



Fall 2016

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Within this section the chemistry class of 1967 is featured on pages 2-4. A remarkable record of achievement for a group that took most of their classes in temporary buildings,

Some classic old black and white picture of UMSL in the past, are found on pages 3—5.

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This section lists the members of the department's largest ever graduating class and also mentions our activities with and for alumni through the Chemistry Alumni Council

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## Department of Chemistry and Biochemistry

### Chairman's Message - Cynthia M. Dupureur

Lol asked me to write "about 300 words" for the Chair's message for this year. I can do it in one: "flux." A common scientific term but often a scary one in other contexts. We began the year with Chris Spilling's departure to administration and my taking over as Chair. This change segued into the budget crisis and accompanying uncertainties.

As the spring term ended it was time to begin the move of the teaching labs to the new Science Learning Center. Graduate students formed a bucket brigade to move glassware and equipment in time for summer, and then for fall offerings in our new teaching spaces. Faculty have enjoyed a heady time spending money from the Dean on new equipment for the teaching labs. Everyone loves the new labs; I noticed that students often linger after they finish their experiments. It was great to see some of you at the 'grand opening' in November. Most of you missed it but you will have another chance to see it in May when we celebrate the 50<sup>th</sup> Anniversary of the first graduating class.

Now it is time to finish cleaning out the old teaching labs in preparation for the initial phases of the renovation of Benton Hall. Almost daily I am in both new and old spaces and sens-

ing history and possibility in them, respectively. See what I mean about flux? In our history, 2016 will go down as a year with some of the biggest changes the department has seen, especially with respect to our work spaces.

With all of the ups and downs, a few things have been especially helpful: one is that, as Dr. Barton's history of the department has pointed out, we have had budget crises before; we prevailed and will do so again. Secondly, we the faculty take heart and pride in you all for your hard work while at UMSL, your professional successes, and for thinking of us when it's time to donate equipment or relay a greeting. It really does brighten our days. Come let us show you around our new spaces, or take one last trip through the old Benton Hall. We're always happy to see you. Best wishes to all in 2017.

Volume 34, 2016

Editor:

Lawrence Barton



### SAVE THE DATE

**May 13, 2017. See page two for more information on how we plan to celebrate the 50th Anniversary of our first graduating class**



*A view of the Science Learning Center from the southwest. To the right of the new building is Natural Bridge Road.*



*Dr. Donald M. Kaesser BS 1967,  
and his wife Pat in Sedona AR,  
earlier this year.*

## ALUMNI INFORMATION

### 1960s

Since the next Commencement is the 50<sup>th</sup> Anniversary of the very first one at UMSL, we decided to reach out to all those 12 chemistry graduates from 1967 who are still living and include information about them in this first section. We were not completely successful in reaching them all but what you will read below represents a litany of successes of which we can all be proud. I refer further to this in the Editor's column at the end of this volume.

**Reginald M. Beal** BA 1967 reached us by telephone in November from his home in Menominee Falls, WI. He retired in 2007 from his position as Associate Professor in the School of Business and Industry at Florida A & M University in Tallahassee. He had already served in the army for three years when he enrolled at UMSL. Following graduation, he worked in the Engineering Department at IBM in Gaithersburg, MD for 3 years. He returned to St. Louis in 1971 and obtained an MBA degree from Washington University. Thence followed a successful career during which he lived and worked in six states. He owned businesses in Atlanta and served as Manager of Business & Enterprise Development at the Tennessee Valley Center for Minority Economic Development, Inc. from 1986 – 1988. He obtained a PhD in Management Science from the University of Wisconsin-Milwaukee, in 1995 and served as a Lecturer at the University of Wisconsin-Whitewater prior to joining FAMU. He returned to Wisconsin in 2007 to be near his family but he still has St. Louis connections including family in Kirkwood and Webster Groves. He is author of several business articles and published a novel in 2008 about the assassination of Martin Luther King. During his retirement he has been seeking volunteer work.

**Jon Benedicktus** BS was in the class of 1967 but graduated technically in 1968 due to his requiring completion of a language course. Following graduation Jon worked for Sigma Chemical Co. for 8 years before joining Anheuser-Busch in St. Louis as a biochemist where he had a 22-year successful career. Anheuser Busch was always a much sought-after employer by our graduates. Much of his work involved processing for corn-refining enzymes and immobilizing these heat resistant materials. He says he was one of the lucky ones—he was not drafted because he was married when he was a student and later when his daughter Dana came along the deferment was extended Dana works for UMSL as Associate Director of Development for Donor Relations.

**Gary Bernstein** BS 1967 initially went to graduate school at the University of Kansas but didn't stay. He died in a small plane accident shortly thereafter. He was the pilot.

**Thomas E. Dueber** BS 1967 retired from DuPont seven years ago after a 35 year career. He and his wife Cheri have been very active in traveling, hiking, woodworking and visiting their four "kids" and the six grandchildren who are located in the DC area, San Francisco and Anchorage, AK. Last summer they backpacked the northern half of the John Muir Trail in the High Sierra with their son and his wife. The 110 miles was a little harder than when they did the southern half 13 years ago. Their son, John just received tenure at UC-Berkeley in Bioengineering. Following graduation, Tom went to UM-Columbia but was drafted in 1969 so he completed just an MS degree with Professor Scott Searles. The Army sent him to Dugway, UT to work on nerve gas but he was able to work at the University of Utah on the weekends. On discharge he joined the program there and obtained a PhD in physical-organic chemistry with 2012 Priestly Medalist Peter Stang who credits Tom with helping him achieve tenure.

**Jodie L. Duke, Jr.** is retired from DuPont and Bristol-Myers Squibb. He and his wife of 49 years, Elsa, have four grandchildren ages 18, 8, 7 and 5. His daughter, is a director with Citi Bank and lives in Kennett Square, Pa. His son Duane is a pediatric surgeon in the Army stationed at Walter Reed in Bethesda and has been deployed three times in the last five years, twice to Afghanistan and most recently to Kenya, West Africa. Because of the deployments and the young age of Duane's children about every other week necessitates a trip to Silver Spring, MD. to help with childcare and whatever needs doing. They count themselves very lucky to live close enough to the children and grandchildren to be able to help. Jodie was drafted in 1969 and worked in an Army medical research lab during his military service. He recalls the conversation with Dr. Armbruster who suggested that the best chemistry departments tended to be in colleges with strong football programs. So he applied to Michigan and obtained a PhD in biochemistry.

**Gary W. Henrich** BA 1967, and BA Biology, received his MS degree in biochemistry from Vanderbilt University in 1970 and later graduated from the Graduate School of Columbia Bible College. He taught at Toccoa Falls College, in Toccoa Falls GA for several years, and was more recently an Editorial Supervisor for Gideon's International in Nashville, TN. We have been unable to reach him recently.

### Upcoming Event

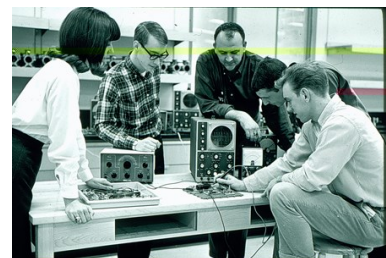
The first UMSL graduating class was 1966-67. 2017 will be the 50<sup>th</sup> anniversary of that class. The Chemistry Alumni Council plans to hold an Alumni Reunion as a celebration in spring 2017 and to invite all graduates to attend but especially those who graduated from 1967 through 1970. The event will be held in the spectacular solarium of the new Science Learning Center. Look for an announcement on the Department Website and on the UMSL Chemistry Group on LinkedIn.

**David Henton** BS 1967 retired from the Dow Chemical Co. in Midland MI 12 years ago after 31 years of service during which he received several awards and other recognition. After UMSL he went to graduate school at the University of Kansas but he was drafted just after writing and defending his MS thesis. Eventually he spent his service period in the Chemical Core at the Edgewood Arsenal in the Baltimore Chesapeake area. Turning down Officer Candidate School, he returned to KU after his draft period and completed his PhD degree in Robert G. Carlson's Laboratory. In retirement, Dave has his own consulting company, and works in polymer and green chemistry and other new areas and tells me he has learned more since retirement than he did during his career. He and his wife Barbara spend most of their time at their home in Jackson Hole WY, as well as in Midland and also in Travers City, MI. He is an avid outdoorsman and enjoys hunting, fishing and hiking. He is proud of his UMSL heritage – one that is indeed a family heritage. Two brothers, a son and his mother all are UMSL graduates. His father was a chemical engineer and worked at the AEC Plant on UF<sub>6</sub> at Weldon Spring which was operated by Mallinckrodt. Dave spent some time there and met a lab technician **Reginald Beal** BS 1967 whom he encouraged to enroll at UMSL. The rest is history.

**Lloyd Hill** BA 1967 received a Ph.D. in Organic Chem. from Iowa State University in 1972. He retired in 2009 from Mallinckrodt Pharmaceuticals after thirty years of service doing mostly process chemistry, serving as Director of Quality Control and also project management on new product development. He also spent three years with Hoffmann LaRoche in South Carolina in the late 1990s and then returned to Mallinckrodt. After retirement he fulfilled a life long dream by teaching as an adjunct at Lindenwood University for three years. He has been married to Diane for 49 years and currently lives in the Kirkwood area. He enjoys some golf but spends most of his free time playing bridge and doubles tennis but he is also exploring some volunteer work. He and Diane enjoy six grandchildren with three in the St. Louis area and three in Houston TX whom they visit often. The oldest is serving in the US Navy on a cruiser in the South China Sea and another is a sophomore at UM Columbia. Skip, as he was known as a student here, says he holds a huge debt of gratitude to the young (at the time) faculty of UMSL for their instruction and encouragement in pursuing graduate work. When the editor was department chair, Skip served on the Departmental Industrial Advisory Council for several years.

**Thomas F. Jenkins** BS 1967 retired from the U.S. Army Corps of Engineers, Engineer Research & Development Center, Cold Regions Research & Engineering Lab Laboratory (CRREL) in Hanover NH in 2008 after 38 years and has done some consulting since. He now lives in Gig Harbor, WA., with his wife Pam. Tom went to graduate school at the University of Colorado immediately after graduation from UMSL but was drafted into the Army two years later so he finished a MS degree in organic chemistry and was stationed at CRREL. He stayed there after leaving the service and completed a PhD degree in analytical chemistry from the University of New Hampshire in 1989. During his career he mostly did research on environmental organic analytical chemistry centering on energetic chemicals such as TNT and RDX. He developed the standard EPA methods for the determination of energetic chemicals in soil and water in the laboratory and the field. The last 5 to 10 years of his work centered on the development of sampling protocols for collection of representative soil samples to allow reliable estimates of contaminants in very heterogeneous environments. He also did work for DARPA, the Defense Advanced Research Projects Agency on land mine detection using chemical sensors. During his career he published more than 65 publications, many government reports and made about 175 conference presentations.

