



UMSL CHEMIST

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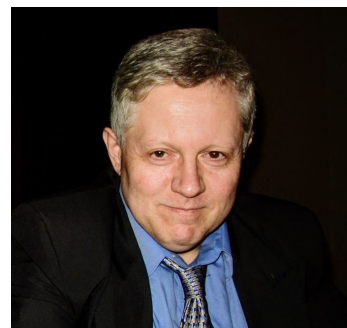
Department of Chemistry and Biochemistry

Chairman's Message - Keith J. Stine

I write to you just a little more than half way into my first year as Department Chair. I look forward to working for the interests of our students, staff, faculty and alumni. I am also pleased to be working with Mike Nichols as Associate Chair, which is a new position for our Department. I extend much thanks and appreciation to the previous Chair, Cynthia Dupureur, for her generous help with the transition. We also owe her thanks for overseeing not one, but two challenging moves as the Science Learning Building opened as did the renovated Benton Hall during her time as Chair. The major news event of the year was the retirement of our longest serving Chancellor Tom George and his wife Curators' Professor Barbara Harbach. This is covered later in the Editor's Column. In 2019, we welcomed Jasmine Maloney as our new office support specialist, and Leah Trimble as our business support specialist so we now have excellent main office support. In 2019, Jack Harms joined our faculty as Assistant Teaching Professor after having completed very impressive PhD research in Jim O'Brien's lab. Jack recently revitalized our chemistry club and is designing new and innovative experiments for undergraduate labs. Zhi Xu retired at the end of August 2019, and we remember his significant achievements in invention and entrepreneurship. Ben Bythell left in August 2019 and took a position at Ohio University and we wish success to him and his students. The Department is currently making use of the excellent mass spectrometer

that he left behind, as we had an important need for basic measurements to support our synthetic chemists. We are also awaiting receipt this year of \$1M worth of major microscopy and other equipment for the MIST lab, secured under a multi-investigator proposal led by Cynthia Dupureur. Several faculty colleagues have won prestigious awards this year, including Alexei Demchenko a Fellows Award from the Saint Louis Academy of Science, George Gokel a campus teaching award, Emeritus Professor David Garin the inaugural Retiree of the Year Award and Jim O'Brien was among the 2019 class of ACS Fellows. Jim Chickos, who has been at UMSL for a remarkable 51 years, will be retiring this year but he is keeping his lab for at least a year. Our faculty continue to receive major grants and patents and publish in prestigious journals, and our graduates continue to be successful wherever they go to in industry, advanced study and professional fields. Our Department and its students and alumni should be proud of all of their accomplishments and there is undoubtedly more success to come.

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Editor:
Lawrence Barton



Dr. Keith Stine was appointed Department Chair in August 2019



*Late-breaking news.
Dr. Kristin Sobolik was appointed our 8th Chancellor in April 2020.*



Chancellor Thomas F. George and Curators' Professor Harbach at their retirement party in August 2019 in the Touhill Performing Arts Center

GOLDEN REUNION CELEBRATION: THE CLASS OF 1969

This event, the third in a series, has begun to mature and we substantially expanded it by not only honoring the class of 1969 but also honoring the new graduates, the class of 2019. Again the 50th Anniversary Celebration, involving about 35 graduates, benefited from excellent involvement by the chemistry class of 1969. Those attending were **Joseph P. Bono**, **Mario Deprimo**, **Timothy Miller**, **Douglas Nuelle** and **Leslie Tucker**. In addition, **Michael Finkes**, BS 1973, MS 1978, who would have graduated in 1969 had he not been drafted, was also there. A number of photographs are to be found on the department website under: *About Us/Department Photos/Alumni Event Photos*. Our class of 1969 was a relatively large one, approximately 30 graduates, and on the following page we describe some of those we were able to contact.



Dr. Leslie Tucker BS 1969, center, speaks with Mario Deprimo BS 1969, MS 1986 and his wife Susan at the Golden Reunion.

The event for the 1969 graduates followed those for the previous two years. A welcoming reception, a bus tour of the campus and a lecture on the history of UMSL presented by Chancellor Emerita Blanche Touhill. The evening was completed with the Golden Reception where all the graduates and families, some faculty staff, alumni and administration had a wonderful time.

On the Saturday morning the 50-year graduates were given breakfast and then were robed prior to their appearance at the 10:00 am commencement event. This was followed by a special Luncheon in the Touhill Performing Arts Center. While this was going on, a reception and luncheon was taking place where the Chemistry Alumni Council and the faculty honored the class of 1969 and their families. This was an experiment for us and was very successful. We estimate that there were

EVENTS

This section was previously called "Upcoming Events" but the Coronavirus pandemic has put a stop to all of the original plans. Celebrations of the 50th anniversary of the first three UMSL graduating classes in May 1967–1969 were very successful. We had planned a similar campus wide event for the class of 1970 on May 15 and 16. This has been cancelled and one for the two classes 1970 and 1971 will probably be arranged next year. The Chemistry Alumni Council partners with the Alumni Association in these celebrations. Last year we honored the class of 2019 along with that of 1969.

The Chemistry Alumni Council is currently planning an event to honor Jim Chickos who is retiring at the end of the summer, 2020. Expected to be in mid-September, the date has not yet been set for obvious reasons. Announcements will be e-mailed to all alums and also put on the department website and the LinkedIn page. See page 11 for additional activities of the Chemistry Alumni Council and for all the announcements of activities of the group on the Department Website and on the UMSL Chemistry Groups on LinkedIn and Facebook.



The group of 1969 alums who attended the Golden Anniversary Celebration in May 2019

about 85 in attendance and we have decided to do this for each of these events in the future.



Members of the class of 2019 at the Reception in the Science Learning Building

Following lunch the two group moved to the Solarium of the Teaching and Learning Building, the lab building, where a three-hour reception took place. About 60 attended this event. Again we felt that this was a most successful activity and we appreciate the assistance provided us by the Office of Alumni Engagement.



Dr. Barton with Tim Miller, BA 1969 and his wife Elizabeth and Ray Novak BS 1968 at the Golden Reunion.

ALUMNI INFORMATION

1960s

Raymond F. Novak BS 1968 and his wife Fran (BA French 1969) attended the event. They actually have attended all three 50th Anniversary Events. Since retirement, Ray and Fran have moved to Parkland, FL.

Joseph P. Bono BS 1969 spent a long and distinguished career in forensic science working with the US Secret Service Laboratory in Washington, DC, the Drug Enforcement Administration, Office of Forensic Sciences, the Naval Criminal Investigative Service (NCIS) Regional Forensic Laboratory in Naples, Italy; and the St. Louis County Police Department Laboratory. He served as an Adjunct Instructor in the Forensic and Investigative Sciences Program at Indiana University Purdue University Indianapolis (IUPUI) prior to returning to the DC area following retirement. He attended the 50th Anniversary celebration in May 2019 and enjoyed being back so much that he and his wife Barbara have moved back to St. Louis and he recently joined the Chemistry Alumni Council.

