an Honorary Doctor of Science Degree at the Saturday May 17, 2014 Commencement Ceremony. The weekend began by Gary visiting the department on the Friday and presenting an excellent lecture based on his experience in industry (Big Pharma) followed by a second career in Small Pharma. He is now Chairman and CEO of Synergy Pharmaceuticals Inc., New York, NY., and on Friday afternoon he presented the lecture: "Drug Discovery & Development 101: From the benchplace to the marketplace; and other ruminations on one UMSL Chemistry alumnus' career in science". His company's drug plecanatide is off to a great start and they expect to file a new drug application in late 2015 and they have been able to raise substantial capital for the project. As we mention later on, Gary is a member of the Chancellor's Council, after the December meeting, he stopped by for a chat in the editor's office.

Don Kaesser BS 1967 and the editor have been in touch recently. The two plan to visit Dr. Armbruster in Orlando, sometime in January. Don is semi-retired from his career as a clinical psychologist in Des Moines Iowa and has spent the last several Januarys on Sanibel Island, FL.

Timothy A. Miller BA 1968 was in touch earlier this year. I am reminded that although we often write about the accomplishments of alums with advanced degrees either from the department or graduate schools elsewhere, we have just as many successes among our alumni who went directly into the workforce after graduation. Tim, who spent most of his career with Ralston Purina is one such example. He has several patents and products in the marketplace. He has delivered seminars about many ingredients, has been a member of the corn genome project and significantly contributed to the effort. He is an expert in the identification and elimination of contamination by Salmonella in processes and has authored by invitation a chapter in a book published by the National Renderers Association. He spent 25 years with Ralston and has owned his own consulting company, Process Associates for the past 20 years.

1970s

John R. Kolb BS 1970 is retired from the Lawrence Livermore National Laboratory where he went after a PhD degree at Northwestern University and a postdoctoral fellowship at Texas A & M University. He continues to support the department fiscally and has done that for many years. He is currently entering the second year of battling a particularly aggressive form of melanoma. He is confident

he will prevail but feels like a personal medical experiment to researchers at Stanford.

Harry W. Orf BS 1970 is now a member of the Chancellor's Council and was at the Founders Dinner in September. Harry is Senior Vice President for Research at Massachusetts General Hospital, where he oversees the largest hospital-based research program in the nation.

Dennis Wester BS 1971 retired from his position as Director of Applied Research at Nordion Inc., in Vancouver, Canada in February, is back "home" in Richland, WA. He was in St. Louis in October with his wife Vicki to attend his mother's funeral. He is very busy with his part-time job translating Russian scientific articles into English.

Robert Lamberg BS 1972 is an ophthalmologist with Clarkson Eyecare and in his position, sees several of his former professors as patients including the editor.

Patricia Armbruster BS 1973 is now retired from her position as a science teacher at Lake Zurich High School in the Chicago area. She travels to St. Louis several times a year because her son and grandson live in St. Louis along with her siblings who include **Dorothea Bean** MS 1987. Pat's husband **David A. Armbruster** BS 1973 is Scientific Affairs Manager at Abbott Laboratories. They intend to return to St. Louis when David retires, currently planned for April 2017. Dave has traveled out of the country quite often this year, and she got to go with him 4 times (Prince Edward Island, Canada; Istanbul, Turkey; Gothenburg, Sweden; and Australia). She is shown below on the left in a picture taken at the *Fifty Years of Great Chemistry* event in April 2013 with **Joan Weisberg** BA 1978 (Biology) and **Earlene Voss** BA 1973.



Michael Finkes BS 1973, MS 1978 has been very busy as President of the UMSL Alumni Association. Part of his goal has been to restructure the organization to make it more streamlined and effective. He also serves on the Chancellor's Council and has been very active as part of the leadership group of the Chemistry Alumni Council, although he is taking a leave from that due to the amount of work associated with the Alumni Association.

Roberta Farrell BS 1975 has retired from her position as Professor of Biological Sciences at the University of Waikato,



Barbara Willis Brown

in Hamilton, New Zealand and was awarded the status Emeritus Professor. She continues activity at the University and is looking forward to a visit by Dr. Corey in January.

William Z. McCarthy BS 1975, PhD 1984, is enjoying retirement from his position at Mallinckrodt, Inc. He and the editor along with some other alumni and colleagues occasionally meet for a beer or two. Bill and his wife Tara live in Lafayette Square in the lovely four-story Victorian row house they have restored beautifully. The Bartons enjoyed an excellent dinner last year with them on their rooftop patio. Bill is still the adventurer that he has been since we have known him. Last spring, Bill, **Andy Ratermann** BS 1976, Andy's brother Tom and son Davis hiked into the Grand Canyon. Bill also tried to climb some volcanoes in Ecuador but he did not quite reach the summits. He tells me he had no real success stories for the newsletter but I disagree!

Andrew Hilliker BA 1976, who completed a BS degree in physics in 2004, and I met very briefly in the Student Millennium Center earlier in 2014. His son is a student at UMSL. Andy spent most of his career with the City of St. Louis Air Pollution Control Program as an Air Pollution Specialist II, Instrument Technician and Calibration Chemist. He is now retired and has been President of the Regional Technical Assistance Corporation since February 2014.

1980s

Larry K. Revelle PhD 1980 has had a 25 year successful career with the FDA Division of Pharmaceutical Analysis in St. Louis. He and his wife Maria Acevedo recently celebrated their 25th wedding anniversary.

John Bookstaver BA 1980 is now Dean of Business, Science, Education, Math and Computer Science at St. Charles Community College.

Karl Seper BS 1982, came in to the office in April. His son was visiting colleges and universities. Karl is a Senior Research Scientist with *Amway* in Grand Rapids MI. He recently was named an Adjunct Professor of Chemistry at Calvin College and he was looking forward to instructing organic lab in the spring.

Colleen Jonsson BA 1983 is now Professor of Microbiology and Director of the National Center for Mathematical and Biological Synthesis at the University of Tennessee. She was formerly with the University of Louisville and also held appointments at the Southern Research Institute and the New Mexico State University.

Barbara Willis Brown BA 1984 was honored with a Distinguished Alumni Award at the Annual Founders' Dinner in September. She also obtained her OD degree from the College of Optometry in 1988. She continues in



William R. Shiang

private practice and is retired from UMSL where she served the College of Optometry for 14 years in various administrative positions. She has been very supportive of the Chemistry Department, establishing the Barbara W. Brown Scholarship for Women in Chemistry in 2000 and has maintained a leadership role in the Chemistry Alumni Council since its inception in 2006/07.

Suzanne (Mates) Pea BS 1984 was Director, Sales Compensation Contract Analysis and Customer Accounts at Covidien/Mallinckrodt when we last wrote about her but more recently she has been with Express Scripts. She was Director of Financial Analysis, focused on implementing a reporting project for the specialty drug business unit. Unfortunately with an initiative to eliminate all integration

related spending following the Medco acquisition, about 500 other jobs were recently eliminated. Her last day was to be Jan 4 but we know she will land on her feet.

William R. Shiang BS 1984, PhD 1989, was honored with one of the five 2014 UMSL Distinguished Alumni Awards, presented at Founders' Dinner on September 27. Bill and his wife **Dawn Shiang**, BA 1983, PhD 1988, now live on a farm near Eminence, MO. Bill is still working with Dow Chemical Co., and Dawn, who won the Distinguished Alumni Award in 2001, manages the farm.

Judy Shih BA 1984 is now a Principal Scientist with Amgen in Thousand Oaks, CA where she has been for 8 years. Her primary responsibility is the development of assays for therapeutics. She did this for Baxter in Fort Lauderdale, then for Nabi Biopharmaceuticals and she and her family moved to California in 2006. Judy holds a PhD degree from the University of Kansas, and recalls fondly the time the editor was her academic advisor. We rediscovered her through a professional contact of hers, **Medha Kamat**, PhD 2006 (see elsewhere).

Rajiv M. Banavali PhD 1985 who is Chief Technology Officer, Fluorine Products Division for Honeywell in Morristown, NJ, presented the Fluorine Chemistry Award at the ACS Awards Banquet at the Dallas National meeting in March. He and the editor were able to spend some time together at the reception. Rajiv continues to provide major support to the department.

1990s

Katherine Carr MS 1990, who obtained her BS in chemistry degree from the University of Indianan, had been a research chemist at Monsanto and progressed through the ranks to Senior Environmental Assessment Scientist, was appointed Senior Scientist in 2013. In 2006 she was awarded a BS degree in Computer Science from Maryville University.