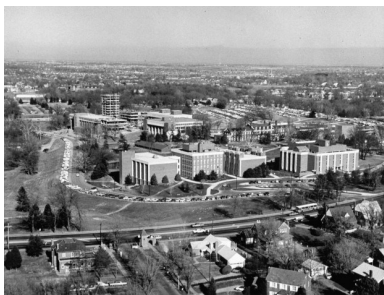
**Donald M. Kaesser** BS 1967 has been a self-employed solo Licensed Psychologist for the past 3 years with no plans to retire, after his 25 prior years of growing a multi-campus group practice of 20+ therapists (*Central Iowa Psychological Services*) which he recently sold. He says that his scientific training in chemistry with Charles Armbruster (and the editor!!) at UMSL has been very helpful as he reads/trains in the multidisciplinary field of Inter Personal Neurobiology. He formerly was a full-time Instructor in Psychology at Des Moines Area Community College for 15 years and after that served 2 years as director of Mercy Hospital Medical Center's Intensive Psychotherapy Program which was modeled after the Mayo Clinic's sister program. He earned a PhD in Counseling Psychology from Iowa State University in 1986 and earlier an MA in Experimental Psychology from Central Missouri State University. Immediately after graduation he was in the first year of the Ph.D. program in Chemistry at Washington University when the draft caught up with him and he served two years in the US Army with 6 months of it overseas. He and the editor visited Dr. Armbruster a couple of years ago in Orlando and hope to do it again in January 2017.



*Physics Lab in the early 1960s. John Thompson BS 1967 in the plaid shirt, David Henton BS 1967 on the right and behind him the late Gary Bernstein BS 1967. We believe the woman is Leslie Bovier who is married to Edward (Ed) Bovier BS 1968.*



*The old Bellerive Country Clubhouse which served as the first building on campus and later as the administration building*



Aerial view of the campus, ca 1971

**Gary Perryman** BS 1967 was offered a TA in the graduate program in chemistry at UM-Columbia following graduation. However, shortly thereafter, he received his induction notice from the Selective Service. He wasn't qualified for an exemption, but because he had his chemistry degree, they allowed him to select any branch of the military. He chose the Coast Guard and served 2 years on a cutter in Alaska and 2 years on a base in California. He left the service in 1973 and used his VA benefits to acquire another degree (meteorology) at the University of Washington in Seattle. After this he applied for a job with the government as either a chemist or meteorologist and received no offers for the latter occupation but several for open government chemist positions. He accepted the chemist offer with the US Geological Survey in Salt Lake City. His duties consisted in testing water and soils for inorganic contaminants. That smaller lab was closed in 1975 and consolidated into a much larger lab in the Denver area. He continued with the USGS until late 1986, when seeing a better opportunity for advancement, he took a similar job with the USEPA Region 8 lab nearby at the Federal Center in Golden CO. His duties changed somewhat and responsibilities grew as he advanced to higher grades. He specialized in metals analyses, headed up the metals section, reviewed the work of onsite contractors, conducted onsite inspections of other labs in his 6-state region (120 labs) and generated all required SOP's for the section. Also, state labs consulted with him on interpreting the latest testing requirements. Before retirement he was a Senior Inorganic Chemist at the lab.

**Carol L. (Reinhardt) Mayfield** BS 1967 has not been in touch since graduation but we believe she lives in Marissa, IL.

**John Thompson** BS 1967 has been in touch with us over the years but we have been unable to reach him recently. He worked for PPG early in his career but more recently was living in El Dorado AR. He owned a company there, *T & T Chemical* with his brother for most of his career. He sold it about 15 years ago and had been consulting for the company that bought it since then. Much of his work had been involved with removal of sulfur from coal.

**Wiley Moore** BS 1968 has been with the Boeing Company as an Aircraft Accident Investigator for the past 8 years. His work involves voice recorder auditing with the National Transportation Safety Board and other world-wide agencies. Prior to that he was a pilot with Continental Airlines.

**Gary S. Jacob** BS 1969 was at the 2016 Founders' Dinner last September. A member of the Chancellor's Council, Gary is Chairman of the Board of ContraVir Pharmaceuticals, Inc., and Chairman and CEO of Synergy Pharmaceuticals Inc. He is looking forward to approval of Synergy's drug, Plecanatide in early 2017. He holds a PhD degree in biochemistry from the University of Wisconsin and spent most of his career with Monsanto.

### 1970s

**John Kolb** BS 1970 is someone we hear from annually and he has been very supportive of the department. John and his wife Judy live in Sonora CA, in the beautiful Sierra Nevada Foothills, in the heart of California's "Gold Country", named after the miners from Sonora Mexico who settled the City in 1848. He was visited this summer by **Dennis Wester** BS 1971 and his wife Vicki, who came down from Richland, WA where they are now retired. John tells us "it was great to see Dennis again and reminisce on old times and old faces, e.g., Jack Coombs. Still strange and amusing that, after all these years and all the paths taken, the best teachers/instructors from whom I was privileged to receive instruction were people at UMSL and one instructor from my old high school". John suffers from melanoma and continues to fight it. He is still undergoing treatment but his "spots" are now tiny ones. That issue along with the physical consequences of being an active outdoorsman are his only problems.

**Sanford A. Asher** BA 1971, who is Distinguished Professor of Chemistry at the University of Pittsburgh was honored with the 2015 Charles Mann Award for Applied Raman Spectroscopy by the Federation of Analytical Chemistry and Spectroscopy Societies.

**Janet (Dobbins) Place** BA 1975 tells us she is "blissfully retired" and doing lots of traveling. In May she and **Virginia Houserman**, BA 1974 with their spouses visited the Galápagos and Macchu Picchu. Janet was most recently Senior Manager. Global Project Management at Roche Molecular Systems in Pleasanton, CA, in the San Francisco Bay area. She was formerly with LifeScan, Inc. in Milpitas, California. As of November 1986, LifeScan, Inc. has operated as a subsidiary of Johnson & Johnson. Janet earned a PhD degree in biochemistry from the University of Kansas and Virginia has her MD degree from UM-Columbia.

**Robert W. Dugger** BS 1975 is a Research Fellow at Pfizer in Groton, Connecticut. As an active pharmaceutical ingredient Project Leader he leads a team of organic chemists, chemical engineers, analytical chemists and others in developing



1981 picture of **Harold Messler**, BS 1970, his wife **Caroline**, **Jack Coombs**, Stockroom Manager from 1965-1977 and his wife **Fran**. The photo was taken by **Joe Bono** BS 1969 whose wife **Barb** is in the upper right.

manufacturing processes for Pfizer's new products. He holds a PhD in organic chemistry from the University of California-Berkeley.

**Daniel Henton** BS 1975, who received a PhD degree from the Ohio State University, had hoped to make his 45<sup>th</sup> high school reunion at Normandy HS this summer but instead he stayed home in Midland MI and participated in a teaching program. He retired from Dow in Midland MI in 2013 and started working for Michigan Molecular Institute. In February 2015 the institute was leased to Michigan State University and Dan became a Research Assistant Professor at MSU, working on several projects. This Spring, MSU offered a Summer Internship Program for some local high school students, chosen primarily by their high school chemistry teachers. He had proposed a couple of projects for the program and they were very popular choices among the applicants and when the VP for Research and Graduate Studies looked at the applicants, he decided to double the number of positions offered and Dan became the mentor for half of the 12, as well as being the backup advisor for four more! The projects worked out very well and he enjoyed the experience as did the students.

**William Z. McCarthy**, BS 1975, PhD 20044, while sharing memories and imbibing at the Ferguson Brewhouse with other alums, the editor and some faculty colleagues, noted a common acquaintance from the past: **James T. Gannon** BS, Ed., 1973, whose wife Terry babysat for the Bartons briefly in the early 1970s. When Bill was a freshman in 1969, instead of joining a fraternity he joined the caving club. Although the group, named Chiluk-Ki Grotto (the Native American term for "cave people"), is no longer active, it was a very formative part of his early days at UMSL and among its members was Jim Gannon, who sadly passed away on Oct 19, 2016. They spent numerous weekends on caving and backpacking trips that were a great distraction from studying. Among their biggest adventures was a trek to Mexico to cave and (try) to climb the volcano Popocatepetl. Other chemist/cavers in Chiluk-Ki Grotto included **Paul Blystone** BS 1975, **Bob Frease** BS 1976, **Jim Ketchum** BS 1997, **Andrew Ratermann** BS 1976 and much more recently **Emilie (Smith) Heberer** BS 1988, and **Jim Wheatley** BS 1989. There also was the occasional merger of caver/chemists on float trips organized by Betty Eshbaugh, then the Secretary of the Chemistry Department. Faculty who participated included the editor, Dave Garin and Jim Chickos, Bill is now retired from a 28 year career at Mallinckrodt in St. Louis and lives with his wife Tara in Lafayette Square.

**Paul Sherwin** BS 1976 is Senior Director, Clinical Research with GE Healthcare. He was relocated from Princeton NJ to Massachusetts at the end of 2015. Paul holds a PhD from the University of Illinois and an MD from the University of Miami.

**H. Pete Kleine** BS 1978, MS 1982 is now Senior Supervisor, Process and Analytical Development at Millipore Sigma (formerly Sigma-Aldrich) in St. Louis. Pete spent most of his career between 1979 and 2010 with Monsanto/Searle/Pharmacia/Pfizer before joining his former coworker **Todd Boehlow** BS 1991, PhD 1997 at Equinox Chemicals in Albany, GA. He returned to St. Louis in 2013 and spent two years managing the Science Laboratories at Maryville University before joining Millipore Sigma in 2015 at the Cherokee site in the city.

**Dennis Delfert** BA 1978 is Professor of Biology at the Lewis and Clark Community College in Godfrey, IL. His first grandchild, Clark, was born in August 2015 in Maryland.

**Bruce Ritts** BS 1979, MS 1983 has been a Lead Scientist at Steris Inc., in St. Louis since 1997. Formerly he was with Petrolite in St. Louis until the company moved to Houston. After spending more than 30 years doing chromatographic methods development and validation he has assumed responsibility for Steris' Energy Dispersive X-ray Spectroscopy-Scanning Electron Microscopy system. He recently returned to the Chemistry Alumni Council to help on projects.

### 1980s

**Michael Hauser** BS 1981, MS 1986 who is Professor of Chemistry at the Meramec campus of St. Louis Community College gave the keynote address at the Emerging Scholars Banquet at the College in November 2015.

**Joan Twillman** BA 1981 is retired from teaching chemistry at St. Charles West High School. She tells me she is a full-time babysitter as well as president of the Mississippi River Water Trail Association. This summer, with a couple of friends she will be paddling the length of the Mississippi River as soon as school is over.

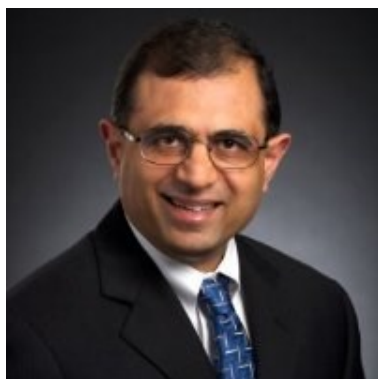
**Dennis Parazak** BS 1982, MS 1988, PhD 1995 has agreed to be our 30<sup>th</sup> Annual Distinguished Alumni Lecturer. Following graduation he spent 10 years with Petrolite in St. Louis during which time he completed his MS degree. In 1992 he decided to return to UMSL and completed a PhD degree with Professor Stine. He was with Hewlett Packard for more than 19 years as an ink chemist and a hardware design engineer first in



*Post Dispatch picture from Sept 1963 of the dedication of the campus. From left, President Elmer Ellis, Chancellor Bugg, Mrs. Dalton wife of Gov. Dalton, Mrs. Ellis, Governor John Dalton and St. Louis Mayor Raymond Tucker.*



*Michael Hauser BS 1981, MS 1986 and his wife Lynn at the grand opening of the Science Learning Center in November*



*Dr. Rajiv Banavali, PhD 1985*

Oregon and later in San Diego. He is now an Advisory Hardware Engineer with Rico Imaging—Americas Corporation in Boulder, CO. More about Dennis later and also on the website.