David T. W. Chiu BS 1969 is a plastic surgeon at the NYU Lagone Medical Center in New York City. He obtained an MD at Columbia University, NY and received training in general surgery at Washington University School of Medicine. He completed a fellowship in hand surgery at the NYU Medical Center and spent time there, at the Bellevue Hospital Center, at the Columbia Presbyterian Medical Center and in 2001, Dr. Chiu returned to NYU's Institute of Reconstructive Plastic Surgery. He has spent the rest of his career at NYU. He has served as Chief of the Hand Surgery Program and Director of the Hand Surgery Fellowship at the Institute for Reconstructive Plastic Surgery. He currently holds a tenured position at New York University as Professor of Surgery (Plastic Surgery & Neurosurgery) and a position at Columbia University as Adjunct Professor of Anatomy and Cell Biology. We have not heard from David since 1969 and the material was obtained on the internet.

Mario J. Deprimo BS 1969, MS 1986 attended the Golden Jubilee Celebration with his wife Susan. He spent his career with the St. Louis Metropolitan Sewer District and served as Laboratory Manager.

Lee Gori BS 1969 was unable attend the fiftieth anniversary of his graduation but he wrote to me that his time at UMSL and his BS Degree in Chemistry has been the most valuable asset in his entire life. He told me that his education has taken him down many paths in the last 50 years,



The group assembled in the Solarium of the Science Learning Center on May 18,

from Paint Chemistry (National Lead) to DOD work at Emerson Electric. He mostly worked in quality control departments obtaining ISO/AS 9001 Certifications for various chemical manufacturing plants. His professional life has been enjoyable and rewarding. He recently retired from Sterling Pharmaceutical as a Validation Engineer in Dupon IL. Lee was extremely complimentary about the faculty who taught him through May 1969. He and his wife of 50 years, Judy are enjoying life at home in Edwardsville, IL, while spending winters in Florida.

Richard Hauhart BS 1969, MS 1982 following graduation worked in the quality control department of Mallinckrodt for 2 years. Then he went on to the Department of Pediatrics at Washington University School of Medicine where he worked on (among other things) the mechanism of action and side effects of antiepileptic drugs using a mouse model. While working there, he attended UMSL in the evening and received his M.S. in chemistry in 1982. Finally, he worked in the Division of Rheumatology at Washington U where he studied the structure-function relationship of complement regulators and was co-director of a protein purification facility. His group also determined the solution structure of several of these regulator proteins using NMR techniques. He was the author or coauthor of more than 50 scientific articles and retired from Washington U. in January 2016. He now enjoys traveling, hiking, gardening and playing with his Shih Tzu named Harriet. He also spends part of each winter in Thailand.



Joe Bono BS 1969 at the reception recounts the story of meeting his future wife Barbara for their first date in the chemistry stockroom



Dr. Doug G. Nuelle BS 1969 speaks to those present at the reception for the classes of 1969 and 2019 in the Science Complex Solarium

Charles (Chuck) A. Heil. BS 1969 and the editor talked on the phone last spring. The editor recalls a float trip on the current river in 1968 with Chuck's classmate **Doug Nuelle** and Professor Garin. Chuck went to graduate school at the University of Colorado and received his PhD degree in inorganic chemistry under the direction of Professor Arlan Norman. He was influenced to work with Norman because his undergraduate research advisor (the editor) was interested in cage compounds and so was Norman. Following graduation Chuck worked for Universal Oil Products for a couple of years before moving with his wife Kay to Cincinnati where he taught at Seton High School, an all-girls private high school, for 36 years. He found it most rewarding and enjoyable. He and Kay have two sons, Chuck III and Isaac, and five grandchildren.

James R. Hutton BS 1969 completed a PhD degree at the University of Illinois Urbana-Champaign with Prof James G. Wetnur. It seems that they moved to the Department of Biological Chemistry at Harvard Medical School where Jim was a Research Fellow and they continued a successful research collaboration. He then took an appointment at Marquette University in Milwaukee, WI. We have not been able to reach him so this material was found on the web.

Gary S. Jacob BS 1969 was unable to attend the Golden Jubilee celebration of his graduation but we did see him and his wife Kathy at the Founders' Dinner in October 2019. He was completing a term on the Chancellor's Council. He continues to serve as CEO of Immuron Inc. a publicly listed Australian biopharmaceutical company focused on oral immunotherapy. Following graduation from UMSL, he obtained a PhD degree from the University of Wisconsin-Madison. He then worked at the IBM Watson Research Center in Yorktown Heights, New York, as a postdoctoral fellow for three years prior to joining the Monsanto Company in St. Louis in 1979. His work at Monsanto centered on the applications of nuclear magnetic resonance spectroscopy to biological systems, and in 1986 his company sent him to Oxford University in the UK, for four years to head a research program involving G. D. Searle, Monsanto and Oxford University. On returning to Monsanto in St. Louis his work continued in the area of glycoenzymology, and among his accomplishments is work on the possible AIDS treatment drug SC48334. During that period he was named Monsanto Science Fellow and this award was, at the time, the first ever accorded an UMSL alumnus.

Harry Koster BS 1969 was with *Spectrum Brands*

in Earth City when we last heard from him. The editor recalls Harry's undergraduate seminar based on research he did at Washington University Medical School with Dr. Kathleen Smith, who directed a project in schizophrenia research. He was there throughout his undergraduate period, from 1965 to 1969, and then worked for Scientific Associates from 1969 to 1971 after which he joined the Schultz Company (now Spectrum Brands) and spent his career there. He and wife Dell Frances had five grown children and seven grandchildren when I first wrote this in 2003.

Steven A. Mestamecher BS 1969 received a PhD in physical organic chemistry from Washington University in 1974 and then joined the Dupont Company, first working in textile fibers, in Old Hickory, TN, and served as an Adjunct Professor of Chemistry at the University of Tennessee, Nashville. His career with Dupont lasted 38 years and was full of successes and recognition. He retired in 2011 as a Senior Technical Fellow & Global Technology Guardian. He was then in Parkersburg, WV where he now resides with his wife Joyce. They have three daughters and Steve is now occupied with playing banjo, square dancing, ballroom dancing, Egyptian history, baseball history, archaeology, and golf. He was unable to attend our event last May but was in St. Louis in October to be inducted into the Webster Groves High School Wall of Fame. This was based on career accomplishments, community service, etc., and was held at the Westboro Country Club.