Michael Crowley BS 1990 is President of Theridian Technologies, a pharmaceutical development contract research and consulting company in Austin, Texas. He is also one of the Founders of Oticus Laboratories, a start-up company developing novel drugs to treat ear infections. Michael and his wife Carrie welcomed their 3rd child in February, 2014. Colman joins Kieran (10) and Connor (8).

Sean A. Whitt BA 1993 who earned an MS degree at the University of Wisconsin-Madison, spent three years working at the Washington University School of Medicine before moving to industry. He has spent 16 years in information technology roles including twelve years with Monsanto/Pfizer and two years with Sigma-Aldrich. He is currently Vice President of Client and Product Support at BizLibrary, a St. Louis technology company focused on employee training and development for small to medium-sized businesses.

Courtney C. Aldrich BS 1994, an associate professor of medicinal chemistry at the University of Minnesota, Minneapolis, will serve as the inaugural editor-in-chief of the journal *Infectious Diseases*, to be launched in 2015. Courtney served as Associate Director of the University of Minnesota's Center for Drug Design from 2007 to 2013.

Kristin Frost B.S 1995 followed her UMSL degree with a MS degree at Ohio State University, and then with a degree in law also at Ohio State. She has worked in patent law in the pharmaceutical industry and with law firms and is currently a patent counsel with Sigma-Aldrich in St. Louis.

Lisa M. (Myerkord) Silver BS 1997 is Strategic Sourcing and Services Manager at SAFC, a unit of Sigma Aldrich in St. Louis. She has been there for about 17 years. Prior to that, following graduation, she spent a year with American Radiolabeled Chemicals. Lisa was one of only two students who were awarded the earlier version of the Armbruster Scholarship and held it for four years through graduation.



Dr. Katherine M. Block

Tammi Pavelec PhD 1997 is now an Assistant Professor of Chemistry at Ivy Tech Community College in Fort Wayne Indiana. Tammi had been with Lindenwood University for more than 11 years before she took a break and moved with her husband to Fort Wayne Indiana in 2012 where he took a new position.

2000s

Aixia Sun MS 2000 was admitted to the A. T. Still University, Doctor of Health Science program in the spring. She is a Senior Scientist for American Clinical solutions in Ruskin, FL. and begins classes online in January 2015.

Peter Kim BA 2000 is now in Gaithersburg, MD with MedImmune, a pharmaceuticals company wholly owned by Astra Zeneca, in their commercial analytics organization. After keeping track of him through North Carolina and

California, we lost him briefly when he moved to the DC area.

Katherine M. Block BS 2001 presented the 28th Distinguished Alumni Lecture on May 4, 2014. Katherine who is a Senior Scientist at the Novartis Clinical Trial Center of Excellence at *Genoptix Medical Laboratory*, which is part of the Novartis Company, in San Diego. After graduation and a stint at Pfizer in St. Louis, she received a PhD degree in biochemistry from the University of Arizona in Tucson. Prior to joining Genoptix in 2012, she was a Senior Development Scientist and Technical Lead at Beckman Coulter in Orange County, CA. Katherine spoke on "*A Perspective on the Path to Industry*". She described her career and current work and provided advice to the students, pointing out that she initially had difficulty find a position but that perseverance, self-belief and a lack of fear in failure were the keys to the success she has seen.

Shu Yao BS 2004, following her PhD degree at the University of Wisconsin, completed a Mitacs Accelerate Fellowship at University of Calgary in 2013. She then started a company in Shenzhen, China working on building pilot devices for the catalytic conversion of waste to liquid chemicals. Her husband Jonathan Hudon is attending medical school at McGill University.

Baljeet Singh BS 2006. MS 2011 joined Pantheon Pharmaceuticals (formerly Gallus BioPharmaceuticals) in St. Louis, in November 2014. He was formerly with AA Pharma Services and prior to that Covidien.

Medha Kamat PhD 2006, is Supervisor, Development and Validation at Eurofins Scientific which acquired the assets of the Discovery and Development Solutions EMD Millipore in the United States and Canada, the Life Science division of Merck KGaA, Darmstadt, Germany, early in 2014. She has been with Millipore since 2010 and she and her husband Bala Ramanathan, recently purchased a home in O'Fallon, MO. When we last met in October, when her advisor Alexei Demchenko received the St. Louis Award of the ACS St. Louis Section, she was expecting her first child.



Holly Pope BSBB 2009 and James (JB) Carroll BS 2008, PhD 2013

Papapida Pornsuriyasak PhD 2006 is in Thailand at PTT Global Chemical. She is a frequent visitor to the department.

Chloe (Bryant) Tullock BA 2006 is a medical writer at Mallinckrodt Pharmaceuticals in St. Louis. She received a PhD in Pharmacology and Physiology at the St. Louis University School of Medicine.

Benjamin Martin BS 2007, PhD 2014, with Dr. Spilling, is now a Chemist III at Sigma-Aldrich in St. Louis.

James (JB) Carroll BS 2008, PhD 2013, who is a Scientist at Chemir Analytic Services in Maryland heights, MO, recently joined the Governing Board of the UMSL Alumni Association. He and **Holly Pope** BSBB 2009 became engaged in August and will marry in May 2015. JB also become active in the Chemistry Alumni Council in 2015.

Scott Hasty BS 2008, PhD 2014 had been teaching at Southeast Missouri State University since graduation with his doctoral degree under the direction of Professor Demchenko and is now an Assistant Professor of Chemistry at Lindenwood University in St. Charles, MO.

Sean Whittemore BS 2008 was at the Dallas ACS Meeting in the spring. He is a postdoc at the Pacific Northwest Laboratory in Richland, WA, and works in the area of hydrogen storage using boron, carbon nitrogen, compounds. It is interesting that he works in boron chemistry in that in his first visit to the editor's office for advice as an undergraduate, he was wearing a boron chemistry tee shirt! He received a PhD degree in organic chemistry from the Ohio State University in 2013

Nathan Birhanu BS 2009, enrolled this fall at Fordham University to study for a dual MA degree in International Political Economy Development and in Economics. Nathan spent almost 5 years serving in the Peace Corps in Africa. He stopped by the office this past fall.

Holly Pope BSBB 2009 who graduated from Saint Louis University with a PhD degree in biochemistry has been working as a Senior Science Educator at the St. Louis Science Center.

Matthew Stockel, BS 2009, MS 2012 is a wet chemistry/HPLC Analyst at AAI Pharma Analytical Services in St. Louis.

Ryan Uding BS 2009, who also received a BS degree in mathematics in 2013 joined Covidien (now Mallinckrodt) following graduation, and is with Gallus Biopharmaceuticals as an Analytical Development Scientist II. Gallus was acquired by Pantheon in September.

Barry Walker PhD 2009, was an adjunct faculty member at Webster University until May. Since then he has been expanding his experience and served as an Intern at Microbe Inotech Laboratories during the summer and is now doing an internship with Lipospectrum, both in St. Louis. His goal is to work in biotechnology as a biologics validation chemist.

2010s

Nicholas Bardol BS 2011, MS 2013, is now a Process Development Chemist at the International Institute of Nano- and Molecular Medicine in Columbia, MO; the institute established by the renowned boron chemist, Fred Hawthorne. Nick did research with Dr. Wes Harris and previously was with Alkymos and Sigma Aldrich in St. Louis.

Mark Chase MS 2006 has been with Mallinckrodt Pharmaceuticals in St. Louis for two years. He was formerly with Crosslink and KV Pharmaceuticals, also in St. Louis.

Sophon Kaeothip PhD 2010 moved home to Thailand and is at PTT Global Chemical, where **Papapida Pornsuriyasak** PhD 2006 also is employed. He had previously been with RIKEN in Japan.

Katherine (Cibulka) Lampe BA 2012 is a lab analyst II at DynaLabs in St. Louis, where she had been for more than 18 months. She was formerly with Covidien, also in St. Louis. We recently had a conversation about the value of "getting one's foot in the door" via one of the temporary agencies. She found both her positions this way and is happy to be now a permanent employee with Dynalabs.

Binod Pandey PhD 2012 in Professor Stine's laboratory is now a postdoctoral fellow at Pennsylvania State University.

Sergey L. Sedinkin PhD 2012 is now teaching at Truman State University. Following graduation with his degree with Professor Bauer, he had been doing post-doctoral research in Professor Gokel's laboratory.

Sitaram Acharya PhD 2013 is a postdoctoral fellow in the chemistry department at Texas Christian University. He completed his doctoral degree with Professor Braddock-Wilking.

Abeera Sharma PhD 2014 received her degree with Professor Stine in May and started a position at Dr. Reddy's Laboratories, a major Indian pharmaceutical company.

Pushkar Shejwalkar PhD 2013 from Eike Bauer's laboratory is now a postdoctoral fellow at Hokkaido University, Sapporo, Japan.