**Rajiv Banavali** PhD 1985 is now Vice President, Chief Technology Officer at Honeywell International where he has been since 2009. Prior to that he spent 22 years with Rohm and Haas both in Houston and Philadelphia. He had previously been Director of Technology, Specialty Products, and more recently Chief Technology for Fluorine Products. After this recent promotion his responsibilities include the entire specialty chemicals business of Honeywell (about \$4 billion) and 500 people in R&D. He and his wife Marysusan were able to get together briefly with the editor for breakfast at the ACS Meeting in Philadelphia where Rajiv's team received a "ACS Heroes of Chemistry Award" for development of a non-ozone-depleting and low-global-warming-potential hydrofluoro-olefin refrigerant for mobile air conditioning systems. Rajiv and Marysusan live in Morristown, NJ and Rajiv serves on the College of Arts and Sciences Advisory Council.

**William R. Shiang** BA 1984, PhD 1989 and **Dawn L. Shiang** BA 1983 and PhD 1988 maintain contact with us. They live in south central rural Missouri on a hobby farm. Bill "retired" from Dow Chemical Co., last year and is enjoying a healthy consultant career working for multiple chemical manufacturing companies doing business in China. He loves being his own boss as well as contributing to their success. Dawn retired earlier from Dow and enjoys her hobby farm as well as volunteering for CASH and as an education mentor.

**Emilie G. Smith-Heberer** BS 1987 is a Senior Research Chemist at Henkel in the Detroit area. She lives with her husband Dan and their two sons in Rochester Hills, MI. Both boys are in college at Michigan State University and both are in the chemistry field. Neil, (the older one) was in chemical engineering and after 3 semesters of engineering classes hated it and switched to chemistry. He works in a lab studying an enantiomeric selection/cyclization scheme and really enjoying it. Ethan switched from supply chain/business to food science/chemistry after his first semester. Emily holds a MS degree in polymer science from the University of Akron.



*Dan Kleypas BS 1970 and his wife Jean pictured with graduate students Michael Mannino BS 2014 left and Matthew Queensen BS 2013 right at the SLC opening in November.*

**William L. (Bill) Lesko** BS 1988, MS 1992 is Team-Lead Inorganic Chemistry at Nestlé Purina Petcare in St. Louis. He was Inorganic Lab Manager at Quantera Environmental Services in St. Louis prior to joining Purina in 1992 where he

also serves as a Research Chemist and Hazardous Waste Disposal Manager.

### 1990s

**Salvatore V. Ciaramitaro** BA 1993 has worked in operations in the Alkylation Unit at Phillips 66 in Wood River IL since June 2014. He had been previously in the National Corn to Ethanol Research Center at SIUE and prior to that with BASF.

**Kim Gorman** BA 1993 and her husband Joe were at the Founder's Dinner in September. I asked her for an update on her activities as President of PTC Labs in Columbia MO. PTC still performs paternity and identity testing, but in 2013 they expanded into the clinical genetic testing area. Pharmacogenetics (genetic testing that predicts a patient's ability to metabolize drugs) was their first area of clinical testing. Pharmacogenetic testing continues to grow as the scientific community learns more about the genes responsible for drug metabolism and as new drugs are introduced. They are currently working on bringing a cancer screening panel online. This panel will identify genetic mutations in at risk families and help direct physicians in determining which family members may be at risk for developing the same type of cancer as the patient. The work is in the early stages.

**Sean Dingman** BS 1994 is now Technical Service Manager at Mississippi Lime Company in St. Louis. He had previously been with BASF and Sigma-Aldrich.

**John R. Johnson** MS 1994 has been with Mallinckrodt for 40 years and is currently Analytical Chemistry Fellow. He has held a number of positions beginning as a Quality Control Technician, then advancing on the technical ladder to positions of increasing responsibility. He held group leader and Research Manager positions prior to being promoted to Technical Fellow. He utilizes his skills to support an R&D department in the area of Nuclear Magnetic Resonance.

**Cecilia Marzabadi** PhD 1995 who is professor and Chair of the Chemistry Department at Seton Hall University presented the 2015 ACS St. Louis Section Women Chemists' Committee Lecture. The title of her talk, which is also the title of a book she co-authored, is *Mom the Chemistry Professor*. She has been an ACS Alternate Councilor since 2004 and currently serves on the ACS National Women Chemists Committee.

**Craig Siman** BA 1995 is Associate General Counsel for intellectual property at Mallinckrodt Pharmaceuticals. He obtained his law degree

from Saint Louis University in 2002. Craig spent almost 5 years with the *Senniger Powers Law Practice*, and a year and a half with the *Polsinelli Law Practice* prior to joining Mallinckrodt in 2007.

**Elizabeth Sloan** BA 1995 is a Team Lead—Organic Chemistry at Nestlé Purina in St. Louis. She has been with the company since 1998.

**Julie L. Schuette** BA 1996 has been a Histology Technologist at St. Louis University Medical School for the past 5 years.. She had a similar appointment prior to that at St. Luke's Hospital in Chesterfield for 26 years.

**Jeff Scholten** BS 1997, MS 2001 spent from 1997 through 2010 with the series of morphing companies GD Searle, Monsanto, Pharmacia and Pfizer until Pfizer dropped its small molecule chemistry programs. After a brief stint with Monsanto - he was in the department with an UMSL-sponsored research program which employed several former several Pfizer employees for 15 months, he spent three years with Sensient Technologies in St. Louis and in June 2015 joined Jost Chemical Co which is near the UMSL campus in Belridge, MO

**Yahia Z. Hamada**, PhD 1999 with Wes. Harris met with the editor during the fall 2016 ACS-National Meeting in Philadelphia. He said that he never forgot his roots in Alexandria University or in UMSL. He has taught the analytical chemistry sequence as well as biochemistry since July 2005 at LeMoyne-Owen College in Memphis. In the past 12-years he has trained about 40 students from under-represented groups. The work led to about 25 presentations at regional, national, or international conferences and 20 student's names appeared as co-authors on peer reviewed publications. He is looking forward to meeting with UMSL professors during the incoming ACS-meetings.

**Nawana (Lofton) Lawson** MS 1999 is a Hazardous Materials Specialist in the Office of Environmental Health and Safety at Wayne State University. Although unable to attend the reception honoring Chris Spilling last June, she sent a nice message which appears in the memory book prepared for him.

**Robert Stockland** PhD 1999 is Professor of Chemistry at Bucknell University in Lewisburg, PA. He is author of the book "Practical Functional Group Synthesis" a 700 page volume published by John Wiley in 2016. When we communicated earlier in the year he had 9 undergraduate students working in his laboratory funded

by grants from the National Science Foundation and the ACS-Petroleum Research Fund.

### 2000s

**Carman Bryant** BS 2001 is now Quality Control Manager at AntriaBio, Inc. in Longmont, CO. She was previously with Avista Pharma Solutions and prior to that Array Biopharma, both in Longmont. She has been in Colorado since 2010 and had been with Sigma Aldrich and Chemir Analytical Services in St. Louis before moving to the mountains.

**Chad Clutes** MS 2001 is a QC Supervisor at Millipore Sigma (formerly Sigma Aldrich). He has been there since 2013 at the Cherokee site. Prior to that he was with Mallinckrodt for 14 years in a similar position. He holds a BS degree in chemistry from William Jewell College.

**Shiyue Fang** PhD 2001 was promoted to Full Professor of Chemistry at Michigan Technological University in 2015.

**Paul McQuade** PhD 2001 who spent a couple of years at Washington University as a postdoc with the late Professor Michael Welch following completion of his degree in the Barton lab, had been an Associate Principal Scientist at Merck Inc., in Philadelphia doing molecular imaging, since 2004. However he just accepted a position with Takeda Pharmaceuticals in Boston as "Director, Lead PET Imaging Scientist". He will move to Takeda which is a wholly-owned subsidiary of the largest pharmaceutical company in Japan. He will be moving to Boston by the end of the year, and his wife Jen will follow in early 2017. He tells us that it is a little bittersweet as he has absolutely loved his time at Merck and in Philadelphia but he and Jen are excited to start this new chapter in their lives.

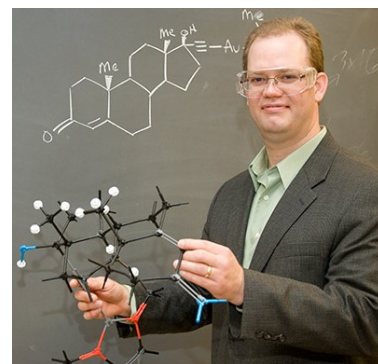
**Angela V. (Schmitt) McKnight** BS 2001, MS 2004 has been with *Steris Corporation* in St. Louis since 2012 and is now a Senior Regulatory Affairs Specialist. She spent six years with Mallinckrodt and two years with Huvapharma NV as a Documentation Coordinator prior to joining Steris.

**Matthew Dunn** BA 2002, who had been with Chemir and Evans Analytical Laboratories in St. Louis, both part of the EAG group, is now Quality Manager at St. Louis Cord Blood Bank.

**Dijana Hadziselimovic** BA 2003 has been a Senior Technical Services Associate at *Steris Corporation* in St. Louis for the past 12 years. Prior to that she was with BioMerieux, also in St. Louis.



**Cecilia Marzabadi** Ph D 1995 giving the 2015 ACS St. Louis Section Women Chemists Committee Lecture



**Robert A. Stockland Jr** Ph D 1999 who is Professor of Chemistry at Bucknell University



**Michael Lantzy** BS 2007

**Michael Steevens** BS 2003 is a Formulation/Optimization Analyst at Nestle Purina in St. Louis. He was formerly with Sigma-Aldrich, Sensient Technologies and most recently he spent 17 years with Baker Hughes until assuming his current position in early 2016.

**Steve Lichtenberg** BS 2004 has been a Senior Analytical Chemist with Mallinckrodt Pharmaceuticals since 2010. Following graduation he worked for the Celsis Laboratory Group for 2 years and as a Research Assistant at Monsanto for almost four years prior to joining Mallinckrodt.

**Robert Barron** BA 2005 is an Analytical R&D Chemist II with Neshor Pharmaceuticals - St. Louis.

**Medha Kamat** PhD 2006 moved to Downingtown, PA in January when her husband Bala accepted a position at Janssen in Malvern, PA. Medha continued to work as Principal Scientist for Eurofins Pharma Bioanalytics Services remotely. We heard recently she moved to Glaxo Smith Klyne as "Bioanalytical External Study Monitor" in November 2016.

**Rachek (Andrews) Kupper** BA 2006 is a chemistry teacher at Chesapeake Senior High School. She lives in Annapolis MD, with her husband John and their two small children.

**Erin M. Brooks** BS 2007 received her O.D. from the UMSL College of Optometry in 2011 and her M.S. in 2013. In Fall 2016 she was appointed Clinical Assistant Professor in Primary Care and Community Services in the College. Since 2013 she had served as a preceptor and instructor (part-time) in the College, including the Optometric Center and the Grace Hill Clinic on Biddle Street in St. Louis. She has a diversity of interests including children's vision, ocular disease, community health, and primary eye care. In addition to clinical duties, she is currently involved in research concerning the Pupil Project, serves as the course coordinator of Ocular Motility and jointly teaches a new neuro-ophthalmology course with Dr. Aaron Franzel.