Timothy Miller BA tells us that as a student he worked at Mallinckrodt and Shell Oil's jet engine oil research lab. Following graduation, he accepted an offer from Ralston Purina in the Pet Food R&D department. There he saw rapid plant expansion and was involved in the resolution or explanation of problems with fats, as well as new product development. He had to learn about extrusion, and then learn to scale up production from pounds to tons and then teach plant personnel the specifics of production. As new plants were brought online he helped train to production employees involved with extrusion. Among products he developed were Meow Mix, Butcher's Blend among others. In the mid-1970s one of the major product lines, Chuck Wagon, was found to be salmonella positive and the FDA threatened to cease production unless this was resolved. He and his boss were able to solve the problem. He was involved internationally initially with European Pet Food Companies in the Netherlands and in Germany purchased by Purina and that led to involvement in design assistance and start-up of



Department Chair Cynthia M. Dupureur addresses those present at the luncheon/reception for the class of 2019.

a plant in Brazil. The next phase of his career involved managing the pilot plant and during his tenure as manager they produced several test markets from this facility. On retirement he established a consulting company, dealing with both existing and start-ups including some international ones. He was able to take advantage of his experience in product development and plant management. Tim currently serves on the Chemistry Alumni Council and has attended all our 50th Anniversary events.

Terry Moore BS 1969 was with the National Center for Drug Analysis in St. Louis for many years but we have not heard from him recently.

Richard Morfing BS 1969 has not been in touch with the editor since he was in his inorganic chemistry class. The last address we have is in Pickering Ohio in the Columbus suburbs.

Robert O. Neff BS 1969 completed a PhD degree in statistical mechanics with D. A. McQuarrie, at Indiana University where the editor visited him when he went there to obtain a B¹¹ NMR spectrum in 1973. Dr. Neff later visited UMSL when at the time he was teaching chemistry at the West Point Military Academy but we have lost contact since then.

Douglas G. Nuelle BS 1969 came to the celebrations in May and enjoyed spending time with his former classmates, **Joe Bono**, **Michael Finkes**, **Harold Messler**, **Mario DePrimo**, **Tim Miller** and **Les Tucker**, all of whom overlapped with him at some time here at UMSL. Doug spoke both at the Golden Reception on the Friday evening where the 1969 graduates were honored and also at the department reception where he recited a story about how Professor Armbruster helped him obtain a scholarship in order to complete his studies and also encouraged him to do research with the editor. However Doug ignored the editor's advise to go to chemistry graduate school in physical chemistry and went to medical school at Washington University where he graduated with honors in the Alpha Omega Alpha honor medical society. After graduation he went to Guam with the US Navy and then to Memphis to the Campbell Clinic in Orthopedic Surgery. Then he went to Port Charlotte FL where he had a successful practice for twenty years. While there, he was the first in the world to do Arthroscopic Surgery of the Temporal Mandibular Joint (TMJ) and since then has published widely and has been issued several patents on devices related to the treatment of TMJ disorders and for a widely used device to assist surgeons in quantifying the soft tissue tension during Total Knee Arthroplasty. His extraprofessional life has cen-

tered on music. While in Florida he played in a Doctor's Rock and Roll Band and also played bass in the community symphony for 15 years. He and his wife tired of the heat in FL and settled in the north Georgia mountains. He still lectures and was going to Colorado in August to lecture at a Harvard symposium on joint replacement and in September to lecture on TMJ to a reknowned dental study club in Wisconsin.



Harold Messler BS 1970, **Tim Miller** BA 1969, **Doug Nuelle** and **Joe Bono** BS 1969 and **Les Tucker** at the reception in May 2019

Lawrence Payette BS 1969 from whom we have not heard recently lives in Sandy Oregon. He spent some time with the EPA in Kansas City following graduation before moving to Portland OR in 1978 to another EPA facility. Most of his career was with the Boeing Company. He and his wife Barbara had two sons, now grown.

James J. Reilly BS 1969 was in touch recently and we had a nice phone conversation. He was in St. Louis to visit his sister Margie in late February. Following graduation he received a MS degree from Washington University with Professor Joseph Kurz and then taught and later served as the Science Department Chair at the Wentworth Military Academy in Lexington MO, where he spent 30 years. Jim is now retired and living in Lexington. He ran into **Samuel Gershman** BA 1970 in Kansas City recently.

Leslie Tucker BS 1969 went to Medical School at UM-Columbia for 4 years and followed this with a 3 year Internal Medicine Residency and a one-year Chief Medical Residency at Mercy-St. Louis. This was followed by a two-year Gastroenterology Fellowship at the Texas A&M Medical School, Scott and White Clinic in Temple Texas. He then moved to UMKC where he was Assistant Professor of Medicine and Chief of Gastroenterology for 3 years and was voted "Teacher of the Year" while there. For personal



Anis (Qureshi) Ashraf PhD 1982

reasons, he left there in 1982 and went into private practice at Mercy- Washington (MO). He is still in full time practice enjoying his time with his wife Dawn and extended family, children, and 15 grandchildren. He was very active in basketball, as well as tennis, winning multiple "over 35 year old" championships in the Franklin County area. He retired from tennis at age 40 due to medical reasons, and now toils unsuccessfully in golf and guitar. During his 37 years of private practice in Washington, he has had many remarkable professional accomplishment, far too numerous for us to list here. Be it suffice to say that the once Valedictorian at Augustinian Academy College Prep High School in St. Louis, has seen great success since graduation from UMSL in 1969.

Among the members class 1969 there were several whom we were unable to reach and about whom we have little information including **Kenneth Greenwell** BS, **Roger Littge** BA, **Randall Quint** BS, **Charles Robinson** BA, **Richard Ruedlinger** BA and **Thomas Weatherby** BS who we know went into dentistry.

Sadly, another group is no longer with us. **Michael Longcor** BS, died in 1974 while serving in the USAF in Germany, **Robert Byington** BA died in 2000, **Dr. Kathleen Cammack** BS died in 2012, **Anthony Herzing** BS died in 2015, and **Francine (Story) Longcor** BS who received a PhD degree with the editor also died in 2015.

1970s

Harold Messler BS 1970 who attended the reunion of the class of 1969, most of whom were his classmates, was also in touch last year, reminiscing about UMSL and his career in forensics. He reminded me that he and his friend **Joe Bono** would not have entered the field if the Chemistry Department had not supported them. He is particularly appreciative of Dr. Armbruster and Jack Coombs whom "he bugged" in the old Country club building looking for a job. He recalls he got his job from the Chem Dept Bulletin Board and Joe got his first forensic job after listening to him talk shop at many of their family dinners together.

Dan Breyfogle BS 1975 who also got an MBA degree from Washington University is Marketing and Technical Director at Trans-Mate Inc., in the greater Boston area where he has worked for almost 16 years. Following graduation he worked at Vestal Labs, now Steris Inc., for eight years and then spent 20 years at the Butcher Company in Massachusetts where he rose to Vice President R & D prior to joining Trans-mate.