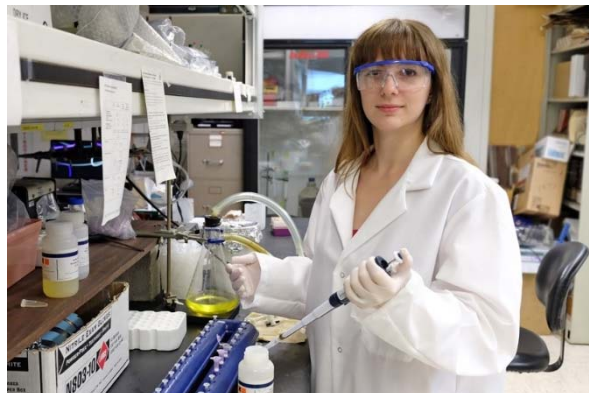
Surendra Dawadi PhD 2013 is a postdoctoral; research associate in the School of Pharmacy at the University of Minnesota-Twin Cities with **Courtney C. Aldrich**, BS 1994.

Marko Jovanovic BS 2013 is a QA Analyst at Anheuser-Busch in St. Louis. He was formerly with AAI Pharma Services Corp. and EAG Life Sciences, both in St. Louis

Kaitlin (Eagan) Linse BS 2013, is now living in Jacksonville, FL. She married last year and moved to Florida with her husband.

Swati S. Nigudkar PhD 2014 who completed her graduate work with Professor Demchenko is at Fimbrion Therapeutics in St. Louis.

Elena Vasilieva, PhD 2014 was featured in UMSL Daily in the spring (see picture below) as she was about to complete her PhD degree with Professor Dupureur. Elena had already secured a position with Monsanto in St. Louis.



Shana E. (Terrell) Usery PhD 2014 is a Chemist III with Pantheon, formerly Gallus Biopharmaceutical, in St. Louis.

J. Prithika Yasomane Ananth Ph.D 2014, is a post-doc in the laboratory of her advisor Professor Demchenko

Chemistry Graduates on the Chancellor's Council

The University of Missouri-St. Louis Chancellor's Council provides advice, assistance and financial support to the chancellor and campus to further elevate UMSL as a premier public metropolitan research university. The members are civic leaders, influential business leaders and prominent alumni. This year, there are three members of the Council who are graduates of the department. **Michael J. Finkes** BS 1973, MS 1978, **Gary S. Jacob** BS 1969 and **Harry W. Orf** BS 1970 all of whom we wrote about on page 2. This is a reflection on the success of our graduates and also the esteem with which they are held by the University.

The Chemistry Alumni Council (CAC)

This group, which held very successful events in 2008 (*Armbruster Reception*), 2010 (*Barton Retirement Reception*), 2011 (*Chemistry Connections and Open House*), 2012 (*Honoring of Joyce Corey and Rudi Winter*) and 2013 (*50 Years of Great Chemistry*) has been on a hiatus for over a year but a meeting is planned for January 20. At this time the following alumni have agreed to attend: **Barbara W. Brown** BA 1984, **Jeanette Hencken** BA 1985, **Jim Grib** BS 1975, MS 1982, **Harold R. Messler** BS 1970, **James (JB) Carroll** BS 2009, PhD 2014, **Jeremy Ridenour** BA 2008, **Janet Braddock-Wilking** BA 1985 and **Scott Hasty** BS 2008, PhD 2014. In addition the editor and Dr. Spilling will be there and there may be others who have not yet responded. There are a couple of ideas floating around about the next project and once it is finalized, it will be announced on our LinkedIn Group site, which was also established by the CAC in 2008. If you are interested in joining the CAC, please contact the editor at lbarton@umsl.edu

Graduates, Dec. 2013 through Dec. 2014

DECEMBER 2013

Maha Abutokaikah, MS
Joseph W. Meisel MS
Jennifer Sneathen BS

Christopher J. Hagerty MS
Desikan Rajagopalan BA

Amber Henry BSBB
Anwasha Laha MSBB
Snowlee Phu BSBB
Charles Rieder MSBB

Isra M. Darwech MSBB
Brian Matthews MSBB
Amber E. Pinson MSBB

MAY 2014

Allan Alla, MS
Taylor Cunningham, MS
Christia F. Koebel BS
Dmitr I. Krits BS
Matthew Lyman BS
Ahmed H. Mohamed BS
Phylicia D. Patton BS
Timothy J. Santos BS
Daniel R. Simmons BS
David Switzer BS

Anseh Babaei BS
Edith Csiki-Fejer, MS
Alexis Koehler, MS
Mitchell Lawless BS
Jonathan Mattingly, MS
Robert Pace BS
Anjeliqa L. Pratt BA
Abeera Sharma, PhD
Abby E. Smith BA & BS
Anna Thibaut BS

Dylan Blumenthal, BSBB
Eleni Goranitis BSBB
Taylor J. Jackson, BSBB
Ryan Kosovich, BSBB
Livingstone M. Nanga, BSBB
Ariel Stavri, BSBB
Sami A.-Samad, MSBB

Suzana Gjoka BSBB
Farha Ihmoud, BSBB
Mary E. Jostes, BSBB
Susan A. Monnig, BSBB
Haska Salihovic, BSBB
Daniel J. Thorne, BSBB
Carolyn A. Smith, MSBB

AUGUST 2014

Benjamin P. Martin, PhD
Elena Vasilieva, PhD
Joe Alan Wilson, PhD
Xiao Guang Jia, MS
Michael P. Mannino, BA & BS

Swati S. Nigudkar, PhD
Shana E. Usery, PhD
J. Prithika Yasomance, PhD
Hanady O. Fallatah MSBB

Laura Janks, BSBB

Zarlasht Momeni, BSBB

DECEMBER 2014

Jimmy L. Allen, BS
Israa Z. Diab, MS
Patrick E.-A. Mua, BA
Maria J. Scuderi, MS
Courtney N. Gipson, BS
Qianying Zhang, BS

Jay K. Bhattarai, PhD
Silke L. Evdokimov, MS
Daniel D. Ristau, BA
Fei Tsao, BA
Deidre H. Stewart, BS

K.-A. N. Abdullah II, BSBB
Dennis M. James Jr., BSBB

Rebecca L. Harding, BSBB
Brenda M. Nahlik, BSBB

BB is the abbreviation for biochemistry and biotechnology.

The Chemistry Club

2014 was a successful year for the **UMSL Chemistry Club** and ACS Student Chapter. After 10 years, faculty advisor Dr. Michael Nichols is handing the reigns over to Dr. Ben Bythell during a transition year. The ACS recognized the club with a Commendation for Performance during the past year. The Chemistry Club made career activities a point of emphasis last year and hosted numerous speakers from various graduate schools and companies in the St. Louis area including Saint Louis University, Monsanto, On Assignment, Aerotek, and UMSL Career Services. Other activities included National Chemistry Week, Pi Day, and demos at the ACS Chemistry High School Day at UMSL. Officers for 2014-15 are Hung Nguyen (President), Mudar Ismail (Vice-President), Gabby Rupp (Treasurer), Sara Abramowski (Secretary), Rahmah Ghazal (SGA Rep), and Kent Morgan (Public Relations/Historian). 2013-14 officers were Hung Nguyen (President), Michael Mannino (Vice-President), Devon Brandon (Treasurer), Anna Thibaut (Secretary), Kevin Baum (SGA Rep), and Mudar Ismail (Public Relations/Historian).

The Chemistry Graduate Student Association

This past year the CSGA organized a night at the City Museum, had a Holiday Potluck Lunch in December, took a trip to Eckert's farm, welcomed the new graduate students with a pizza party, staffed ACS Career Day, and a Finals Study Session, attended a Cardinals Baseball game and voted for and hosted Dr. Michael Haley for Seminar. In the recent election **Jeremy Ridenour** BA, a student in the Spilling group handed over the presidential reigns to **Joseph W. Meisel** MS 2014, a student in the Gokel Group.

Graduate Student Offers Course on Brewing of Beer

Joseph W. Meisel, a fourth-year PhD student working with Professor Gokel, offered a beer brewing course for credit for non-science majors in the fall 2014 semester. His idea was to



use beer to help demystify science and math for people sometimes intimidated by the curriculum. Joe has been an avid home brewer for the past three years. He brews small batches – about 50 beers at a time in 5 gallon tanks. He

recently bottled a Belgian tripel ale. The editor can attest to the quality of his product. He recently brewed a batch of gluten-free Oatmeal Stout and gave the editor a six-pack. Joe is shown here in the picture featured in *UMSL Daily*.