**Jennifer N. Desotel**, BS 2007 has been a manufacturing chemist with Proctor and Gamble in Cedar Rapids IA since July 2007. She spent 6 years with Mallinckrodt in St. Louis, following graduation and then moved to Iowa and spent time with NantPharma which makes injectable pharmaceuticals and Raining Rose, an organic product manufacturing company, prior to her current position

**Nicole Lubanowski** BSBB 2007 is now with Washington University as a Software Tester.

**Adel Pacquette** BS 2008 is a Postdoctoral Researcher at IBM. She completed a PhD at the University of Illinois at Urbana-Champaign in 2015 with Professor Andrew Giwerth on the development of catalysts for alternative renewable energy technology. She is currently working on electrochemical processes.

**Supratik Dutta** PhD 2010 is now a Research Scientist at Eli Lilly and Company in Indianapolis.

**Sarah Gadel** BSBB 2007 has been a Senior Research Associate with Pfizer in St. Louis since May 2015. Following graduation with her degree in biochemistry and biotechnology here, she spent almost 8 years as a Research Specialist at Washington University School of Medicine. Her work there led to five refereed publications.

**Michael Lantzy** BS 2007 was in touch recently after the editor had met his brother on the golf course—of all places. Mike is Regional Sales Manager at *Fuze* in Dallas. He and his wife Adriana have gorgeous looking two year old twins. Mike previously was with *KnowledgeLake* in St. Louis, Minneapolis and then Dallas. Following graduation, Mike, who played baseball for the UMSL team, spent almost a year playing and managing a baseball team in Hannover, Germany.

**Sujittra Srisung** PhD 2007 has been a Lecturer and Researcher at Srinakharinwirot University in Bangkok since 2007.

**Maria (Udan) Johns** PhD 2009 has been Manager - QC Analytical at Pantheon in St. Louis since September. She had been with Millipore/Eurofins at the Missouri Research Park in St. Charles County since 2012.

**Holly Scheibel** BS 2009, MS 2013, is an Analytical Chemist II at Mallinckrodt Pharmaceuticals. She recently agreed to join the Chemistry Alumni Council as long as we don't work her too hard! She tells us that work is going well and that she is starting to do a bit more NMR now and having to do a lot of reading for that. She works with **John Johnson** MS 1994, in R. & D. She was about to leave for vacation to the northwest when we heard from her.

## 2010s

**Nathan Birhanu** BS 2009 is a Paul D. Coverdell Fellow in International Political Economic Development and in Economics at Fordham University where he is completing a dual MA degree. He is also an Assistant for the Finance and Project Staff for the Fordham Bedford Housing Corporation. Last summer he was a financial analyst for Nomura in New York City. After graduation he spent 5 years in the Peace Corps in Southern Africa.



**Nathan Birhanu** BS 2009



**Greg Hogan** PhD 2010 who completed his degree with Professor Beatty is now Assistant Professor of Chemistry at Texas A & M University Texarkana. He had been a Chemistry Instructor at Northwestern State University in Natchitoches, LA between graduation and Summer 2016.

**Mary Keithly** BS 2010 is Assistant Professor of Chemistry at Missouri Southern State University. She obtained a PhD degree in biochemistry from Vanderbilt University in 2010. She defended in April, had a second child in May, and then moved straight to Missouri Southern State for the new position. She really loves what she is doing and was working hard to prepare her classes when we heard from her in September.

**Erin Martin** BS 2013 is a PhD candidate in analytical chemistry with a minor in environmental science at Indiana University in Bloomington, IN. She is the treasurer of the student chapter of the Electrochemical Society there and also received the Associate Instructor Award in 2015.

**Abby Smith** BS 2014 has been a Chemist at Sensient Food Colors in St. Louis since March 2015 and prior to that she was a customer Service Representative with the same company. For about a year following graduation she was an Analytical Lab Technician with Chemir-EAG, also in St. Louis.

**Abeera Sharma** PhD 2014 is a Scientist in Dr Reddy's Laboratories Ltd. an Indian multinational pharmaceutical company based in Hyderabad, India. She received her degree under the direction of Professor Stine.

**Paul Gontarz** PhD 2015 is a Bioinformatician at Washington University School of Medicine. He is married to **Elena Vasilieva**, PhD 2014 who works at Pantheon in St. Louis.

**Chase Gobble** PhD 2016 is a Staff Scientist at EAG Laboratories, formerly ABC Labs, in Columbia, MO. He completed his PhD research under the direction of Dr. Chickos and graduated in August.

**Hung T. Nguyen** BA 2016 who also received a BA degree in English, is a first year student in the University of Missouri Medical School in Columbia. He spent two years prior to graduation working as a Medical Scribe at Phys-Assist Scribes, Inc., in St. Louis. He won our Junior Award in 2013 and the English Department's Undergraduate Essay Award in Writing Studies in 2015-16. He was formerly Managing Editor and also a columnist for the Current.

### ACS MEETINGS IN SAN DIEGO AND

### PHILADELPHIA

The planned reception was a very small one in San Diego when Drs Spilling, Wong and Barton got together with **Cecilia Marzabadi** PhD 1995. However the editor encountered several alumni at the ACS meeting in Philadelphia in August. Elsewhere we mention **Rajiv Banavali**, PhD 1985, who is Vice President, Chief Technology Officer at Honeywell International. We met **Katherine Carr**, MS 1990, at a meeting of the Division of Agrochemicals titled *Blues and Brews!* She is retired from Monsanto where she was a Senior Scientist but is still involved with professional activities through her consulting and through the ACS. **Yahia Z. M. Hamada**, PhD 1999, was at the Local Section Activities Committee Reception. Dr. Hamada is Associate Professor of Chemistry at LeMoyne-Owen College in Memphis. We encountered **Greg Lumetta**, BS 1982, PhD 1986 at the Exposition. Greg is a Staff Scientist at the Pacific Northwest National Laboratory in Richland WA, and on the street we met **Mahesh Paudyal**, PhD 2012, who has been a Post-Doctoral Research Associate at University of Texas Southwestern Medical Center in Dallas since graduation. And of course **Donna Friedman** PhD 1980, who is an ACS Councilor for the St. Louis Section and now serves on the ACS Committee on Committees, regularly attends national ACS meetings.

### GRADUATES, DEC 2015 -DEC. 2016 DECEMBER 2015

Tiffany Aljets, BA	Terence Blue, BA
Doug Hammerstroem, PhD	Amer Irskic, BA
Kristofer J Masgio MS	Yang Song, MS
Satsawat Visansirikul, MS	Tori Thunderburk, BA
Ashley Wagoner, BS	

#### BS in Biochemistry/Biotechnology (BSBB)

G. R. Akhuzada,	Shane C. Brinker,
Arvon A. Clemons,	Richard Davenport,
Nathaniel Letcher,	Joseph P. Lyons,
Stony R. Marsh,	Rhett D. Mayfield,
Mark A McCabe,	Kent Morgan,
Sara N. Rohrbough,	Thomas J. Smith,
Yao Xiao,	

#### MS in Biochemistry/Biotechnology (MSBB)

Christie B. Dion,	Shaun Eckerle,
Adam Ehlen,	

### MAY 2016

Allan J. Alla PhD	Carolyn Dolby Baird, MS
Anosha Abdul Basir, BS	Ryan Cantwell, MS



Dr. Erin M. Brooks BS 2007



Drs Barton and O'Brien with George Heinz, **Donna Friedman** PhD 1980 and Donna Nelson ACS President, receiving award on behalf of the St. Louis Section at the ACS meeting in Philadelphia last April.



Chancellor George left, Dr. Dupureur center and Dr. Spilling right at the Science Learning Center ribbon cutting ceremony in November.

Rajesh Dhimal, BA  
 Adam Claude Dion, MS  
 Stephan M. Germann, MS  
 Andrew M. Hoffman, BA  
 Samer Fares Issa, BA  
 Leasa Lanae Keating, BA  
 Michael P. Mannino, MS  
 Hung T. Nguyen, BA  
 Vedran Ponjevic, BS  
 Benjamin Quiggins, MS  
 Taylor Kay Russel, BS  
 Mahdia Seddiqi, BS  
 Steven K. Skaggs, BS  
 Brendan T. Sullivan, BA  
 Tinghua Wang, MS  
 William R. Stewart III, BS

Cody Aaron Dickinson, MS  
 Trang Thu Do, BA  
 Ethan Marty Grames, BS  
 Nathaniel Hussey, BS  
 Malika Kaur, BA  
 Taylor M. Laramie, BS  
 Carissa Nelson, MS  
 Jacquelyn L. Niederschulte, MS  
 Matthew Queensen, MS  
 Elizabeth A. Ridgway, BS  
 Abigail C. Schlottach, BS  
 William F. Shofner, BS  
 Ryan A. Stanton, BS  
 Ladarla M. Tutton, BA  
 M. D. B. W. Mudiyansele, MS

*BS in Biochemistry/Biotechnology (BSBB)*

Ghulam R. Akhuzada  
 Rajesh Dhimal  
 Ashley R. Haddox  
 Taylor A. Harrison  
 Daniel R. Hill  
 Mudar Ismail  
 Patrick G. Nittler  
 Sara Ni. Rohrbough  
 Amy Nicole Smith  
 Jessica R.N. Thompson  
 Connor J. Williams

Kaylyn Bauer  
 Bridgette Fletcher  
 Christopher P. Harper  
 Muhsin R. Hassan  
 Rachel . Hoffmeister  
 Nicholas R. Morgan  
 Ana A. P. Perez  
 Gabrielle E. Rupp  
 Traviona R. R. Terry  
 Jane J. Wangondu

*MS in Biochemistry/Biotechnology (MSBB)*

David P. Ahrens  
 Alyssa L. Francis  
 Joseph M. Logsdon  
 Sarah W.L. Tan

Victoria J. Anderson  
 William E. Lammering  
 Susan A. Monnig  
 William G. Wilson

**AUGUST 2016**

Fawziah G. Alshehri, MS  
 Edith Csiki-Fejer, PhD  
 Chase Gobble, PhD  
 Yuhyun Kim, BA  
 Adam Z. Ehlen MSBB

Michael A. Bengston MS  
 Chase Gobble MS  
 Xiao Jia, PhD  
 Joseph Meisel, PhD

**DECEMBER 2016**

Magnus Creed, BS  
 Lauren Silver MS

Salvatore Pistorio, PhD  
 John Zhou, BA

*BS in Biochemistry/Biotechnology (BSBB)*

Muhamed Basic,  
 Thomas F. Connell,  
 Abigail Eaker,  
 Jasmina Hasanovic,  
 John F. Kuc,  
 Stefanie Pace,  
 Lindsey K. Probst,  
 Britney Sartori,  
 Lynnsey D. Street,

Sidnie Campbell,  
 Magnus Creed,  
 Sarah Goodrich,  
 Elizabeth N. Karanja,  
 Jaemin Lee,  
 Theodore M. Moll,  
 Victoria A. Rogers,  
 Analea M. Sterling,  
 Nathan T. Zeller,

**THE CHEMISTRY ALUMNI COUNCIL**

This group had fewer meetings this past year but was able to hold a very successful event in honor of Department Chair Chris Spilling's appointment as Interim Provost and Vice Chancellor for Aca-

demie Affairs., and his replacement by new Chair Cindy Dupureur. There were 85 present including many former and current research coworkers, alumni, faculty and administrators. Also present were staff members of the Research Office and family members. A short program was held during which Cindy, the editor, Chancellor George and Michael Finkes spoke. One of the features Mike introduced was a Treasure Hunt wherein students were given clues and had to identify certain individuals. This allowed for more interaction between the students present and alumni, faculty, etc. Gift certificate prizes were awarded. A memory book was signed by most of those present and a plaque was ordered, both of which were to be presented to Dr. Spilling in the fall.