Andrew Hilliker BA 1976, who obtained a BS degree in physics in 2003 was in touch in June

2019 to express sadness in the passing of **Jim Wheatley** BS 1988. He had known him and his brother **Jeff Wheatley** BS 1976, who died in 2016, since they were kids at Shenandoah Grade School. Andy has been retired from the City of St. Louis where he was an environmental specialist, since 2011. He now consults through his company, Regional Technical Assistance Corporation.

Mark H. Owens BS 1976, MS 1982 retired from Mallinckrodt/Covidien/Curium in 2019 after almost 34 years with the company(s). He now lives in Branson, MO, and his wife Theresa will join him when the coronavirus issue relents. She stayed in St. Louis to oversee a remodeling job in their St. Louis home. He started his career with Scientific Associates, and also spent time at Envirodyne Engineers, both in St. Louis, prior to joining Mallinckrodt.

1980s

James K. Grant MS 1981 presented a seminar: "Careers in Chemistry: Have you considered Environmental, Health and Safety Fields?" in the department in February 2020.: Jim holds a MS degree in chemical engineering from Washington University, one in engineering management from UM-Rolla in addition to his UMSL degree. He was with Monsanto and then Mallinckrodt in St. Louis, ultimately as Manager for Environmental Affairs there and the last years of his career before retirement with the Transportation Safety Authority Washington DC., as Hazardous Materials Program manager.

Anis (Qureshi) Ashraf PhD 1982 with Dr. Winter was sad to tell us that her husband Javed passed away suddenly and unexpectedly on March 2018 in his sleep from cardiac arrest. So she is alone and working in her company *Advanced Organic Synthesis* of which she is owner and Chief Scientific Officer. It is a custom synthesis lab specializing particularly in monomers, polymers, nano materials, active pharmaceutical ingredients and heterocyclic building blocks. They focus on polymers ranging from light emitting polymers and conductive polymers to water-soluble polymers and polymers for drug delivery.

Mike Drain BA 1982 retired from his position as Professor of Chemistry at Hunter College, NY., for health reasons in the summer 2019, and he told me about that in September. Mike had a most successful career at Hunter College, New York, during which he did research in supramolecular photonics, nanomaterials and phototherapeutics. During my research I learned that he died from metastatic thyroid cancer in January 2020.



Dr. C. Michael Drain BA 1982 who had a distinguished career as Professor of Chemistry at Hunter College NY., but passed away in January 2020

This is taken from the obituary I found online:

Hunter College mourns the loss of our beloved Chemistry Professor Michael Drain. A renaissance man, he had the rare vision to see the connection between the sciences and - the humanities. Highly regarded internationally for his research, he was equally devoted to mentoring his students, paving the way for the next generation of chemistry leaders. We will miss his brilliance, his collegiality, and, most of all, his humanity. His legacy will live on in the Michael Drain Chemistry Scholarship to which donations are welcomed. Jennifer J. Raab, President, Hunter College.

Mike published almost 120 research papers, funded his work extensively from the granting agencies and was a highly cited author. He completed his PhD degree at Tufts University with Barry Corden and then did postdoctoral research with David Mauzerall at the Rockefeller University in New York. In 1990 he joined the laboratory of Jean-Marie Lehn (Nobel Prize 1987) in Strasbourg, France where he spent two years. Still searching for the right position for him he then spent a couple of years at Washington University as a visiting fellow in the laboratory of Professors Holten and Kirmaer prior to joining Hunter College in 1995. Mike presented our Distinguished Alumni Lecture in the department in 1994 and on occasion dedicated research publications to the editor and Joyce Corey and acknowledged those two and Charles Armbruster during the retirement Symposium held in Mike's honor in September 2019. He is survived by his wife Smita Patel, Professor of Biochemistry and Molecular Biology Rutgers University, Robert Wood Johnson Medical School, whom he met in graduate school.

Patients of Greater St. Louis". It was something he always wanted to do but in his 31 year career, he couldn't do it when he was working full-time as a primary care physician.

Jerry Orlando BS 1982 has been a Source Control Investigator with Clean Water Services in Hillsborough Oregon since March 2017. He worked in the St. Louis County Crime Lab following graduation and then spent 10 years with Quanterra when they were analyzing soil samples from Times Beach for dioxin. He has lived in Beaverton, OR for 20 years and worked for a series of analytical/environmental laboratories there. In the 1990s he obtained a MS degree in Technology and Human Affairs from Washington University.

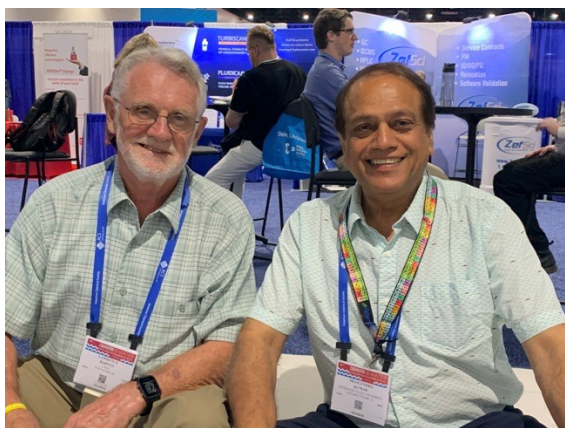
Jeanette Hencken BA 1985 has rejoined the Chemistry Alumni Council and was most helpful in moderating the successful event held on October 19, 2019 "A Discussion: Helping the Public Understand and Accept Science-Based Facts". Jeanette spent her career teaching chemistry, physics and forensic science at Webster Groves High School.

Sandy Wisneski BS 1985 retired from Mallinckrodt Pharmaceuticals in March 2018 after almost 31 years there. She was R&D Senior Director responsible for product and compliance support for the Global Pharmaceuticals R&D organization. She obtained the MBA degree from Washington University in 1994. Her husband **Rich Wisneski** BS 1986 retired from Mallinckrodt in September 2019 where he had been for 33 years and was Senior Research Associate. They are both enjoying retirement together and hope to take some trips once their youngest-daughter is in college next year and the coronavirus pandemic passes.

Steven A. Kolodziej BA 1987, PhD 1992 is an Associate Research Fellow, BRD, Biotherapeutics Pharmaceutical Sciences and a Group Leader in the Conjugation and Polypeptide Process Development Group at Pfizer, Inc., in St. Louis. Following graduation with his PhD degree from Rudi Winter's group, he did postdoctoral research at the Washington University School of Medicine and then he joined Monsanto as a Postdoctoral Research Associate. He was actually hired by Bruce Hamper who is now on the faculty here. After just over one year he became Senior Research Investigator at Searle, then Group Leader and Associate Fellow at Pharmacia and finally Associate Research Fellow at Pfizer as Monsanto morphed through Searle, Pharmacia into Pfizer. Steve has achieved major success in his career, far too much to describe here, but recently he came



David Miller BA 1983



Drs Barton and **Shelly Kumar** PhD 1982 at the ACS meeting in San Diego

Shelly Kumar PhD 1982 and the editor had breakfast together at the ACS meeting in San Diego. Shelly, who was the second PhD to graduate from Bob Murray's group is Professor of Chemistry at Governor's State University in suburban Chicago. He said that he is eligible to retire with full pension, but after coming back from the ACS meeting, he is rejuvenated, and does not think he will retire for another year or so. He is doing research work in the q-NMR area, and enjoying it. He gave a paper at the meeting on q-NMR.