The Faculty

James K. Bashkin was proud to tell me that he attended the dissertation defense of his former research student **Holly Pope** BSBB 2009 for her PhD degree in the Department of Biochemistry at St. Louis University. He told me that the SLU department was clearly delighted with her. In September he presented the lecture "Toward the Prevention of Cervical Cancer with New, Broad-Spectrum Antiviral Agents for High-Risk HPV" to the general UMSL community as part of the UMSL Health Research Seminar Series. His research program goes well. His students presented two papers at the 247th National ACS Meeting in Dallas in March and four papers at the 49th Midwest Regional Meeting of ACS in November in Columbia, MO. He also published three research articles during the year, and among the coauthors of all three was **Kevin J. Koeller** PhD 1994.

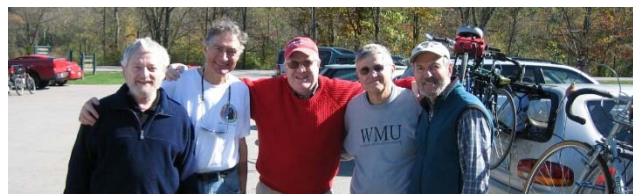
Eike B. Bauer was pleased to report that the four PhDs who have graduated from his group are all employed, three in academia and a fourth in industry. His most recent PhD, **Pushkar Shejwalkar** 2013 is a postdoctoral fellow at Hokkaido University in Sapporo, Japan where Dr. Bauer gave an intensive lecture series and a research talk at in October 2014. He continues to be active in the project SEED and STARS programs, both of which provide research experiences for economically disadvantaged high school students. He added two new graduate students in 2013 including **Matthew Queensen** BS 2013, so he now has three in his research group. His latest publication was published in the journal *Organometallics*, and his group provided the cover art for the issue in which it appeared. Dr. Bauer serves on a committee which is developing a scientific literacy course for non-science majors on the campus. The course will be offered first time in the spring semester 2015.

Alicia M. Beatty has been teaching Chemistry 1121 (Chem. 12), Basic Inorganic Chemistry and a special topics course in her specialty, Supramolecular Chemistry, recently. She will also be teaching the Chemistry Colloquium in the spring semester 2015. She has three graduate students in her group including **Stephanie (Cowin) Cernicek** BS 2011. Stephanie (with husband Scott) recently (December 4, 2014) had a baby, Eli. Alicia's research program has recently expanded to work with magnetic materials, and will include pharmaceutical co-crystals beginning in early 2015..

Benjamin J. Bythell has purchased a quadrupole time-of-flight mass spectrometer and ultra-high performance liquid chromatography system. Additionally he solicited a donation of an ion-trap mass spectrometer. Dr. Bythell is currently training his new students on use of these instruments and computational chemistry. He lectured at St. Louis University in August and chaired sessions at the ACS National Meeting

in Dallas in March and the American Society for Mass Spectrometry in June. He has published six papers this year comprising both independent and postdoctoral work. He has taught Instrumental Analysis, Physical Chemistry I and next semester a special topics class on Biological Mass Spectrometry.

James S. Chickos must now be the old-timer on the campus, but you wouldn't know it from his intellectual and physical activity. He continues to be an avid cyclist (see picture) and his research program continues to be very productive. He spent a month in Portugal as an Erasmus Lecturer this past year and presented an invited lecture in honor of the passing of Manuel Ribeiro Da Silva at the Calcon Conference in Santa Fe NM in July. Together with collaborator Joel Liebman, and Rafa Notario, he jointly edited an issue of *Structural Chemistry* in honor of the retirement of Maria Victoria Roux, who spent a semester in the department a couple of years ago. He delivered a signed copy of the issue to her home in Madrid as part of his trip to Portugal.



Jim Chickos and Dave Garin, fourth and fifth from the left, with their cycling buddies.

Valerian T. D'Souza is busy redesigning the Introductory Chemistry Course (Chem. 1111, formerly Chem. 11), teaching it and writing proposals for funds to support his efforts. He is the "go-to" guy for the department website but the routine updating is done by the editor. As I type, he is on a trip over the winter break to Bangkok, home to India and thence to Rome before returning for the Spring Semester.

Alexei Demchenko, who was recently appointed Curators' Professor of Chemistry and Biochemistry continues his productive research program in the area of synthetic carbohydrate chemistry. During 2013-2014, his research group, published 22 articles, presented 18 posters at conferences, and delivered 17 invited talks at universities and symposia including lecture tours in China, India and Thailand. He continues to serve as an Associate Editor of the *Journal of Carbohydrate Chemistry*, 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. He is also serving as the Chair of 2015 Gordon Research Conference on Carbohydrates and a co-organizer of 2015 Pacificchem. In 2013-2014, he received an award from the Mizutani Foundation for Glycoscience, the Chancellor's Award for Research and Creativity, and the ACS St. Louis Award. Currently his research group consists of a post-doctoral research assistant **Prithika Yasomanee Ananth** PhD 2014, and six graduate students including

Michael Mannino B.S 2014. In addition he had two visiting students from Thailand and six undergraduate researchers in his group last year. Updated information on current research, teaching, and outreach activity is available on the department web site.



Alexei Demchenko, Recipient of the 2014 St. Louis Award of the St. Louis Section of the American Chemical Society

Cynthia Dupureur's research group alumni were very "productive" this past year: **Supratik Dutta** PhD 2010 and his wife welcomed twin sons this spring and **Charulata Prasannan** PhD 2009 and her husband also have a new son (just one!). This summer the group gathered to watch classic cartoons from the cultures of group members and to congratulate **Elena Vasileva** PhD 2014 on her graduation and new job at Monsanto. This fall Dr. Dupureur attended the *Gibbs Conference* in Carbondale, IL, and she remains Program Director for the Biochemistry and Biotechnology Program.

Chancellor Thomas F. George had a busy year with his administrative responsibilities. The legislative session went well, and we succeeded in getting our final equity adjustment of \$1.4 million approved by the legislature, only to be vetoed by the Governor. We are still waiting on whether we will receive the \$10 million match for the same amount raised privately for a new business building, which was withheld rather than vetoed by the Governor. On the national scene, Chancellor George was elected as vice president and treasurer of the Coalition of Urban and Metropolitan Universities. Wearing his faculty hat, Dr. George has continued his research program in chemical/materials/laser/nanophysics, including nanomedicine. During 2014, he published six journal articles and also presented his work to students in the STARS program. In addition to science, he published journal articles on music and economic development. During the summer, Chancellor George and his wife, Curators' Music Professor Barbara Harbach, accepted an invitation to travel to Northwestern Polytechnical University in Xi'an, Shaanxi Province, in China. In addition to exploring cooperative programs between NPU and UMSL, he gave a scientific research seminar and a presentation on the role of higher education in economic development, and he played piano in

a jazz program in a concert with Barbara and Chinese musicians.

George W. Gokel continues to travel the world describing and promoting his chemistry and in October, when we celebrated the ACS St. Louis Award to Alexei Demchenko, George was in Sidney, Australia on a lecture tour. He was featured in March in the newsletter *Missouri Cures* in a *Missouri Researcher Spotlight* noting his induction into the National Academy of Inventors. His successful research program continues, albeit with a smaller group than when he joined us in 2007. Dr. Gokel was awarded a 2014-15 FastTrack Funding Award, administered by the University of Missouri System Office of Research and Economic Development. It is for \$50,000 for the study: "Enhancing Antibiotic Potency and Counteracting Antimicrobial Drug Resistance". He and his students published 4 articles in 2014, presented papers at conferences and he presented a Colloquium to the department in December.

Bruce Hamper has been developing hybrid lecture and online chemistry courses for non-majors. He introduced an updated Environmental Chemistry offering for non-majors that includes laboratory evaluation of water samples collected in the St. Louis region. With the help of the students in the class, he is building a database of the chemical composition of water samples from our local streams, rivers and municipal water supplies. Bruce is also working with undergraduate Alex Lyss and advanced high-school students Paul Meuser and Derek Lee to develop NMR spectroscopy methods for analysis of intermolecular interactions. Bruce is now the grandfather of two grandchildren, Maisy and Liam. Bruce and Liam are building a wooden pedal car soon to be displayed on the UMSL biking trail!