Another feature this past year was that the CAC became an affiliate group of the UMSL Alumni Association and was able to receive some modest funding. Also planning begins this fall for the celebration of the 50<sup>th</sup> anniversary of the first graduating class. To that we will invite all alumni and hope especially that those from the very early days of UMSL will make a special effort to attend. It is to be held in the Solarium in the new Science Learning Center, essentially the new teaching laboratory building for our department and the Biology Department with some small space for the Physics Department.

We recruited some new members to the group this year but we are always looking for younger alums to join us. If anyone would like to join the group please let the editor know.

**THE FACULTY**

**James K. Bashkin** continues to be active in all aspects of department affairs, including running a busy research program, teaching and serving as Safety Coordinator for the Department. He presented a seminar this fall on his research on *Anti-viral Agents for Human Papillomavirus (HPV) and Polyomaviruses* in the department. The work involves preparing pyrrole-imidazole polyamides that bind to the viral DNA. A student from Srinakharinwirot University, Bangkok, Thailand (where **Sujitra Srisung** PhD 2007 is a faculty member), Kwang (Deer) Pattanakaset Wong Chanakarn, visited the Bashkin group and carried out research for three summer months. PhD student M. José Scuderi presented her work, "DNA-Binding Studies of Pyrrole-Imidazole Polyamides with anti-HPV activity" at Pacificchem 2015 in Honolulu in December. Co-authors were **Kevin J. Koeller** PhD 1994, Terri G. Edwards, Chris Fisher, Gaofei He, G. Davis Harris Jr. and Professors Dupureur and Bashkin. Another student **Edith Csiki-Fejer** defended her Ph.D. thesis in July and was teaching chemistry at UMSL this fall. His



Salvatore Pistorio PhD 2016, the 14<sup>th</sup> PhD recipient from the Demchenko group has accepted a position at Monsanto in St. Louis.

research group attracted additional students this year and published one research paper in collaboration with the Dupureur group and was awarded two patents. A notable feature of the year was the invited talk *From the MLH Green lab to other great adventures: Green Chemistry (no relation) and antiviral agents to prevent cervical cancer*, at the 80<sup>th</sup> Birthday Symposium for Professor M. L. H Green, with whom Bashkin received a D. Phil. in Organometallic Chemistry, at the Inorganic Chemistry Laboratory, Oxford University, May 14, 2016, Oxford, UK.

**Eike B. Bauer** tells us that Negar Jourabchian joined the Bauer group as a PhD student in January 2016. Misael Barcenas, who was a SEED student in 2015 and a STARS student in 2016 in the group, was admitted to the engineering program at Northwestern University. The group presented posters at the Missouri Organic Day and at the Graduate Research Fair at UMSL in April. He gave talks at Knox College (Galesburg, IL) and at Saint Louis University in September 2016, and will be giving talks at the University of Mainz (Germany) in December and at The University of Kansas in March 2017. This fall he went with colleagues Stine, Holmes and Bythell to watch a live concert of Slayer (a heavy metal band).

**Alicia M. Beatty** continues her research in Supramolecular chemistry. Her students Stephanie Cernicek and Matt Fischer will defend their dissertations in Spring 2017, and Carl Oberle is continuing his work on single molecule magnets

**Benjamin J. Bythell** continues his productive research program. During 2016 he published 6 articles and was awarded a grant for \$110,000 for "Utilizing Gas-phase Fragmentation Chemistry for Ultra-complex Mixture Analysis: Towards Petroleum Structural Characterization by Tandem Mass Spectrometry" by the ACS-Petroleum Research Fund.

**James S. Chickos** is as active as ever in research as he completes his 48<sup>th</sup> year on the faculty. He recently agreed to extend his service to the editorial board of the *Journal of Physical and Chemical Reference Data* for another 3-year term and also serves on the advisory board of the *Journal of Chemical Thermodynamics*. During the past year he was senior author on 7 research publications and will be lecturing in Thailand in January for a couple of weeks.

**Valerian T. D'Souza** continues to work on innovations for his first semester introductory chemistry course. He tells me that he has finally created a modular format of IntroChem 1 (Chem 1111, or Chem 11) where students will be able to

learn chemistry at a pace that is comfortable to them. Instead of taking 5 credit hours, from spring 2017 they can take 1 credit hour at a time.

**Alexei V. Demchenko**, Curators' Professor, continues his very active research program in synthetic carbohydrate chemistry. During 2015-2016, his research group, published 18 articles bringing the total number of publications to 150. Together with Keith Stine and Cristina De Meo (SIUE), he was awarded a \$2.1M grant from the NIH in August 2016. His group welcomed Crystal O'Neil, an NIH Post-doctoral Fellow, who joined his other post-doctoral research assistant **Prithika Yasomanee** PhD 2014 and seven doctoral graduate students: including **Michael Mannino** BS 2014. Former graduate students: **Papapida Pornsuriyasak** PhD 2006, is in Thailand at PTT Global Chemical while **James T. Smoot** PhD 2008 is still at Tate & Lyle in Chicago, **Archana R. Parameswar** PhD 2008, moved to Global Molecular Labs, and more recently to EliteMed Laboratories in Fort Worth TX, **Aileen F. G. Bongat** PhD 2008 is at Dextra (UK), **Laurel K. Mydock-McGrane** PhD is at Fimbrion Therapeutics, **Sophon Kaeothip** PhD 2010 is at PTT Global Chemical, **Hemali Premathilake** PhD 2011 has recently accepted a lecturer position at Portland Community College, **Sneha Ranade** PhD 2012 moved from industry to a teaching position at IITian's Prashikshan Kendra in Pune, India, **Scott J. Hasty** (PhD 2013 is an Assistant Professor at Lindenwood University, **Swati S. Nigudkar** PhD 2014 is at Monsanto, and his most recent graduate **Xiao Jia** PhD 2016, who taught Chem. 2633 this past summer, has joined EKG Labs. Updated information on current research, teaching, and outreach activity is available on the department website.

**Cynthia Dupureur** tells us that the baby boom among Dupureur group alumni extended even further into 2016: **Elena Vasilieva** PhD 2014 and her husband **Paul Gontarz** PhD 2015 have a new son. **Mary Keithly** BS 2010 had a busy year: She welcomed another daughter, completed her PhD at Vanderbilt and is now an Assistant Professor at Missouri Southern University. PhD student Jacqui Niederschulte and her husband will welcome their first child this fall. **Supratik Dutta** PhD 2010 joined Eli Lilly this year as a Research Scientist. Dr. Dupureur gave up directing the Biochemistry and Biotechnology Program to chair the Department.

**George. W. Gokel** and his coworkers have formed a company called Upaya Pharmaceuticals. It is based on technology developed in their lab that enhances antibiotic potency and, in a number of cases resensitizes bacteria to drugs



George Gokel holds the check presented for Upaya's Accelerate STL Challenge success. At right is Dr. Mohit Patel BSBB 2011, MS MSBB and third right is Saeedeh Negin PhD 2013



Jordan Rabus BS 2015 who is now in the PhD program and Ashley Wagoner BS 2016 who is working at Mallinckrodt in St. Louis, attending the SLC opening and ribbon cutting

to which they had developed resistance. *Saeedeh Negin* PhD 2013, *Mohit Patel* BSBB 2011, MSBB 2012 and a 2016 PhD in Biology, and Michael Gokel are partners in the company. They competed in the Accelerate STL Challenge and participated in the Startup Connection annual event. The photo (right) shows them receiving a check for \$5,000 to help develop their start-up. Professor Gokel was surprised by a 70th birthday party held at Norwood Hills Country Club in June. The guests included Chancellor Tom George and Barbara Harbach as well as current faculty, current and past coworkers, friends, and his three sons, two of whom came from Los Angeles and Sydney, Australia to attend the event.

**Bruce Hamper** has been working in collaboration with Merck & Co (Rahway, NJ) to develop new flow-through detectors for chiral pharmaceutical ingredients. Over the summer, undergraduate Robert Guilmett and exchange student Khrankhwan Khuangbun carried out research towards chiroptical detection by liquid chromatography or HPLC. The results describing development of HPLC methods for resolution of chiral phosphonates appear in *Chirality*, and included contributions from *Michael Mannino* BS 2014, *Melissa Mueller* BS 2014 and STARS student Liam Harrison. Undergraduate Brendon Sullivan contributed to a synthesis project resulting in the x-ray crystal structure of a novel acyloxy hydroxamic acid. They also had a unique collaboration with the Nelson-Atkins Museum of Art. Undergrad Chris Thomas carried out ion analysis of an Egyptian statue from the 5<sup>th</sup> dynasty in support of restoration efforts at the museum. Bruce has continued to develop and refine CHEM 1021; Beer Brewing: Chemical and Biochemical Principles. A second class, Beer Brewing 2, was added this fall to accommodate evening students and offer greater discussion of the brewing process. This led to the development of new labs for brewing and installation of a quarter-barrel brewing apparatus.

**Wesley R. Harris** has been serving as Interim Vice-Provost for Research and Graduate Studies since January 2016 but once the new Provost is appointed and Chris Spilling returns to that position, Wes will return to the position of Associate Dean of the Grad School.

**Stephen Holmes** had a very busy and successful year in research. He made invited presentations at UMKC and Pacificchem in Honolulu at the end of last year, at the University of Guelph, Brock University and Queens University, all in Canada in March and in July at the International Conference on Coordination Chemistry in Brest, France. He published research articles in the

*European Journal of Inorganic Chemistry* and in *Polyhedron*. Another article in press in the *Journal of Chemical Education* describing outreach (high school, ACS Science Coaches/STARS) with the assistance of graduate student **Philip Ferko** BS 2010, a new Chem. 1121 (Chem. 12) experiment with the help of graduate student Ben Quiggins, and portions of Chem. 4433 lab (343 lab) experiments currently in practice at UMSL. He has two students completing their PhD theses including **Philip Ferko**, BS 2010; two of his students received MS degrees and an undergraduate began working in his lab this past fall. He is seeking eager students for research activities. He was re-appointed to the editorial board of *Polyhedron* and was appointed the editorial board for *Magnetochemistry*. He helped his instrumentation needs by effecting the transfer of a Quantum Design PPMS magnetometer from UMKC to UMSL. The deal was brokered with assistance from Interim UMSL Provost (Spilling), UM System Interim Vice President for Academic Affairs, Research and Economic Development (Bob Schwartz), and Tony Caruso (UMKC Physics, Asst. Vice Chancellor for Research). He is seeking new users for this regional magnetometer facility and he has received \$12,500 from the College of Arts and Sciences to assist in setting it up. He is also seeking donations to acquire a helium recovery system for the instrument to reduce costs. Further assistance from the College, allowed the acquisition of two instruments for the 4433 laboratory, a Q2000 differential scanning calorimeter and a Q500 thermal gravimetric analyzer.

**Rensheng Luo** tells us that the three NMR spectrometers including the Bruker Advance 300, the Varian Unity Plus 300 and Agilent DD2 600 will move to a new lab located at room SLB216 in the new Science Learning Center in a few months. He is working with a design team. The old Bruker ARX 500 spectrometer was decommissioned this past year. To cover facility maintenance costs, the internal use rate increased to 7~12\$/hr in October, 2016. This year, he was co-author in 7 publications. On the personal side, his daughter graduated from the University of Pennsylvania and she currently works at Brigham and Women's Hospital at Boston.