David A. Miller MD (BA Biology and Chemistry 1983) was honored to be recognized last year by Volunteers in Medicine - West County for six years of service as a volunteer physician for "Outstanding Services to the Underprivileged

full circle and now enjoys a very productive research collaboration with Alexei Demchenko. Steve and his wife Mary have two children, a daughter who is a traveling nurse in Torrance, CA and a son who is a junior at Missouri State University.

Hossein Shabany, PhD 1988 has been Senior Scientist at EAG Life Sciences for the past 12 years. Following graduation from the Spilling group he spent two years as a postdoctoral fellow with **George Gokel** when he was at Washington University School of Medicine. He then spent 5 years with Monsanto/Pfizer as a research chemist and 3 years with Fleming Pharmaceutical before joining EAG.

1990s

Michael Crowley BS 1990 lives in Austin, TX where he is President of Theridian Technologies, LLC. He says all is good. His wife Carrie and kids keep life busy, interesting and fun. A picture from last summer shown left, includes Kieran 15, Connor 16 and Colman 6. Professionally, he has been consulting for more than 10 years now. He provides drug development consultation services, transaction due diligence, and serves as an expert in patent litigation. He co-founded a start up pharmaceutical company for infectious disease (new meds for ear and nasal infections). When we communicated they had raised over \$1M and their first clinical study was underway.



Mike Crowley BS 1990 and his family.

Jean (Huhmann) Vincent BA 1991, PhD 1996 who is Vice President Advanced Polyurethane Materials at Evonik Corporation in Allentown, PA was honored to participate on a "Women in Science" panel for the sophomore class seminar at Cedar Crest College in Allentown early this year. Everyone was in a different field of science, primate research, forensic pathology, engineering, education outreach, material science and chemistry, but the stories all had similar themes. "What an inspiring group of women, both the other panel participants and those in the class, said Jean!"



Jean (Huhmann) Vincent BA 1991, PhD 1996 in a "Women in Science" panel for the sophomore class seminar at Cedar Crest College in Allentown, PA

(Roberta) Ann Vu BA 1992 was a Manager of Quality Control with Steris in St. Louis from 1989 through 2000. Since then she had a series of management positions including Director of Global Quality for Bausch & Lomb in Rochester, NY from 2000—2011, then successively Site Director with Otho Clinical diagnostics, Senior Director

for Quality Network optimization and later for world wide biosurgery quality, with Ethicon in Somerville, NJ and since 2016 she has been with Zimmer Biomet, in Palm Beach Gardens, FL, as Vice President for Quality and Regulatory Affairs.

Lori (Rodriguez) Buffa BA 1993 who did research here with Gordon Anderson obtained an MD from UM-Columbia in 1998 and completed a pediatric residency at Cardinal Glennon Children's Hospital in 2001. She has been practicing in St Peters, MO since 2001 and has watched her patients grow up; and is now caring for their children. Since 2015 she has co-owned Cloverleaf Pediatrics LLC. They have partnered with Washington University Physicians and she enjoys teaching residents, participating in clinical research and traveling abroad on medical missions. She and her husband have two adult sons.

Matthew Mahoney BS 1993 spent more than 16 years with Monsanto/Searle/Pfizer starting with Searle in Skokie IL., as a Chemist and finishing with Pfizer in Chesterfield, MO. as a Senior Scientist. He also spent eight years with Novus International, Inc., as a Research Specialist and since late 2018 has been a Staff Research Scientist at the Washington University School of Medicine.

Sean Dingman BS 1994 joined OXY, in St. Louis in January 2020 as a Senior Technical Service Specialist. He had been with Mississippi Lime Company for four years and prior to that BASF.

Helen Y. (Chiu) Taff BS 1994 is a Business Analyst with Refinitiv in Fenton, MO. She also holds a BS in Chemical Engineering from Washington University and has worked with Laclede Gas, Mallinckrodt, BJC Healthcare and Thomas Reuters prior to her current position.

Cecilia Marzabadi PhD 1995 who is Professor and former Chair of the Chemistry Department at Seton Hall University is the 2020 Chair of the North Jersey Section of the American Chemical Society. A member of the North Jersey Section for more than 20 years, she is only the second Seton Hall University faculty member to be named its chair since 1930. In January 2020 she was named as the Emma G. Quartaro Woman of the Year Award for 2020 at Seton Hall.

Elizabeth (Amin) Ambrose BA 1996, PhD 2002 was in touch after receiving the last issue of the UMSL CHEMIST. She enjoyed the seminar visit of Cindy Dupureur to her department in the School of Pharmacy at the University of Minneso

ta-Twin Cites, where she is Associate Professor of Medicinal Chemistry. Her research work appears to be going well and she has won awards for Professor of the Year/Semester 8 times since 2011.

Kirstin (Talir) Blase BS 1997 received a MS in biochemistry and biotechnology in May 2019. Following graduation with her BS she worked in the Department of Radiation Sciences at Washington University until the birth of her first daughter in 2001. She decided to stay home and did some One-on-One Tutoring for 15 years and had 2 more children as well. About six years ago as she was completing courses to obtain a teaching certificate, she took Biology from Dr. Christopher Wolin here. He suggested that she take Advanced Biochemistry from Mike Nichols. She loved it and changed her mind about the teaching accreditation and was accepted into the MS program for BCBT for the fall of 2015. In the meantime, 3 years ago, she accepted a position as a full-time teacher at Villa Duchesne High School and is still there teaching chemistry, honors chemistry and AP chemistry.



Juan Mareque-Rivas
PhD 1998 now Professor
of Chemistry at Swansea
University in Wales.

Juan Mareque-Rivas PhD 1998 did two years of postdoctoral research in bioinorganic chemistry at the Massachusetts Institute of Technology in the laboratory of Prof. Stephen J. Lippard following the completion of his degree under the supervision of Dr. Lee Brammer. He then spent 10 years on the faculty of the University of Edinburgh, Scotland. In 2011 he returned to his native Spain to take an Iberbasque Research Professorship at CIC biomAGUNE in the Basque Country. In 2013 a daughter Catriona was born to him and his wife Lyn and they wanted to raise her in the UK. Initially he took up a Readership in the School of Engineering at Aberdeen University, Lyn's home town, but then he was tempted by the opportunity to start a new chemistry department at the University of Swansea, in Wales, and joined there in 2016 as co-head and head of research but luckily they managed quite soon to persuade someone else to take the role of department head.