Wesley R. Harris continues as Associate Dean of the Graduate School where recent focus has been on making improvements in the admissions process. This semester, he has been working with Vicki Sauter's Information Systems Design classes in the College of Business. The classes were divided into small teams and given a semester long design problem to come up with improvements to graduate admissions processes. The students were very creative in their recommendations and he looks forward to implementation of several of their suggestions. A similar approach will be used for the three new Professional Science Master's Programs that were initiated this year in Chemistry, Biochem & Biotech, and Cell and Molecular Biology. Wes and his wife Marion attended a meeting of the Council of Graduate School in Portland in July. It was a very good meeting, and they were able to schedule a few extra days on the Oregon coast. The biggest news is that they welcomed their first grandchild on Nov 7, when Ryan Harris was born in San Diego. Ryan, Father (Jonathan) and Mother (Jennifer) are doing well and Wes and Marion were able to get away over the fall break to visit them.

Stephen Holmes occupies an office next door to the editor and the latter can hear the repeating rhythm of the music Steve plays on his device through the walls. Steve is nevertheless very busy with his National Science Foundation funded research on cyanide-based single molecule magnets

and published an article in the *Journal of the American Chemical Society*. Also in 2014 he gave invited conference presentations in St. Petersburg, Russia, in Vancouver, BC, Larnaca, Cyprus and again Vancouver, BC. He presented a departmental colloquium and also one at the Missouri University of Science and Technology (UM-Rolla). He was recently appointed to the Editorial Board of *Magnetochemistry*, serves on the Editorial Advisory Board for *Polyhedron* and also served as a guest editor for the *Journal of Materials Chemistry C*. His graduate student **Philip Ferko** BS 2011 presented a paper and a poster at the International Conference on Molecule-Based Magnetism in St. Petersburg, Russia, and won awards at the UMSL Graduate Research Fair and from the UMSL Sigma Xi Chapter.



Dr's Beatty and Holmes obviously find something amusing at the Murray Banquet in March at the Glen Echo Country Club

Rensheng Luo tells me that the NMR Laboratory is running smoothly except when we have one of the too-frequent power failures or a flood. The last power failure along with leaking water damaged all four spectrometers. He just completed work on the first grant he obtained since he has been at UMSL and his productivity just sky-rocketed – 14 papers appeared, are in press or were submitted since the beginning of last year.

Michael R. Nichols continues to investigate Alzheimer's Disease (AD)-related research with particular attention to the amyloid-beta protein and inflammation. The lab saw the recent graduation of **Shana Terrill-Usery** PhD August and he currently has three graduate students in his laboratory. Undergraduate researchers this past year were **Eleni Goranitis** BSBB, **Laura Janks** BSBB and two continuing students. All three doctoral students in the lab gave talks at the recent ACS Midwest Regional meeting at University of Missouri-Columbia in November. Findings from the group were published in *Biomaterials Science*, *Biochimica et Biophysica Acta*, and *Biochemical and Biophysical Research Communications* this

year. Dr. Nichols continues his involvement with the American Society for Neurochemistry. After 10 years of serving as advisor to the Chemistry Club, Dr. Nichols will turn over the job to colleague Dr. Bythell.

James J. O'Brien probably didn't realize how busy he would be as Chair of the St. Louis Section of the American Chemical Society for 2014. Highlights of the year included Recognition Night (see picture), presentation of the St. Louis Award to Alexei Demchenko in October and presentation of the Midwest Award to Professor Vicki Grassian (U of Iowa) at the 49th Midwest Regional ACS Meeting held at the University of Missouri–Columbia in November. The year was capped off by a most enjoyable Continuity Dinner where he handed the gavel to the 2015 chair, Dr. Pegah Jalili. In spite of this ACS work he was able to continue his research in high resolution electronic spectroscopy and co-authored an article in the *Journal of Chemical Physics* with several authors including **Sean Whittemore** BS 2008.



Jim O'Brien, 2014 Chair of the St. Louis Section of the ACS turns over the gavel to 2015 Chair Pegah Jalili at the Continuity Dinner in December

Nigam P. Rath continues to run the X-ray Diffraction Facility but much of the work is for off campus researchers as the emphasis on preparative chemistry drops in the department. For example, of the twenty one publications in 2014 which he co-authored and which included descriptions of crystal structures that he had solved, only six were from department research laboratories. Others represent collaborations with colleagues at Washington University and in India. This year marks the 25th anniversary of his joining the chemistry department. He wanted me to say that this was during the editor's term as department chair.

Christopher Spilling directed the dissertation research of his 18th UMSL chemistry PhD student **Benjamin Martin** BS 2008 who is now working as a process development chemist at Sigma Aldrich. There is only one graduate student, **Jeremy Ridenour** BA 2008, remaining in his research group. He will be working with a small army of undergraduate research students this coming spring and hopes to attract new graduate students in the fall 2015. Chris attended the *International Conference on Phosphorus Chemistry* in Dublin, Ireland in June and presented an invited lecture. His oldest son Andrew (23) just completed his first year as an ensign in the navy. He will be deploying to the far-East (visiting

Singapore, Vietnam and Japan) early next year and is getting married on his return next summer. Robert (21) having spent 3 years as an enlisted soldier and reaching the rank of sergeant, is now at West Point Preparatory School. If all goes well, he will move "down the hill" to the Military Academy in summer 2015 to begin a four year trek towards a college degree and a commission as a 2nd Lt in the army. William (16) is a junior in High School. The family will be reuniting for Christmas in San Diego.

Keith J. Stine completed a year in which there were some notable events. He was honored as an *ACS Fellow* at the San Francisco ACS meeting and was elected Chair of the UMSL Faculty Senate and University Assembly. He also presented an invited talk at the Symposium on "Glyconanomaterials for Nanomedicine" at the San Francisco ACS meeting. Dr. Yih Hornig Tan, who worked in his lab for just over 4 years as a postdoctoral research associate, started a job at Albany Molecular Research this fall. Keith now has two graduate students in his lab. Two high school students from the STARS program and four undergraduates worked there this past year. His research focusses on a number of aspects of nanoporous gold and it includes a collaboration with Professor Demchenko's lab on using the material as a support for carbohydrate synthesis and they were jointly funded recently by the NIH for a major project. He is presently busy editing a book to be entitled *Carbohydrate Nanotechnology* for Wiley, in which he has written his own chapter and during the past year, work was completed on the 9th edition of *Experiments in Physical Chemistry*, 9th Ed., Joseph W. Nibler, Carl W. Garland, Keith J. Stine, and Judy E. Kim, McGraw-Hill, 2015. He also coordinated ACS Project SEED at UMSL and a student working in Prof. Bauer's lab was partially supported by the program.

Janet Braddock-Wilking was named *UMSL Inventor of the Year* for 2013-14. She has two graduate students working with her on the synthesis and characterization of luminescent heavier Group 14 containing metalloles and dibenzo-metalloles for which she received funding this year from the National Science Foundation. She published two papers on some of the research by a recent graduate **Sitaram Acharya** PhD 2013 on the synthesis of platinum and palladium complexes containing the water soluble PTA and DAPTA ligands. She is currently working on a manuscript describing some of the results by another recent graduate, **Teresa Bandrowsky** BA 2008, PhD 2013 on the synthesis and characterization of luminescent dibenzogermoles. She presented a poster at the 17th International Silicon Symposium in August 2014 in Berlin, Germany on some luminescent complexes containing siloles containing a terminal alkyne unit linked to platinum centers prepared by current graduate student Doug Hammerstroem. Janet and her husband Bruce and their two sons took a family trip to Scotland, England and Wales this past summer. Their son, Kevin started college at Missouri S&T (UM-Rolla) in August where he is majoring in engineering. Their other son, Alex is finishing his last year of classes in journalism at Webster University.

Chung Wong is pleased that two new PhD students, Elizabeth Hood and Andrew Lutes, have joined his lab. Other students participating in research include Pragma Manandhar, Kristin Mills, Yunyi Kang, Qianying Zhang, Ryan Yiran Liu (from Duke University), Preston Bruce (from Saint Louis University High School) and William Tong (from Parkway West High School). Former summer intern Manish Agarwal is now in the MBA program at the Indian School of Business in Hyderabad, India after working in the industry for a few years. This year also marks the first joint publication between the Chung and Spilling research groups.

Zhi Xu successfully completed an international clinical trial related to non-invasive blood glucose detection technology. He is teaching physical chemistry and conducting research in the area of ultra-sensitive analytical instrumentation. Dr. Xu and St. Louis Medical Devices Inc., which was formed to commercialize his non-invasive glucose monitor technology, won the Bar Association of Metropolitan St. Louis "Inventor of the Year" competition in the "startup" category. The only other category is "established companies". He was also elected to the National Academy of Inventors earlier in 2014.