**Lynda M. McDowell** joined the UMSL Chemistry faculty in 2016 as Assistant Teaching Professor. She had been teaching Physical Chemistry part-time for us. She received her B.A. degree from the University of Minnesota, and her Ph.D. from Washington University in St. Louis with Professor Dewey Holten. Following receipt of her PhD degree she held a postdoctoral fellowship at Washington University with Professor



Janet Wilking with her graduate student Stephan Germann and Wes and Marion Harris



Professor Vally D'Souza



Lynda M. McDowell joined us as a Assistant Teaching Professor in 2016.

Jake Schaeffer, and held faculty appointments in Chemistry and Medicine more recently there. She has published extensively in the area of electron transfer in biological systems as well as Rotational Echo Double Resonance NMR Spectroscopy (REDOR) including applications to biological chemistry. Her most recent work was in the area of glycosaminoglycans. She has also taught at Saint Louis, Lindenwood and Maryville Universities in St. Louis. She will be teaching chemistry 1121 (Chem.12) and Quantitative Analysis.

**Michael R. Nichols** continues to investigate Alzheimer's Disease (AD)- and inflammation-related research. New projects focus on development of an AD-selective antibody and an investigation of a recombinant inflammasome protein complex. Current doctoral students are Ben Colvin (6<sup>th</sup> year) Lisa Gouwens (5<sup>th</sup> year) and Nyasha Makoni (2<sup>nd</sup> year). Undergraduate researchers this past year included a biology student, two seniors who graduated **Mudar Ismail** BSBB 2016, **Elizabeth Ridgway** BS 2016, and four other undergraduates in the BB (biochem/biotech) program. Ben and Dr. Nichols both attended the American Society for Neurochemistry meeting in Denver. Findings from the group have been published in *Archives Biochem Biophys*, *J Neurosci*, and *Brain Research* this year.

**James J. O'Brien** continues to serve as Director of the St. Louis Section of the ACS and was recently re-elected. He has been active in the Section for many years and currently chairs the Midwest Award Committee. His research in high-resolution molecular spectroscopy using intracavity laser absorption and Fourier transform emission techniques continues and this past year one of his publications included two recent alums, **Courtney Gipson** BS 2015 and **Ethan Grames** BS 2016. He recently secured funding from the National Science Foundation.

**Nigam P. Rath** continues to run a very productive X-Ray Diffraction Facility and he soon will be involved in the submission of a NSF proposal for purchase of a new single crystal x-ray diffractometer. He coauthored 21 publications in 2016 and interestingly, one from Washington University Medical School includes two alumni, **Jan (Rohrbacker) Crowley** BA 1975 and **Laurel Mydock-McGrane** PhD 2010. Of further interest to the editor is that a search of *Scifinder* indicates that Dr. Rath's top co-author is the editor and that former chairs Gordon Anderson and Chris Spilling are among the top 10.

**Christopher D. Spilling**, after completing 11 plus years as Department Chair, was appointed Interim

Vice Provost for Research and Graduate Studies and Dean of the Graduate School on Jan 1 2016 and then Interim Provost and Vice Chancellor for Academic Affairs on July 1, 2016. When a new Provost is appointed he will continue as Vice Provost for Research and Graduate Studies and Dean of the Graduate School. He is still involved in research, managed to publish during 2016 and still has external funding from the National Science Foundation. His research group consists of five graduate students and three undergraduates. He traveled this past year including trips to the ACS Meeting in San Diego as well as to South Africa, Russia and England. He is most proud to now be a grandfather. Andrew and Melissa Spilling were proud to announce the birth of a son Benjamin Andrew Spilling on August 31. Ben was christened aboard the newly commissioned USS Detroit and his name will be inscribed in the ship's bell.

**Keith Stine** completed a very busy and successful year in teaching, research and campus affairs but it was marred by some serious personal setbacks. Keith lost both parents this year. His father Henry Stine died in September 2015 and his mother Fay Stine passed away in September 2016. In spite of these personal challenges, this was professionally a very active and successful year. Several research publications appeared or were accepted. Two are in the *Journal of Electroanalytical Chemistry* and another was in *Journal of Organic Chemistry*. The work involves collaboration with Professor Demchenko and coauthors include current postdoc **Jay Bhattarai** PhD 2015, former graduate students **Binod P. Pandey** PhD 2013, **Abeera Sharma** PhD 2014 and **Swati Nigudkar** PhD 2014. An updated version of a chapter on enzyme immobilization on nanoporous gold was published in a volume of *Methods in Molecular Biology* (Springer) entitled *Enzyme Stabilization: Methods and Protocols*. A chapter concerning self-assembled monolayers of carbohydrate derivatives was accepted for publication by the on-line publisher Intech co-authored with current and former students. His student coworkers this past year included three non-thesis M.S. degree students, a Physics thesis M.S. student, five undergraduates and a high school STARS student. Research on a number of aspects of nanoporous gold continues, including collaboration with Professor Demchenko's lab on using the material as a support for carbohydrate synthesis. This work has expanded to include monolithic polymeric materials and an NIH U01 grant was recently received by Professor Demchenko on which Dr. Stine is a co-PI. Work continues on another jointly held NIH R01 grant. He also completed a two year period as Chair of the Faculty Senate and University Assembly in April.



The photographers: Drs Bauer and O'Brien with Campus photographer August Jennewein

**Janet Braddock-Wilking's** research group has focused on a NSF funded project to synthesize luminescent silicon and germanium ring systems such as sila- and germafluorenes. Research continues on her UM-Fast Track funding for the study of germafluorene systems for OLED components. She gave an invited talk at the 47<sup>th</sup> Silicon Symposium in June in Portland, Oregon on recent work on the synthesis and characterization of new luminescent germa- and silafluorenes. **Douglas Hammerstroem** PhD 2015 and two current PhD students, Stephan Germann and Michael Bengston have worked with her on these projects. She traveled to Utah in late May with her husband Bruce and son Kevin to visit and hike in 5 National Parks. Kevin is still studying in the engineering program at Missouri Science and Technology. Their son, Alex is working on his thesis and will graduate in December from Boston University with a MS degree in Journalism.

**Chung Wong** tells us that his former student **Paul Gontarz** PhD 20 took an appointment as a Bioinformatician at Washington University School of Medicine in January this year. Former high-school student researcher Marshal Huang has entered the PhD program in bioinformatics at UM-Columbia. Undergraduates participating in research this year include Rahmah Ghazal (BB), Mercedes Hill (Biology), Curtis Stump (Chem & Biochem), and Qinwei Zhuang (BB). Graduate students include **Howard Mayes**, BS, BSBB 2015, Ananya Mukherjee (BB), Andrew Sime-roth (BB), and Shireen Yalda (Chem & Biochem). In the summer, four high-school students carried out research in Chung's group through the Research and Engineering Apprenticeship Program (REAP) sponsored by the US Army Research Office. They were Lyndsey Madkins, Evan Montgomery, Sonnie Nguyen, and Precious Taylor.

**Zhi Xu** teaches both Physical Chemistry labs, and conducts research on Ultrasensitive Spectrophotometry and non-invasive blood chemical detection.

### **Emeritus, Retired, and Former Faculty**

**Charlie Armbruster** and the editor were in touch recently. Charlie is doing well and now plays bridge every afternoon. The editor and **Don Kaesser** BS 1967 will visit Charlie in January 2017.

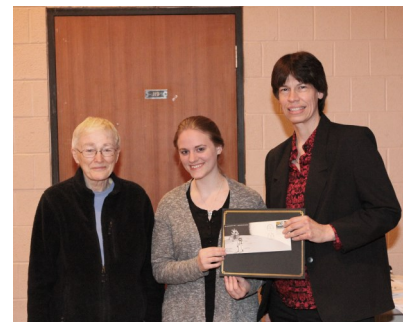
**Lawrence Barton** has enjoyed contacting class of 1967 graduates recently and at the moment is trying to arrange an appropriate celebration for the 50<sup>th</sup> Anniversary of the first graduating class here. He is reducing his commitment to the national ACS, starting in 2018, by not filing for

Councilor but will continue on the Council Policy Committee for one more year. He continues to advise undergraduate students, help maintain the department website and the graduate brochure as well as arrange the Robert W. Murray and the Distinguished Alumni Lectures. However his main activity still consists of writing the UMSEL CHEMIST and maintaining contact with alumni. He continues as an Ex Officio member of the UMSEL Alumni Association Board and has found more work as the President of the UMSEL Retirees Association. He enjoys his activity with the Chemistry Alumni Council but looks to find someone to replace some of his work there in the future. He and his wife **Patricia J. Barton** BA 1978 continue to spend several months per year in Florida playing golf and enjoying the weather. During 2016 he had two holes-in-one at Glen Echo Country Club where his handicap ranged from 14—18 during the year. On the down side, he was in England in July to attend the funeral of his younger brother Peter. It is clear that if Peter had not smoked he would be playing golf today! The editor continues to discourage colleagues, students and friends from smoking but that advice, sadly, often falls on deaf ears.

**Joyce Y. Corey** was as expected very active in 2016. She attended the 47<sup>th</sup> Organosilicon Symposium which was held at Oregon State University from June 19<sup>th</sup> through the 22<sup>nd</sup>, flew home for one day and then flew to Portland, Maine to begin her usual 4 weeks in the same cabin she has rented since 1976. She has been very busy writing her 3<sup>rd</sup> review on reactions of hydrosilanes with transition metal complexes but it took an additional year or so just to get it to publishable form (145 pages and 400+ references). She is now working on a piece for *Dalton Transactions*, for a special issue on "Silicon Chemistry: Discoveries and Advances", which is due Feb. 1, so she says she really must get moving. In November, she returned from Montpellier where she and her late husband and UMSEL colleague Gene spent part of a sabbatical year in 1982 at the University of Science and Technology of Languedoc (now the University of Montpellier II). She attended a Memorial Symposium for Dr. Robert Corriu who ran the lab and supervised about 50 scientists and technicians. He died in February, 2016. Joyce was asked to speak about their time there. She was the only person to speak in English at the Symposium – she says her French is limited to about 10 words! She stayed with friends she had met in 1982 and with whom she traveled in the 90s and onwards. They visited a museum in Rodez for the display of works by the modern artist Pierre Soulages. They then continued north on small roads to the village of Conques which literally sits on a hill-



**William R. Stewart III**, BS 2016, recipient of a Lawrence Barton Scholarship with Dr. Barton at the Donor Reception in April



**Drs Corey and Dupureur** with **Victoria Rogers**, recipient of the Eugene and Joyce Corey Scholarship



The new organic chemistry laboratory  
in the Science Learning Center

-side. The church there was built in the 1200's. Soulages was commissioned to replace the 53 stained glass windows. To say the least, the windows are unique and very modern.

**David Garin** was pleased to learn that the LibreTexts project developed at the Univ of Cal-Davis has requested to include the online organic chemistry laboratory manual (<http://www.umsl.edu/~orglab/>) he developed with Professors Chickos and D'Souza. The project is generating an open access resource to facilitate post-secondary education with an emphasis on free textbooks (<http://LibreTexts.org>). Garin would also like to know if anyone wants his extensive collections of *Al-drichimica Acta* and back issues of the St. Louis ACS newsletter, the *Chemical Bond*.

**Harold H. Harris** and Mary Harris are celebrating their 50<sup>th</sup> anniversary in 2016. After the two of them spent a couple of weeks in Alaska, at Denali National Park and the less-visited Katmai National Park (bigger than Yosemite and Yellowstone combined, but far less visited), they had a family reunion on neutral territory (Kentucky) with their children, and Mary's family. They hope to visit Hal's brothers next year in California. Hal continues to contribute to the University Research Board and the Creve Coeur Energy and Environment Committee, and has been dragged onto the Board of the Retirees Association. He has also been collaborating with Jim Chickos. They submitted their second paper on thermodynamics together this year.