2000s

Melissa (Stuchell) Brereton BS 2000 is an Instructor in Biochemistry and Molecular Biophysics at Washington University School of Medicine where she has been since 2015. She has a PhD degree in biochemistry from the University of Utah and we note that she presented a paper at the Gibbs Society of Biological Thermodynamics meeting in Carbondale in October 2019.

Katherine M. Block BS 2001 moved to San Francisco in 2018 to take a position with AbbVie in

their Companion Diagnostics Division as Associate Director. Following graduation she spent a couple of years at Pfizer in St. Louis before completing a PhD degree in biochemistry at the University of Arizona. Prior to her current position she was Senior Scientist at the Novartis Clinical Trial Center of Excellence at Genoptix Medical Laboratory, in San Diego. Prior to joining Genoptix in 2012, she was a Senior Development Scientist and Technical Lead at Beckman Coulter in Orange County, CA. She presented our Distinguished Alumnae Lecture in 2014 and encouraged the students not to give up hope when job-seeking becomes difficult. Her perseverance certainly has paid off!

Lisa French BA 2003, MS 2004 is Central Scientific Stores & Environmental Safety Manager at University of the Sciences in Philadelphia. She taught at the St. Louis Community College and also at Maryville University before joining the St. Louis College of Pharmacy in 2007 where she spent 12 years as Chemistry Laboratory Manager and Instructor. She moved to Philadelphia in 2019.

Shu Yao BS 2005 who received a PhD degree from the University of Wisconsin is CEO and founder of Green & Clear World Environmental Engineering Inc., in Brossard, Quebec, Canada.

John Schmitz BS 2007 in March 2019 took an appointment as Production Manager at ThermoFisher Scientific at the biological site (formerly Patheon). During his studies at UMSL and on through 2019 he held positions at Covidien/Mallinckrodt/Curium in process development and improvement and was excited to learn new equipment and techniques for drug manufacturing in his new position.

Sean Whittemore BS 2008 who obtained a PhD in organic chemistry from the Ohio State University sent us an update. He started at Sensient Technologies as Applications Technologist II in January 2018 and was promoted to Innovation Manager last June. He and his wife were expecting their third child.

Arthur Wilde BS 2009 was the 2019 American Chemical Society, St. Louis Section, High School Chemistry Teaching Award Winner! Art has taught at Bayless High School in St. Louis since 2011. He has received several awards for the innovative teaching techniques in his chemistry classes, including the Bayless High School Teacher of the Year Award. He has continually found ways to make chemistry an approachable, relatable, enjoyable and memorable subject to his diverse group of students through real world



Arthur Wilde BS 2009

applications. He has incorporated new technologies and techniques into his classroom and is always looking toward the horizon to see what authentic tools and lessons he can incorporate into his learning environment. He is currently working on his EdD degree here and continues to find ways to enhance his teaching in and outside of the classroom.

Paul Gontarz PhD 2105, with Dr. Chung Wong, has been a bioinformatician at Washington University School of Medicine since graduation. He is married to **Elena Vasilieva**, PhD 2014 who is a Manager, Scientific and Technical Affairs at Thermo Fisher Scientific, formerly Patheon, in St. Louis. Elena completed her PhD research with Dr. Dupureur.

Mark Ulrich BS 2003, MS 2006, is now Chemical Process Engineer at Jost Chemical Co., where he has been since spring 2019. He had moved to Florida in 2016 to become Production Manager at Tropicchem Research Labs., in Jupiter and later worked as a color formulator with OFRA Cosmetics in Pompano Beach, FL.

Adam Dion BA 2006, MS 2016, moved from Mallinckrodt Inc., where he was for 11 years to Pfizer in Chesterfield as a Scientist, Analytical R & D, a Chemist II equivalent position

2010s

Kristen R. (Sachs) Friedman BS 2010 is an Associate Scientist in Microbiology/Biochemistry with Pfizer in St. Louis. She joined the company in 2010 following graduation and spent five years as a Technical Specialists in Plant Manufacturing/Sample Handling.

Marko Jovanovic BS 2011 is Quality Assurance (QA) Supervisor at Thermo Fisher Scientific in St. Louis where he has been since May 2019. Prior to that he spent almost 6 years as a QA Analyst at Anheuser Busch and prior to that a couple of years at EAG Life Sciences. When we last heard from him his family had just had a child, moved into their first home and he was also entering into a new job at Thermo Fischer Scientific. At the time he was looking for chemists/biochemists to work an evening shift.

Brian Huesgen PhD 2012, who wrote his thesis on a chemical education project with Hal Harris has been with Carboline Co., in St. Louis for about 10 years and is now Global Process and Quality Manager.

Doug Hammerstroem PhD 2015 with Janet Wilking is a Team Leader at Eurofins EAG Materials Science, in Maryland Heights, where he

has been since graduation. He told us that two other graduates had started there recently. **Carl Oberle** PhD 2018 who did his research with Alicia Beatty and **Alan Scheibel** BS 2019, who is also in our MS degree program.

Michael Mannino BS 2015, PhD 2019, a Demchenko Lab graduate, started a post-doctoral fellowship at the University of Georgia, following his thesis defense. Mike's father Dr. Anthony Mannino has taught organic chemistry here in the evening and summer for the past 20 years.

Ethan M. Grames BS 2016, MS 2018 is a Lab Analyst at Eurofins at the Missouri Research Park in St. Charles County.

Lorna Espinosa BS 2018 has been with Abstrax Inc., Long Beach, CA since January 2019, first as a Formulations Chemist and currently as a Manufacturing Chemist. Her first position following graduation was as an analytical chemist with Nestle Purina Analytical Laboratories in St. Louis.

Ethan Gallaher BS 2019 is working at Huvepharma Inc in the Tower Grove South area in St. Louis.

Rebecca Harris BSBB 2019 decided to take a gap year prior to applying to Med. School. She was doing research with Dr. Gokel and recently has been caring for her 85 year-old grandmother.

Anastasia Jensen BS 2019 is working for Millipore Sigma as a Biochemical Technologist II. She is part of the Formulation and Manufacturing group and was really enjoying it when we heard from her last fall.

Matteo Panza PhD 2019 recently joined Cayman Chemical Company in Ann Arbor, Michigan as Scientist 1, in medicinal chemistry. He completed his thesis research with Alexie Demchenko.

Haley Steber BS 2019 spent the summer following graduation working as a full-time intern at Pfizer with Dr. Qin Zou. In the fall she joined our PhD program working with Alexei Demchenko.

Cristina Sinobas Perriera BSBB 2019 accepted to our PhD program, started in January 2020 in the Nichols lab just in time for the Coronavirus shutdown

Alan Scheibel BS 2019 is now in our MS program and received a Graduate School Fellowship for fall 2019. He did a summer internship at



A view of the audience and panel at the event:
A Discussion: Helping the Public Understand and Accept Science-Based Facts.