Chairs of the ACS St. Louis Section at Recognition Night: Hal Harris (back row center, chair 1994); Donna Friedman PhD 1980 (back row second from right, chair 1992); Lol Barton (back row right, chair 1980); Jim O'Brien (front center, chair 2014) and Keith Stine (front right, chair 2008)

Emeritus, Retired, and Former Faculty Members

Charlie Armbruster is in much better health than he was when we wrote about him last year. He was in town for personal matters and he attended the May Commencement when **Gary S. Jacob** BS 1969 was awarded an honorary degree. At the time of writing, the editor, who spoke to Charlie recently was planning to visit him on Orlando with former student **Donald Kaesser** BS 1967. Charlie is a serious contract bridge player and when we last spoke in early January he had just competed in a major bridge tournament and did well enough to earn enough points to become a *Bridge Life Master!*

Lawrence Barton was recognized for 25 years of service on the Council of the American Chemical Society at the Dallas ACS meeting in spring 2014 and becomes a 50-Year Member in 2015. He continues as a member of the ACS Council Policy Committee and is active in the St. Louis Section. He now serves on the Board of the UMSL Retiree Association but is winding down some of his other extracurricular activities. He and **Patricia J. Barton** BA 1978 celebrated their 50th Wedding Anniversary by visiting Vancouver, BC in October. They now spend increasing amounts of time in their condo in Fort Myers and this year will spend Christmas there with essentially the whole Barton clan. This year he played almost 150 rounds of golf but his handicap is going up and is now 17!

Eric Block and his wife Judy have not been well recently so they were unable to spend the winter holiday in Florida where they were able to enjoy New Year's Eve last year with Hal and Mary Harris and the Bartons.

Joyce Y. Corey spent most of 2014 updating her review of reactions of hydrosilanes with transition metal complexes. Scientifically, the high point of the year was the International Symposium on Silicon Chemistry which was held in Berlin in August where she was asked to review student and post-doc presentations and posters. Another highlight of the meeting was the excursion on Thursday afternoon which was a three hour boat ride on the canals of Berlin. She had been to Berlin previously, shortly after the wall came down when there were still significant areas that had been destroyed by bombing and was pleasantly surprised at the change. Her only regret was that Berlin has 178 museums and she didn't see even one! The meeting is held every 3rd year and the next one will be in China, for the first time since it began in 1965 in Prague which she had attended shortly after earning her PhD. 2015 will include attending the ACS meeting in March in Denver where she is one of the invited speakers for the symposium that honors this year's recipient of the Cotton Award for Synthetic Inorganic Chemistry who happens to be a friend and the first female to receive this Award. She will be visiting former student **Roberta L. Farrell** BS 1975 in January in New Zealand and expects to go to Maine again for the 40th year to the same place

David L. Garin, an avid social bicyclist, has organized a website with information for older cyclists, www.cyclingoverfifty.com. His latest venture was an October cycling trip to Hilton Head, S.C. where the emphasis was biking on the beach. After ten years as President of the UMSL Retirees' Association he has relinquished the position and will serve as Past President for the next two years.

Harold H. Harris continues to teach the Physical Chemistry for BA/BS Majors courses, as a Founders Professor. He also serves on some significant departmental and University-wide committees, including the University Research Board. He plays tennis on several competitive teams and says that he "wins some, loses some", but two of his teams are in first place in their respective leagues. He still

enjoys bicycling to UMSL from his home in Creve Coeur when his schedule and the weather allows.

Rudolph E. K. Winter continues to be a fixture in the department, working with Joe Kramer in the Mass Spec. Lab and also collaborating with colleagues. A regular lunch group includes Winter, Hal Harris and Barton.

Former Staff Members

Betty Eshbaugh's husband Ken died in Jan 2014 and Betty broke her hip 5 weeks later but was doing well when we last spoke to her. For those who don't know, Betty was with the University from 1963 through 1998. She was initially in the Chancellor's Office but joined the department in 1964 and stayed there for the rest of her career, running the office for chairs, Armbruster, Murray and Barton.

Donna Lemp, who joined the department in 2002, retired in the fall. She had been a very valuable colleague for the 12 years she was with us and this writer certainly appreciated her contributions. Unfortunately, she was not replaced so the department has only two members of the office staff, Lindsay Shy, Administrative Associate and Michelle Haley, Senior Secretary.



Dr. Barton with 2013-14 Lawrence Barton Scholarship recipients, junior Hung Nguyen and Ahmed Mohamed BS 2014 and currently in medical school in Chicago at the Donor Reception in March.

Scholarships, Fellowships and Lectureships

New Scholarships

The Stephen S. Lawrence Scholarship was established at the end of 2014 by **Steve Lawrence** BA 1982, PhD 1989. Steve completed his PhD degree research working in the laboratory of former faculty colleague John Schriefels. He then took a faculty appointment at Rockhurst College following graduation and joined the Saginaw Valley State University faculty in 1992. His teaching assignments include introductory, analytical and environmental chemistry. Within his first five years of eligibility he has won numerous awards at SVSU including the Franc A. Landee Award for Excellence in Teaching, the Earl L. Warrick Award for

Excellence in Research and was the first recipient of the Faculty Award for Innovative Use of Technology in Teaching. The Scholarship recipients will be junior or senior chemistry majors in good standing with a cumulative GPA of at least 2.8, who are enrolled in a minimum of 9 hours and for whom the funds will allow timely completion of the degree requirements. Recipients will have a demonstrated record of good departmental citizenship, which may include tutoring, teaching, activity in the chemistry club, or other departmental volunteer activities. This award is renewable at the discretion of the Department of Chemistry. A minimum of two recipients will receive scholarship awards of equal amounts.

The Eugene and Joyce Corey Scholarship Fund was also established recently. This fall we were contacted by **Dr. Vincent Chang** MS 1979 who informed us that he and his wife Sarah wanted to initiate the establishment of a scholarship in honor of his research advisor Joyce Corey and her late husband Dr. Eugene R. Corey. Thus his contribution, matched by his company Abbot Laboratories, is the seed money and he intends to continue to add funds to that and he hopes many of you will do so too so that it can be endowed as soon as possible. Details of the scholarship agreement have not been established yet except that the funds will be used to support undergraduate chemistry majors. We expect that this will be a popular destination for funds contributed by alumni. To this end several of you will receive an individual solicitation from the editor. I am so pleased we are doing this for this beloved couple whose interest in and care for our students has influenced many, many of you throughout the years.



Dr's Eugene and Joyce Corey

Ongoing Scholarships

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 2014-15 went to two students: **Corey Hubert** and **Timothy Grotha**.

The Lawrence Barton 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 2014-15 the scholarship was awarded to **Hyung Park** and **Jessica Spencer**.

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 2013-2014 awards were made to **Ben Martin** and **Jagodige Yasomi**.

The Barbara W. Brown Fellowship for Women in Chemistry is designated students who are women and over the age of 24. It was established by **Barbara (Willis) Brown** (BA 1984) in 2000. The 2014-2015 fellowship went to **Ashley Wagoner**. 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 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. 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 2014-15 the fellowship went to **Melissa Thornton**.

The William and Erma Cooke Memorial Scholarship is 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. **Hung Nguyen** and **Magnus Creed** received the scholarship for 2014-15.

The Robert W. Murray Lecture

On April 6 2015 **Professor R. Graham Cooks**, Henry Bohn Hass Distinguished Professor of Chemistry at Purdue University will present the Eighteenth Annual Robert W. Murray Lecture. For 2014, the Lecture was given by **Professor Joanna Aisenberg**, Amy Smith Beryllson Professor of Materials Science, Professor of Chemistry and Chemical Biology in the Department of Chemistry and Chemical Biology and Director, Kavli Institute for Bionano Science and Technology at Harvard University.



Professor Joanna Aizenberg, the 17th Annual Robert W. Murray Lecturer

Distinguished Alumni Lecture

The 27th Annual Distinguished Alumni Lecture for 2014 was given by **Dr. Katherine M. Block** BS 2001 who is a Senior Scientist at the Novartis Clinical Trial Center of Excellence at *Genoptix Medical Laboratory*, which is part of the Novartis Company, in San Diego. Katherine spoke on "*A Perspective on the Path to Industry*". On May 4, 2015 **Dr. Michael Groaning**, BA 1995, MS 1997, Associate Director, CMC Regulatory Affairs at *Endocyte, Inc.*, in Lafayette, IN will present the 28th Annual Distinguished Alumni Lecture

OTHER DEPARTMENTAL STUDENT AWARDS

Undergraduate

The award for the **Outstanding Student in Introductory Chemistry** went to **Alexander Lyss** 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 **Dorcas Kamau**, the **American Chemical Society Award for Analytical Chemistry** went to **Dmitry Krits** and **Ann Thibaut** who received a certificate and a one-year subscription to *Analytical Chemistry* and the **ACS Awards in Inorganic and Organic and Physical Chemistry** went to **Hung Nguyen, Dmitry Krits, and Courtney Gipson**, respectively. The **American Chemical Society-St. Louis Section's Outstanding Junior Award** went to **Jessica Spencer**. The award was presented at the Annual ACS High School and College Awards Night in April. **Dmitry Krits** received the **Alan F. Berndt Outstanding Senior Award** and the **American Institute of Chemists-Student Award Certificate**. The 2014-15 Undergraduate **Chemistry Aid to**

Education Awards were given to **Magnus Creed, Courtney Gipson, Ethan Grames, Hung Nguyen, Hyung Park, Steven Skaggs, Jessica Spencer, Joshua Stuckel, and Ashley Wagoner** and a **Certificate of Commendation for Outstanding Service** was presented to **Hung Nguyen and Anna Thibaut**.