**Jane A. Miller** received an *Outstanding Alumnae Award* from her alma mater Agnes Scott College, in spring 2016. We have not been in touch but saw her at the 2016 Robert W. Murray Lecture Banquet in March.

**Rudolph E. K. Winter** tells me he is alive and kicking, and didn't have anything more to add. The Winters and the Bartons got together in Fort Myers in late November and the trio of old-timers Winter, Hal Harris and Barton have lunch together in the department a couple of times per week. Rudi continues to work in the mass spec lab with Joe Kramer but bemoans the lack of support for the aging facility.

### SCHOLARSHIPS AND FELLOWSHIPS

**The Charles W. Armbruster Undergraduate Chemistry Scholarship** honors Dr. Charles W. Armbruster, who served as Chair of the Division of Science and as the first department chair. He served the University from 1962-1998. The Scholarship is given to incoming Missouri resident undergraduate students, transferring into the

department from other universities and community colleges. Awards for 2016-17 went to two students: **Rahmah Ghazel and Thao Pham**.

**The Lawrence Barton Scholarship** is designed primarily for junior chemistry majors who are first generation college students and who have financial need. For 2016-17 scholarships were awarded to **Joseph Frye, Austin Stelling and Justin Weatherford-Pratt**.

**The Barbara W. Brown Fellowship for Women in Chemistry** is designated for students who are women over the age of 24. It was established by **Dr. Barbara (Willis) Brown** BA 1984 in 2000. Barb has worked on behalf of and supported the department for many years. The 2016-2017 fellowship went to **Jenna Schuler**.

**The Eric G. Brunngraber Undergraduate Research Fellowship** honors the late Dr. Eric G. Brunngraber. He was the first regular biochemistry faculty member (1987) but passed away shortly thereafter. He had been associated with the department for many years and directed the research of undergraduate and graduate students. For 2016-17 the fellowship went to **Nichole M. Lattina and Brandon Wood**.

**The William and Erma Cooke Memorial Scholarship** has been one of the major endowed awards in the Department since 1990, and was one of the first such endowments at UMSL. It is designed primarily for sophomores. It was endowed by **Dr. Dorothy C. Cooke** BS 1971, in honor of her parents William and Erma Cooke, in 1989. **Nicholas Glenn** and **Curtis Stump** received scholarships for 2016-17.

**The Eugene and Joyce Corey Scholarship Fund** is relatively new and goes to an outstanding chemistry undergraduate who has excelled in service to the department. Such service can include one or more of the areas: research, undergraduate teaching, student organization leadership and other contributions as deemed appropriate by a faculty committee. Merit is a principal feature among the selection criteria and need is a secondary criterion. Awards are made for a full academic year and candidates may not receive more than one Eugene and Joyce Corey Scholarship. It was established to honor the late Eugene R. Corey who served on the faculty from 1969 to 1988, and Professor Emerita Joyce Corey. The first such award was made to **Victoria Rogers**.

**The M. Thomas Jones Memorial Fund** was the first endowment that recognizes performance by graduate students. It honors Dr. Jones who served in faculty and administrative positions for 19 years including serving as Deputy Chancellor.



Hal Harris cycling in Naples, FL  
with his son Matt in December.

It is funded by his widow Patricia Jones and family and was established initially by contributions from colleagues and students. 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 2015-2016 awards were made to **Carlos Castaneda**, **Maria Scuderi**, **Allan Alla** and **Matthew Fischer**.

**The Stephen S. Lawrence Scholarship** was established at the end of 2014 by *Steve Lawrence* BA 1982, PhD 1989. It is awarded to 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. The first award was made to **Alana Tucker**.

**The Rath Family Scholarship** was funded by Professor Nigam Rath and his family and is for full-time undergraduates studying STEM at UMSL and preference may be given to Chemistry/Biochemistry students. They must have a GPA of 3.0 or better and a minimum ACT score of 24. Preference will be given to a student who demonstrates financial need and may be given to students who are the first generation in their families to attend college. Award recipients will be encouraged to participate in peer-mentoring, tutoring, or similar programs in the STEM disciplines. The first award was made to **Victoria Rogers**.

**The Hal and Mary Harris Scholarship** is the most recent one established. Recipients must be juniors seeking a degree in chemistry with a minimum GPA of 3.0 and enrolled in a minimum of 12 credit hours. The first recipient of this award was **John Zhou**.

**Friends and Alumni Scholarships** are need-based and were established after an appeal made to alumni and friends and matched by the University in 2005.

**The John J. Taylor Scholarship** was established by his family. **John J. Taylor** BA 1979 had directed funds from his estate to a chemistry scholarship. He was a long-time Mallinckrodt employee, was very supportive of the department and died in 2004.

**The Monsanto Biochemistry and Biotechnology Scholarship** was established in 2005 with the help of **Michael Finkes**, BS 1973, MS 1978 who

encouraged his employers to provide funds which would be matched by the University. It is awarded to non-freshmen in the BS program in Biochemistry and Biotechnology. The 2016 awardee was **Sidnie Campbell**.

**The Ceil Degutis Award for Research Excellence in the Center for Nanoscience** was endowed by George and Kathryn Gokel in memory of her grandmother. The award is given to a deserving graduate student (or recently completed graduate student) "who has made a significant contribution to the field of nanoscience, broadly defined." The awardee receives a cash award of \$500 and has his or her name inscribed on the plaque in the Center for Nanoscience lobby. An award was not made for 2016-17.

## STUDENT AWARDS FOR PERFORMANCE

### Undergraduate

The award for the *Outstanding Student in Introductory Chemistry* went to **Ashwin Spencer** 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 **Justin Weatherford-Pratt**; the *American Chemical Society Award for Organic Chemistry* went to **John Zhou**; and the *ACS Award for Analytical Chemistry* went to **Steven Skaggs**. The *ACS Awards in Inorganic and Physical Chemistry* went to **Elizabeth Ridgeway** and **Andrew Hoffman**, respectively. The *American Chemical Society-St. Louis Section's Outstanding Junior Award* went to **John Zhou**. The award was presented at the Annual ACS High School and College Awards Night in April. **Elizabeth Ridgeway** received the **Alan F. Berndt Outstanding Senior Award**. The 2016-17 Undergraduate *Chemistry Aid to Education Awards* were given to **Magnus Creed**, **Lorna Espinosa**, **Cory Hubert**, **Alexander Lyss**, **Hailong Mo**, **Brandon Wood** and **John Zhou**.

### Graduate

The 2015-16 *Outstanding Graduate Teaching Assistant Award in Memory of Jack Coombs* was awarded to **Carlos Castaneda** and **Jack Harms**. **Carolyn Baird** was honored with the *Outstanding MS Student Award*. *Graduate Student Research Accomplishment Awards* went to **Chase Gobble** and **Salvatore Pistorio**. Recognition was accorded to 2016 *Graduate School Fair Research Poster* winners 1<sup>st</sup> **Salvatore Pistorio**, 2<sup>nd</sup> **Hyung** and 3<sup>rd</sup> **Satsawat Visansinkul** and to *Spring 2016 Graduate School Dissertation*



**Dr. John Bookstaver** BA 1080 is Dean of Business, Science, Education, Math and Computer Science at St. Charles Community College



Mary and Hal Harris with Cindy Dupureur and John Zhou, recipients of the Harris Scholarship at the Student Awards Ceremony in May





Dr. Karen L. Wooley, the 20th Annual Robert W. Murray Lecturer

*Fellowship Recipient Salvatore Pistorio.*

### THE ROBERT W. MURRAY LECTURE

On March 20, 2016 Professor **Michael J. Krische**, of the Department of Chemistry at the University of Texas-Austin, Director, Center for Green Chemistry and Catalysis, *Robert A. Welch Chair* in Science and a faculty member in the Environmental Science Institute presented the Nineteenth Annual Robert W. Murray Lecture. His title was: *Formation of C-C Bonds via Catalytic Hydrogenation and Transfer Hydrogenation*. We are delighted to announce that the 2017 lecture will be given by **Dr. Karen L. Wooley**, W. T. Doherty-Welch Chair in Chemistry, University Distinguished Professor at Texas A&M University where she holds appointments in the Departments of Chemistry, Chemical Engineering and Materials Science & Engineering. She also serves as Director of the Laboratory for Synthetic-Biologic Interactions.

### DISTINGUISHED ALUMNI LECTURE

The 29<sup>th</sup> Annual Distinguished Alumni Lecture for 2016 was **Michael J. Finkes** BS 1973, MS 1978. Mike is retired from Monsanto where he served as a Quality Insurance Specialist. He is *Immediate Past President* of the UMSL Alumni Association, a former member of the Chancellor's Council and has been a resource to the department for many decades. His lecture title was "My Journey with Monsanto: from Herbicides to GMO's," Along with **Barbara W. Brown** BA 1984, he and the editor established the Chemistry Alumni Council in 2006. The 2017 Lecture will be given by **Dennis Parazak** BS 1982, PhD 1996. Dennis has an interesting and successful story to tell.

### EDITOR'S COLUMN (LAWRENCE BARTON)

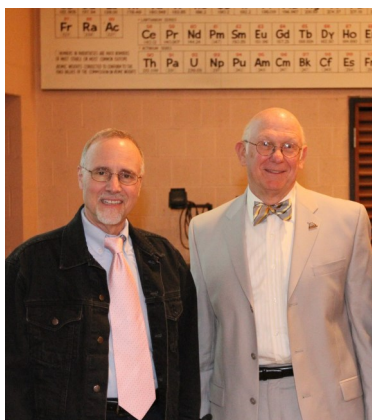
This will be quite different from recent columns in which I described the history of the department, as I see it, in five-years sections (lustrums). I got as far as 2010 so I have decided to hold off before writing about the history of such recent times. Perhaps someone more connected to the department in recent times will take over this role. However, I can't neglect mentioning the loss of former colleagues and friends during that period. In 2012 we lost Bob Murray, Randa Schneider and Lois Brunngraber. Bob was perhaps our most distinguished colleague on the campus dur-

ing his years here. Randa was a friend to all as she helped students and faculty members during her 19-year stint in the department office and Lois, the widow of our late friend and colleague Eric Brunngraber, was a great supporter of the department. More recently we lost Joe Flunker, our glassblower, and also Bruce Burkeen our former machinist/electronics technician who was the link to our late beloved Ted Windsor.

These are changing times for the department and for the University. The 2015-16 academic year saw that largest graduation class in campus history. According to Chancellor Tom George we awarded 3,199 degrees during the academic year. UMSL now has more than 95,000 alumni – of whom about 72 percent live and work in the St. Louis region. No university has more alumni in the region. Within the department similar successes were observed. We had our largest ever number of graduates when 99 degrees were awarded during 2016-17. Clearly the number was bolstered by the new very popular and successful biochemistry and biotechnology (BB) options offered jointly with the Biology Department, however, all numbers were up. There were 33 BA/BS degrees in chemistry and 34 BS degrees in BB. Similarly there were 17 MS degrees in chemistry and 11 MS degrees in BB. Our facilities have finally improved substantially as the Science Learning Center was completed, replacing all the teaching Laboratories in the department, and some instrumentation space including the NMR Lab. This will be followed by the renovation of Benton Hall thereby providing better office space, lecture rooms etc. Much disruption is expected as colleagues move to temporary quarters. Even now the space will be unrecognizable to most of you. A lecture theater was removed from the Research Wing to accommodate the beautiful solarium. Some new teaching lab equipment has been purchased, or at least ordered and the whole facility is certainly worth a visit.