Pfizer after graduation and is currently a Laboratory Technician at EAG Laboratories.

Austin Stelling BS 2019 who also minored in Philosophy is in our PhD program working with Stephen Holmes.

Brandon Vestal BSBB 2019 is taking graduate courses in the department and hoping to be admitted to the graduate program.

Marina Villoch BSBB 2019 was hired as full-time Research Assistant at Mote's International Center for Coral Reef Research and Restoration in Summerland Key, Florida.

Sinhareeb Emara (Aoleiwi) BSBB 2019 has been admitted into the A.T. Still University Missouri School of Dentistry and Oral Health in Kirksville MO for 2020.

Tinghua Wang PhD 2019 who completed his PhD degree in September 2018 in the Demchenko laboratory is a Senior Program Manager at WuXi Biologics in China

Christopher A. Wilke BSBB 2019, who spent his last two years here working in the Bashkin research lab, was featured in *UMSL Daily* following graduation in December 2019. He is now with Bayer Crop Science in St. Louis. He spent his first week as a college graduate hiking in the mountains near Colorado Springs and interned at Millipore-Sigma prior to joining Bayer.



Christopher A. Wilke BSBB 2019 working in the Bashkin Lab in 2019



Panel members Hal Harris, Aimee Hood, Ruth Watt and Kristine Callis-Diehl, the event chair Mike Finkes BS 1973, MS 1978 and the moderator Jeanette Hencken BA 1985.

urday, October 19, 2019 from 1:00 - 3:00 p.m. in Room 102 of the recently remodeled Benton Hall and was followed by a reception. The event was extremely successful with 64 registrants but only 45 in attendance, however those present really appreciated the program. It was moderated by **Jeanette Hencken** BA 1985, retired Chemistry, physics and forensic science teacher at Webster Groves High School. Panelists included: **Aimee Hood**: Regulatory and Scientific Engagement Lead at Bayer (formerly Monsanto), **Ruth Watt**: Manager of STEM Events at the St. Louis Science Center, **Kristine Callis-Duehl**: Director of Education Research and Outreach at the Donald Danforth Plant Science Center and **Hal Harris**: UMSL Professor Emeritus Chemistry, past education coordinator for Chemistry and Physics students pursuing a teaching career. There was a very lively discussion.

The editor and Michael Finkes were invited to join the UMSL Alumni Association Annual Meeting in August 2019 and at the meeting, Mike accepted *Alumni Association Affinity Group of the Year Award* on behalf of the CAC. The trophy is in the department office, I believe. Planning was underway for the Celebration of the 50th Anniversary of the class of 1970 and the class of 2020 but the Coronavirus issue resulted in cancellation. Still under discussion is an event honoring Jim Chickos who is retiring. Jim is one of the two longest-serving faculty members at UMSL, 1969—2020. We hope to do this in late summer, 2020, if the virus allows us!

The group holds very few meetings but organizes very successful events. The major problem is we need to recruit younger alumni and new leadership for the group. **Anyone interested in reconnecting with the department and working with a great group of committed alums should contact the editor at lbarton@umsl.edu.**

THE CHEMISTRY ALUMNI COUNCIL

Again the CAC was active and very successful. Led by **Michael Finkes** BS 1973, MS 1978, there were two very successful events. We honored the 1969 graduates in May, described earlier and held a program titled: *A Discussion: Helping the Public Understand and Accept Science-Based Facts*. This audience-participation program was held on Sat-

GRADUATES, DEC. 2018—DEC 2019

DECEMBER 2018

Justin M. Nemeth BS	Tinghua Wang PhD
<i>BS in Biochemistry/Biotechnology (BSBB)</i>	
Josh Bratcher	Anna K. Hoffmeister
Hilmo Malkic	Rachel M. Manno
Presley A. Pham	Jennifer K. Selph
Nilkumar J. Thanki	Katelyn U. Wiehe
<i>MS in Biochemistry/Biotechnology (MSBB)</i>	
Jason Bedwinek	Cassandra M. Hoffner
Wei-Ting Huang	Snowlee Phu
Sarah Ruhland	Taylor W. R. Wagner
Catherine Alex	Daniel Greenwood
Saif Alruwaili MS	Yelena K. Hines

MAY 2019

Akiyemi H. Adeusi BS	Abdullah A. Alqahtani MS
M.S. Barnes-Flaspoler BS	Ethan R. Gallaher BS
Giri Raj Gnawali MS	Jack Harms PhD
Khamh B. Hum BS	Anastasia Jensen BS
Michael Mannino PhD	Rishi Ram Paudel MS
Michael J. Pollihan BS	Alan, T Scheibel BS
Hayley B. Steber BS	Austin L. Stelling BS

BS in Biochemistry/Biotechnology

Carolyn M. Antoine	Alexander D. Blackshear
Aaron I. Boland	Dureese Rojae Colvin
Agota Csiki-Fejer	Taylor J. Gerar
Alexandra J. Hamrick	Rebecca D. Harris
Robert S. Korb	Zohra Mohammad
Joshua D. Neeter	Rachel E. Rosse
Cristina S. Pereira	Matthew T. Stacy
Samiya Tazeen	Brendon D. Vestal
Marina Villoch	

MS in Biochemistry/Biotechnology

Erwin Bankston Jr.	Kirstin J. Blase
Megan Elizabeth Reid	

AUGUST 2019

Maha Abutokaikah PhD	Philip J. Ferko, PhD
Giri Raj Gnawali MS	Rishi Ram Paudel MS
Kapur Bahadur Dhami MS	

DECEMBER 2019

Mohammed H. A Albinsaad BS	Mithila D. Bandara PhD
Trevor M. Bick BS	A. M. Kagarama BA
Matteo Panza PhD	Brendan M. Ratay BS
James W. Long MSBB	Ema C. Mathai MSBB
Challen A. Pretorius MSBB	Chiis Wilke BSBB

THE FACULTY

James K. Bashkin's research group published several papers in the past year, including two in collaboration with Cindy Dupureur's group in which the Dupureur group played the leading role. Those papers reported extremely novel biophysical behavior of polyamide-DNA interactions. Another paper was published with David Wilson and Gregory Poon of Georgia State in which a different type of new interaction was observed - a ternary protein, DNA, polyamide complex. They also reported with Ming Luo of Georgia State on the first polyamide-RNA-protein interactions, as demonstrated by crystallography and biophysical methods, from an inhibitor of the negative strand RNA virus known as VSV. Dr. Bashkin also received his 16th US patent and gave plenary lectures at the International Clinical Chemistry Conference in Paris and the International Congress on Medicinal Chemistry in Edinburgh, a lecture at the University of Strathclyde, Glasgow, Scotland, and a seminar in Pharmaceutical Sciences at SIU-Edwardsville. He is now an Editor of the International Journal of Molecular Science. Ph.D. Stu-



Professors Nichols, McDowell, Stine and Demchencko with some of the 1969 baccalaureate graduates **Haley Steber**, **Anastasia Jensen**, **Alan Scheibel**, **Ethen Gallaher** and **Austin Stelling** at their luncheon/reception in May 2019

dent Ali Sabi passed his independent research and dissertation proposals .