Graduate

The 2013-14 **Graduate Student Research Award** went to **Swati Nigudkar** and the 2013-14 **Graduate Teaching Assistant Award in Memory of Jack Coombs** was awarded to **Chase Gobble**. **Adam Dion** was honored with the **Outstanding MS Student Award**. Recognition was accorded to 2013-2014 **Graduate School Fair Research Poster Winners Philip Ferko, Xiao Jia, Abeera Sharma and Shana Usery** and to 2014-2015 **Graduate School Dissertation Fellowship Recipients Swati Nigudkar** (Spring 2014) and **Paul Gontarz** (Fall 2014).

Editor's Column (Lawrence Barton)

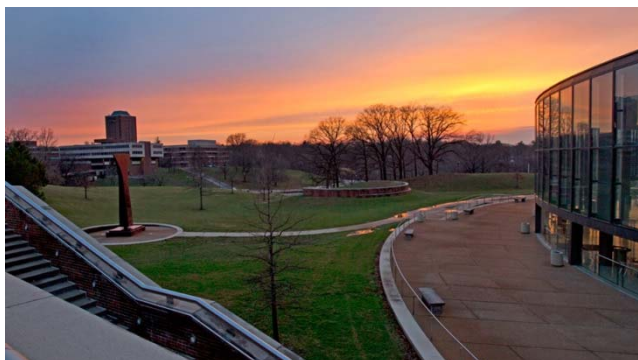
I enjoy writing this annual tome but it is becoming harder as I become more disconnected from the department. I depend on all of you to keep in touch and I hope you will do that. We have a most loyal and supportive group of alumni and that is the engine that drives my activity. My writing the history of the department, from my perspective, is coming to the end. I have been doing it in lustrums, five-year periods, and the one below represents a period just over ten years ago. Thus I will have to write about something else in three years' time!

I am very flattered and pleased to have seen so many contributions go the Lawrence Barton Scholarship. That fund has grown such that it is the largest endowed fund that we have. With that in mind, I hope that some of you will begin to help build the Eugene and Joyce Corey Scholarship Fund instead. I am so pleased that we have established this fund – it is something I have thought about for years and the stimulus that Vincent and Sarah Chang provided led to its establishment. I am anxious to see this project be successful soon and I hope you all agree with me. I repeat that I look forward to hearing from you and I wish you all the very best for 2015. Remember your successes are our successes and if we can tell the community about them, then the value of your degree is enhanced!

Department History 2000 – 2005

We noted last year that the late 1990s was a period of change for the department. However we saw just as much or even more change as we entered the third millennium. On the campus, the Student Millennium Center opened, and the access to the campus from I-70 and Florissant Road changed and improved remarkably, although we are still waiting for the promised new main entrance from the campus on University Boulevard, formerly New Florissant Road. Additional parking garages were constructed, one for the

new student center and the other for the Performing Arts Center. However we did not see the promised renovation of Benton and Stadler Halls, which we had been anticipating for ten years. We changed the name of the department from Chemistry to Chemistry and Biochemistry, to better reflect the focus of our programs, and we established what were to be very successful programs in collaboration with the Department of Biology: the BS and MS degrees in Biochemistry and Biotechnology.



We were shocked when former colleague M. Thomas Jones, who had been on the faculty from 1969 through 1990, died of cancer in January 2000.



At UM-St. Louis, in addition to his position as Professor of Chemistry, he served in various administrative capacities including Associate and Acting-Dean of the College of Arts and Sciences, Interim Associate Vice Chancellor for Academic Affairs, and Deputy Chancellor. In 1990 he left St. Louis to become Deputy President at the University of Houston with

Marguerite Ross Barnett. He later served as Associate Vice President for Research at Houston, then moved to Kent State University, to become Vice Provost and Dean of Research and Graduate Studies. His memory lives on through the M. Thomas Jones Memorial fund, which supports graduate students and is supported substantially by his family. A wonderful celebration of his life was held on a cold winter's Sunday afternoon, at which several former colleagues spoke, including Chancellor Touhill, Vice Chancellor Driemeier, Deans Terry Jones and Mark Burkholder, the editor and several of Tom's family members.

Another terrible loss took place in Fall 2001 when Bob Cabaniss died of complications from lung cancer. Bob had been associated with the department since 1966. When the editor joined the faculty in 1966 Bob would come to the department on Saturday mornings to carry out various glassblowing assignments. He was appointed Scientific Glassblower in the Chemistry Department in December

1969 and took early retirement in 1992. Following this period, he continued to work for the department part-time until he became ill with the cancer that was later to take his life. During his time here he maintained contact with



McDonnell Douglas and also maintained his own company, Florissant Scientific Glassblowing. Many scientists around the Midwest made use of his unique skills and some of his work was included in experiments on the Space Shuttles. Bob was replaced in the department by **Ken**

Owens (BS, 1982) and it is ironic that Ken, who learned all his early skills from Bob when he was a student here and later storeroom manager, also succumbed to cancer, in 2007.

Within the department we continued to see changes in the composition of both the faculty and the staff. Bob Murray and Dave Garin had retired in 1999 and Dave Larsen took one of the early retirement offers in 2000. We had begun recruiting for a replacement for Bob Murray during the 1999-2000 academic year but were unable to identify a suitable individual at the senior level. This was to turn out to be a major advantage because we were then able to recruit two more junior colleagues, both of whom have done very well here. Cindy Dupureur joined us from Texas A & M and Alexei Demchenko joined us from the University of Georgia, both for the fall 2001 semester. Cindy was the second biochemist to be added to the department after Don Becker who had joined us in 1998. Long-time colleague Rudi Winter retired in the summer of 2001 but continues, to this day, running the Mass Spec facility with Joe Kramer. At his retirement, Rudi had been on the faculty for 32 years. In early 2001, Lee Brammer and Bill Welsh announced that they were leaving the University; for both personal and professional reasons. Bill's wife Sue Welsh, MD, PhD, worked for Johnson and Johnson in New Jersey and they had been commuting for a couple of years. They decided they needed to be able to spend more time together so Bill took a position at the Robert Wood Johnson Medical School in New Brunswick, New Jersey where he now holds a named professorship. Lee moved to Sheffield University in Yorkshire, England to be closer to his parents, one of whom was not well. Lee is now Professor of Chemistry at Sheffield.

Gordon Anderson commented in the UMSL CHEMIST in 2000 that in the first 18 months in his role as chair he saw more changes in the office staff that the editor had seen in 18 years. He had hired Nicole Jacobs to run the office when Lisa Hoguet left but Nicole only stayed a few months and she was replaced in May 2000 by Charmaine Henson, who had known **Bill Neumann PhD 1987** when they were both at Monsanto. Charmaine stayed for two years and was replaced by Angela Thomas in the summer of 2004. Randa Schneider's old position was filled by Pat Mayberry in 2000 and Pat stayed just over two years to be replaced by Dena Woods. Dena herself left in 2004 to be replaced by Michelle Haley who is still with us. Joanna Jolly was replaced by

Glenda Gillespie in August 1999, who left in June 2000 but returned in March 2001 and stayed for another year or so. After she left we had some temporaries in the office but Glenda, who went to the dean's office, was replaced by Donna Lemp who was with us for 12 years. Among the technical staff, Gordon Kerschman, who had replaced Dave Herod in 1991 as the NMR electronics technician, retired and moved to Texas. We replaced him with Mark Regina, the spouse of **Karen (Jansen) Regina**, BS 1993.