On that note, I remind you that in May there will be an opportunity to visit the new laboratories as we plan to celebrate the 50th Anniversary of the first graduating class. The building is ideal for such an event. There is a large solarium/entrance way stretching from the main entrance to the Science Complex facing north, with large steps going all the way to the second floor. More about that later on.

As Cindy noted in her remarks on page one, the past year has seen major budget cuts on the campus. The department seems to have been spared major damage but there has been some. The



Chancellor George with **Michael Finkes** BS 1973, MS 1978 the 29<sup>th</sup> Annual Distinguished Alumni Lecturer

office staff numbers have dropped from 3 fulltime positions ten years ago, to about one and a half now. Regular faculty positions have been lost due to the lack of full replacements for Chris Spilling and Wes Harris who are currently administrators. Also, John Gutweiler, who had been with the department on a non-tenure track since, 1972 retired. We are delighted to have two non-tenure track colleagues, Bruce Hamper who had been with us since Wes Harris moved to the graduate school and our new colleague Lynda McDowell, who is described elsewhere. There are now only 16 full time regular faculty members whereas in 1997 we had 18. Several aspects of the department have been curtailed somewhat including the seminar program, travel and entertainment expenses, technical and instrumentation support but student support seems to be in reasonable shape. We certainly appreciate the confidence the administration seems to have in our programs, students and faculty that led to our not being hit as hard as some other units.

But let's not dwell on problems as we plan to celebrate the 50<sup>th</sup> Anniversary of our first graduating class. In 1966 Dave Garin and I joined a group of 6 full time regular faculty members and a couple of part-timers. Dave and I were not much older than the students in the senior class. Other faculty colleagues who had joined the department earlier were of course Charlie Armbruster who helped set up UMSL and especially the science departments as he served as Director of the Division of Science for four years and as chairman of the department for another seven years. Also, here in those days were David Larsen, Stuart Weidman, Marcel Halberstadt, Alan Berndt and Jane Miller. When Dave Garin and I were interviewed, there was scaffolding on the inside of Benton Hall and the lab wing had just been opened in January 1966 to accommodate the seniors remaining lab courses.

I have reached out to the 13 students who graduated in 1967 and have been able to communicate with all but three of them within the past six weeks. Looking back, it is not clear to whom credit goes for the remarkable successes of our very first class but it certainly was a very successful group of students. From my perspective, most of the credit goes to those talented students themselves and to Charlie Armbruster. Charlie encouraged all of them to go to graduate school in chemistry and assigned faculty members as mentors to help achieve that goal. My memory does not serve me well enough to recall the effectiveness of the mentoring but of the 13 students in that class at least 10 obtained advanced degrees, and all of them went on to very successful careers in industry or government work.

Most of the men were drafted and in some cases their service led to technical careers that may not have surfaced had they not been in service. I will not repeat what was described at the beginning of this volume except to repeat that it represents a spectacular record. What a great start to our program we saw when those young faculty members and those not much younger seniors went to the Commencement which was held at the old Kiel Opera House, now the Peabody Opera House.

I have highlighted the successes of that first class in this column but I could write similarly about the succeeding classes. What a record we can boast for all our graduates. To quote Dean Yasbin who said recently: "Of course it was pointed out that UMC is the Flagship. I felt obliged to remind everyone that UMSL is the Starship (boldly going where no one has gone before)."

The department is doing very well at the moment. Several faculty colleagues received federal grants this year, including Mike Nichols from the NIH, Ben Bythell from the ACS/PRF, Alexei Demchenko/Keith Stine from the NIH and Jim O'Brien from the NSF. We have also hired a part time glassblower to replace the late Joe Flunker. Matt Reinsch is gearing up to work in the new glass shop in the SLB designed by Joe a few years ago. Of interest surely is that Bruce Hamper's brewing course has really taken off this year, with two offerings for non majors to learn about chemistry, microbiology and other science topics. A new program in biochemistry/biotechnology, a dual degree (BS/MS), was successfully launched in F2015 and now has 3 students enrolled.

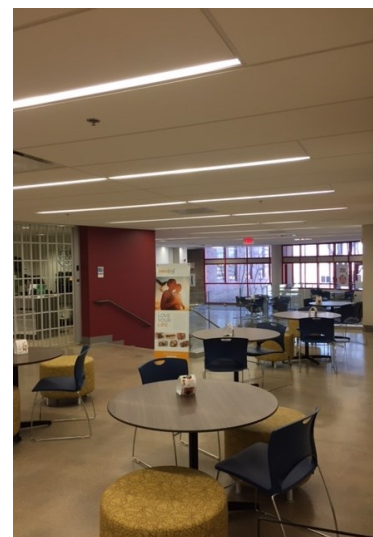
Clearly we have lots of good stuff to report. We can also boast about the excellent support our alumni provide us, not only in helping with activities, etc., but in making contributions to our scholarship programs. We truly appreciate that support and of course our students really need assistance in these difficult times. Please keep in touch with us and tell us about your successes. They only go to enhance our program's reputation and thence the value of your and future graduates' degrees. Happy 2017 to all my friends—you alums of the department!

### Thanks to our Generous Contributors 2016

Below we list the individuals, chemistry alumni and friends who made contributions to the department including memorial and scholarship funds processed through December 18, 2016. We are most grateful for your support. If we missed out your name, we apologize and hope



*Dean Ronald Yasbin speaks to those assembled for the Grand Opening of the Science Learning Center in November.*



*View from the south end of the solarium on the first floor of the Science Learning Center building towards the northern entrance of the Science Complex*

You understand that we are fallible. Very recent gifts will appear next year.

Mr. Nicholas A. Ahlemeyer  
 Mr. Hamza Ahmed  
 Drs. S. Massoud and Elizabeth A. Amin  
 Dr. and Mrs. Dennis M. Anglim  
 Charles W. Armbruster, Ph.D.  
 Dr. and Mrs. Rajiv M. Banavali  
 Dr. and Mrs. Lawrence Barton  
 Dr. Eike Bauer  
 Ms. Amie M. Beerman  
 Ms. Dana Benedicktus  
 Mr. Andrew G. Breite  
 Mr. Lyle W. Brizendine  
 Barbara W. Brown, O.D.  
 Edward H. Brunngraber, MD  
 Dr. Jacqueline R. Szmuszkovicz  
 Mr. and Mrs. Eric H. Brunngraber  
 Dr. and Mrs. Vincent H. Chang  
 Dorothy C. Cooke, M.D.  
 Mr. Kevin R. Criscione  
 Ms. Sheena L. Crompton  
 Dr. Jack M. and Ms. Randle Shoemaker-Crump  
 Mr. Matthew T. Daniels  
 Ms. Pranathi Dasari  
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 Mr. Terrence J. Elmendorf  
 Mr. Romain Etwaroo  
 Shiyue Fang, Ph.D.  
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 Mr. and Mrs. Michael J. Finkes  
 Ms. Deborah L. Flores  
 Dr. David L. Garin and Ms. Peggy Hermes  
 Dr. and Mrs. Gregory P. Genova  
 Mr. Wesley W. Gerber II  
 The Honorable P. Wayne Goode  
 Mr. and Mrs. Lee L. Gori  
 Ms. Jennifer A. Grabow  
 Mr. and Mrs. James K. Grant  
 Mr. Keith Bradford Guller  
 William A. Hanshaw, Ph.D.  
 Ms. Kathryn A. Harder  
 Dr. and Mrs. Harold H. Harris  
 Mr. Michael A. Hauser  
 Ms. Cynthia S. Holmes  
 The Boeing Company  
 Mr. Raymond and Dr. Virginia Houserman  
 Mr. and Mrs. Richard A. Hoyt  
 Mr. Kyle D. Igel  
 Mrs. Michelle Insko  
 Dr. and Mrs. Gary S. Jacob  
 Ms. Jennifer Jezek-Taussig  
 Ms. Shari M. Keith  
 Dr. and Mrs. John R. Kolb

Ms. Beth Krumm  
 Stephen S. Lawrence, Ph.D.  
 Mr. Martin F. Leifeld  
 Ms. Patricia Lenz Jones  
 Ms. Yanina L. and Dr. Brian -Grimmond  
 Mr. Can Li  
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 Kenneth R. Mares, Ph.D.  
 Mrs. Celeste S. Marx  
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 Dr. and Mrs. Rolf Mueller  
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 Mr. and Mrs. James G. Murphy  
 Dr. and Mrs. Harry W. Orf  
 The Honorable Karen A. Pierre  
 Mr. Michael A. and Dr. Janet D. Place  
 Mr. and Mrs. Michael G. Provance  
 Ms. Cherise S. Pruitt  
 Mr. Gregory W. Przygoda  
 Mrs. Suchitra and Dr. Nigam P. Rath  
 Dr. and Mrs. William P. Ridley  
 Mr. Rodger O. Riney  
 Mr. Bruce E. and Dr. Vicki M. Ritts  
 Ms. Shannon Schultz  
 Mr. Daniel Sherling  
 Drs. William R. and Dawn L. Shiang  
 Mr. Stewart Shilcrat  
 Mr. Scott H. Simmons  
 Sigma-Aldrich Corporation  
 Mr. Arvell J. Steeples  
 Mr. Thomas W. Thompson  
 Blanche M. Touhill, Ph.D.  
 Mr. and Mrs. Dan C. Tucker  
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 Mr. Mohammad K. Uppal  
 Mr. Angelo Vangel  
 Dolores F. Vermont, Ed.D.  
 Mr. Carl T. Von Till  
 Mr. Michael J. Walkonis  
 Mr. Michael H. Walsh  
 Mrs. Kimberly Wells  
 Ms. Laura L. Williams  
 Dr. Shuguang Wu and Bo Liu  
 Hui Zhao, Ph.D.  
 Henghu Zhu, Ph.D.



*Millennium Center 2016*

#### ACKNOWLEDGMENTS

I wish to thank Eike Bauer, Jim O'Brien, my cellphone and August Jennewein, the University photographer, for the photographs and **Patricia Barton** BA 1978 and Dave Garin for proofreading.



*View of the Science Complex 2016,  
 Benton Hall from the north*

**UMSL Chemistry Alumni Fund**

Enclosed is my contribution of \$ \_\_\_\_\_ Yes I work for a matching gift corporation.  
 \_\_\_\_\_ I would like information about bequests to the University.

Designation for funds:

- Chemistry Department Endowment \_\_\_\_\_
- Robert W. Murray Lectureship \_\_\_\_\_
- Eugene and Joyce Corey Scholarship Fund \_\_\_\_\_
- E.G. Brunngraber Fellowship (undergraduate research) \_\_\_\_\_
- Charles W. Armbruster Scholarship \_\_\_\_\_
- Lawrence Barton Scholarship \_\_\_\_\_
- M. Thomas Jones Memorial Fund (graduate student support) \_\_\_\_\_
- Barbara Willis Brown Women in Chemistry Scholarship \_\_\_\_\_
- Outstanding GTA 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

Or contribute online at the UMSL website by clicking GIVE on the upper right of the site.

**UMSL CHEMIST  
 FALL 2016**

**Please join the UMSL  
 Chemistry Alumni  
 Group on LinkedIn  
 for announcements of  
 alumni activities and  
 other department  
 events**

**INFORMATION UPDATE SPRING 2016**

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:  
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News of other alumni:  
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*The Wellness Center, now fully operational is a popular destination for students, staff and faculty.*