During the early 2000s chemistry alumni saw many successes including recognition by the campus. This was, in fact, a remarkable period. **Dawn Shiang**, BA 1983, PhD 1988 was honored with a UMSL Distinguished Alumni Award in 2001. In 2002 **Douglas G. Nuelle** BA 1969, in 2003 **Kim Gorman** BA 1993 and in 2004 **Sandy Asher** BA 1971 all were similarly honored. These awards are very competitive indeed and it reflects very well on the quality of our students and the degrees that our chemistry alumni receive! Internally, we honored several alumni by inviting them to present the Distinguished Alumni Lecture. In 2001 **Ken Owens**, BS 1981, who at the time was our Scientific Glassblower, in 2002 **Douglas Nuelle** BS 1969, in 2003 **Jerry Ronecker** BS 1982, in 2004 **Jean (Huhmann) Vincent** BA 1992, PhD 1997 and in 2005 **Rajiv Banavali** PhD 1985 all were similarly honored. Our other major lecture series, the Robert W. Murray Lectureship, brought big stars in our field to the department during that period: in 2001 Robert Grubbs, who would win the 2005 Nobel Prize in Chemistry and in 2002 R. Fraser Stoddart, who was knighted by Queen Elizabeth II in 2006. In 2003 the Lecture was presented by T. Don Tilley, in 2004 by Jaqueline K. Barton and in 2005 by Peter Bernath.

Changes were seen among the campus leadership. The editor served as Chair of the UMSL Senate and University Assembly from 2000 through 2002 when Chancellor Blanche Touhill, who had served as Chancellor since 1991, would step down. The major focus during that period was for the campus to achieve a more equitable share of the total UM budget. At the time our share was about 12 % but most measures suggested it should be about twice that amount. This topic was the subject of the editor's Commencement Address in August 2002. Progress here was very difficult during the presidential term of Manuel Pacheco but the arrival of Elson Floyd allowed Chancellor Tom George to make progress on this important issue. Chancellor Touhill stepped down in 2002 and was replaced, on an interim basis, by long-time administrator Don Dreiemier who had been Dean of the Business School and also Deputy to the Chancellor. The editor served on the Chancellor Search Committee during 2002 when we hired Tom George, whom he had met previously. Elson Floyd replaced Pacheco as President and was helpful in bringing George to UMSL. They had known each other in the state of Washington where they were both academic administrators.

We saw other changes in the administration and on the campus that affected the department. David Young had been Dean of the College of Arts and Sciences but he left in 2001 to be replaced by History Professor Mark Burkholder, a former Associate Dean who had always been very supportive

of our department. Leaving when Young left was Jack Nelson, Vice Chancellor for Academic Affairs who came in anxious to make major changes. He was unable to carry out much of his program, partly because his ideas were not completely accepted by the faculty and also his interaction with the Chancellor was not good. Nelson was replaced by Doug Durand and then Jerry Durham, the latter later being replaced by Glenn Cope in 2004. Doug Wartzok, Associate Vice Chancellor for Research and Dean of the Graduate School, regarded by many as the best administrator on the campus, also left and this led to dark days, in the opinion of the editor, in the Research Office and the Graduate School.



Janet Braddock-Wilking with Chris Spilling when she was presented with the UMSL Inventor of the Year Award.

The year 2003, when Tom George joined us, was the 40th Anniversary of the campus. The celebration involved several events including one at the new Touhill Performing Arts Center (PAC). Among the pioneers recognized was Charlie Armbruster who came from Orlando for the event. The editor served on the organizing committee for the event and attended it along with colleagues Dave Garin and Hal Harris. The PAC was dedicated in 2003 and the Founder's Dinner was held there at the same event. That was where **Kim Gorman** was presented with the Distinguished Alumni Award and among those dancing to the music of Maynard Ferguson at the event were **Mike Finkes** and his wife Linda.

As usual, colleagues and alumni were prominent among activities of the St. Louis Section of the American Chemical Society. **Pauline Bellavance** PhD 1979 served as Section Chair and presented the 2000 St. Louis Award to Gordon Anderson at the banquet where he was introduced by the editor. Later on that year Pauline presented the 56th Annual Midwest Award to Joyce Corey at the Midwest Regional Meeting of the ACS, held at the soon-to-be-demolished Henry VIII Hotel. That was a wonderful event at which ACS President Daryle H. Busch was in attendance. That meeting was essentially run by the department. The General Chair was Chris Spilling, the Program Chair was Keith Stine

and the Exposition Chair was the editor. The faculty and many students and alumni were able to enjoy what was a real UMSL Chemistry celebration. A significant aspect of Joyce's award was that she was the 56th recipient but the first woman to be so honored.

Later on during that period, we saw more changes in the composition of the faculty and staff. Don Becker had been sought after by his former colleagues at the University of Nebraska-Lincoln, and he left us in 2003 to head up a new Redox Biochemistry Center there. Don was replaced by Dr. Mike Nicholls who joined us in 2004 from the Mayo Clinic in Jacksonville, FL, where he had been doing postdoctoral research. Around the end of 2003, Gordon Anderson began to drop hints that he may be moving on and later he accepted the position as Dean of the College of Arts and Sciences at East Tennessee State University in Johnson City, TN. His decision was a shock to us and a great loss to the department.

With the loss of Anderson, and previously Brammer, it became clear that there was a need for at least one new inorganic chemist and that led to the appointment in 2004 of **Dr. Janet Braddock-Wilking** (BA 1985) as Assistant Professor. The domino effect left a gap in the NMR facility and recruitment of a replacement led to the appointment of Dr. Rensheng Luo as Director of the NMR Facility in 2005. He came to us from St Jude Children's Research Hospital. Also in 2004 Dr. Chung Wong was appointed to fill the position vacated by Bill Welsh. Chung joined us from San Diego where he held joint positions with the University of California and the Howard Hughes Institute. Of course the major change during that period was the decision that the department had to have yet another Brit as chair and Chris Spilling was appointed and has served admirably since 2004. Also in 2004 David Garin became President of the UMSL Retirees' Association, a position he would hold for 10 years!

There were, of course, ups and downs during the latter part of this period. Chris Pigge announced his resignation and moved to the University of Iowa. The search for a replacement led to the addition of Dr. Eike B. Bauer to the faculty. Eike is an organometallic chemist and a native of Germany who had been a postdoc at UC-Riverside and a faculty member at Illinois-Wesleyan University. In 2005 the University established a matching scholarship program. If units or individuals were able to raise or contribute \$15K for a scholarship, the university would match it with another \$15K. At that time the editor made his single broad appeal for contributions from our alumni. We were spectacularly successful and were able to establish a *Friends and Alumni Scholarship* by raising \$30K from our alumni. At that time the widow of **John J. Taylor** BA 1979 established a scholarship fund from John's estate which allowed another \$60K to be endowed for the *John J. Taylor Scholarship*. Also during that solicitation period, friends and alumni from Monsanto, principally **Michael J. Finkes** BS 1973, MS 1978, persuaded the company to provide \$15K to establish the *Monsanto Scholarship in Biochemistry and Biotechnology*. We were delighted with these developments and they enhanced similar success at the beginning of the lustrum, when **Barbara W. Brown**

BA 1984 had established the *Barbara W. Browne Scholarship for Women in Chemistry* and the Brunngraber family had endowed the *Brunngraber Fellowship*, both in 2000. We are so lucky to have such good friends and supportive alumni!



Michael and Linda Finkes at the Murray Banquet in March

As that period came to an end, several additional changes were seen on the campus. In early 2005 Express Scripts issued an RFP to relocate its headquarters to the UMSL Campus. This was the result of much work by Chancellor George and his assistant Betty Van Umm. In July 2004 the Wayne Goode Cycling Trail was established and plans for erecting a life-size statue of the former state senator and "founder" of the campus were laid. The statue was to be sculpted by Jay Hall Carpenter in bronze and it was finally unveiled during the summer of 2006, adjacent to a series of small lakes and fountains which had been installed previously. In the department we continued to enhance our instrumentation for research and teaching. We had in 2002 upgraded the old XL-300 300 MHz NMR spectrometer to a Bruker Avance system, equipped with a four-nucleus probe (¹H, ¹³C, ¹⁹F, and ³¹P) with z-gradients and variable temperature capability. We added MALDI capabilities to the mass spec facility and in 2005, a new polarimeter, an FT-IR system and a fluorescence spectrometer were installed. We continued to seek external funding to improve our facilities and in the summer of 2005 a new X-ray Diffraction system was installed, the Bruker Apex II kappa system, and it was celebrated with a Symposium in the department.

All in all, the years in question provided special challenges, but it was ultimately a rewarding time of growth for the department. But the backbone of the department continues to be an increasingly successful alumni body's ongoing loyalty and support. Thank you all and best wishes in your personal lives and in your careers.

Thanks to our Generous Contributors 2014

Below we list the individuals, chemistry alumni and friends who made contributions to the department in 2014 and to the memorial funds in honor of Robert Murray, Tom Jones and Eric and Lois Brunngraber. We believe that 2014 was our most successful year ever 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.

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