Eike B. Bauer's research group in 2019-20 consists of PhD student Deva Talasila, MS students **Michael Barnes-Flaspoler** BS 2019 and **Kellsie Jurkowski** BA 2018 and undergraduate research student Shane Pitman. Shane was selected to present their research at the Undergraduate Research Day at the State Capitol in April 2020. Unfortunately, the event was canceled due to the Coronavirus crisis, but Shane would have served as UMSL Ambassador and the selection process was very competitive. Jasmine Richardson and Jude Sorkin did high school summer research in 2019 in the group. Jasmine did so within the



Jim Bashkin with his research undergraduate students who were honored with Meehan Scholarships in 2019, from left Ruth Kvistad, a current lab member, and two lab alumni, Lauren Huebner and Harper Wieldt

Jennings High School program that offers students from the Jennings High School a paid summer research opportunity. She was valedictorian of her class and is now studying chemistry at St. Louis U. Jude did his summer research within the competitive STARS program. The Bauer group presented at the Missouri Inorganic Day (Wash U) and at the Missouri Organic Day (UM Columbia) in 2019. Michael who received the 2019 Undergraduate Organic Chemistry Award of the ACS and a Teaching Award of the UMSL Chemistry Department is trying to get the research group into computational chemistry using density functional theory (DFT). The Bauer group received an UMSL Research Award in 2019 for \$8,300.

Alicia M. Beatty tells me she has a new graduate student, part-time Ph.D. student who teaches at Jefferson Community College, Wesley Whitfield. Nothing really exciting is happening for her, just having fun converting general chemistry labs and the Basic Inorganic Chemistry lecture course to online versions.

James S. Chickos is retiring in August 2020 after 51 years on the faculty. The Faculty Senate honored him for 50 years on the faculty in Fall 2019. Jim joined UMSL in 1969 when Rudi Winter, the late Tom Jones and Bob Rouse joined the faculty. Jim was a graduate student when I was a postdoc at Cornell University. He did postdoctoral research at Princeton with Kurt Mislow and also at the University of Wisconsin with Bob West. He is a prolific researcher, with more than 193 publications to his name and he is pleased to be able to keep his laboratory for a couple of years. He will also maintain memberships on editorial boards for the near future.

Valerian T. D'Souza after working on revamping Intro Chem 1 for over 7 years incessantly and with extraordinary results, is taking a break from that and is teaching one small section of the course and another small section using the modular format. He went to India last August to do a private spiritual retreat with his uncle who is the Bishop of Agra along with his aunt who was Superior General of Holy Cross nuns in Geneva.

Alexei Demchenko's successes on the campus and beyond continue to grow. During 2019-2020, his research group *Glycoworld*, published 21 articles through February, 2020, bringing the total number of publications to 188. In 2019, he and his group members delivered 29 talks and posters at regional and international conferences. In 2020, he received the prestigious *Fellows Award by the Academy of Science – St. Louis*, and the Co-Investigators of the Year Award (with K. J. Stine) by the UMSL Office of Re-

search. His research group currently consists of one post-doctoral fellow, six doctoral students, and one undergraduate and their research is funded by NSF, UM System Research and Creative Works Strategic Investment Program, and two major NIH grants, one of which was recently renewed for another four years. In 2019 Professor Demchenko served as the US Representative to the International Carbohydrate Organization and he is 2020-2021 Chair of the Division of Carbohydrate Chemistry of the American Chemical Society. Updated information on current research, teaching, and outreach activity of the Glycoworld is available at: <http://www.umsl.edu/chemistry/Faculty/demchenko.html> or @Glycoworld (Twitter)



James S. Chickos who is retiring in August 2020 after 51 years on the faculty.



From left to right: Vally D'Souza, His Eminence Oswald Gracias, Cardinal of Mumbai, Most Rev. Albert D'Souza, Archbishop of Agra and Sister Eugene D'Souza, past Superior General of Holy Cross Sisters



Alexei Demchenko, back left with his research students; from left Catherine Alex, Melanie Shadrick, Michael Mannino, Mithila Bandara, Matteo Panza, Crystal O'Neil, Scott Geringer, Ganesh Shrestha, Yashpal Singh and Samira Escopy, in Apr. 2019.

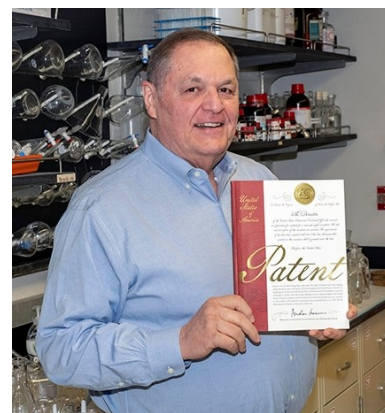
Cynthia M. Dupureur tells me that while she has taken up a number of campus service duties, she is enjoying the relative quiet that comes with no longer being department chair. Her research group is collaborating with Janet Wilking on one of Janet's fluorescent compounds. The patent was filed in early April. This has inspired her group to set up a tank of fluorescent fish in the lab! Last summer her group's annual outing involved Thai food, seeing the Pompeii exhibit at the Science Center, and Ted Drewes. Her whole group attended the Gibbs Society of Biological Thermodynamics meeting in Carbondale again in October 2019, where she gave an invited talk *Molecular driving forces and kinetics in hairpin polyamide-DNA interactions*. She continues to teach yoga at the campus rec. center, but this spring it was only online.

George W. Gokel was honored with a teaching award from the National Society of Leadership and Success in December 2019 and was awarded his 11th patent: *Molecules that Inhibit Efflux Pumps in Multi-Drug Resistant Bacteria and Uses Thereof*. During the semester break, he participated as a plenary lecturer at the Winter Enrichment Program of the King Abdullahaziz University of Science and Technology (KAUST) in Saudi Arabia. His recently graduated doctoral student, **Joseph Meisel** PhD 2016 is completing a post doctoral stint with Professor Andrew Hamilton, Chancellor of NYU. Joe has accepted a position as assistant professor at George Washington University in Washington DC. He will begin his independent career there this summer.

Bruce Hamper was promoted to Associate Teaching Professor in spring 2019. He continues to develop introductory chemistry courses in beer brewing and online content for general chemistry. The following publication co-authored with **Joseph Meisel** PhD, 2016 was published in the *Journal of Chemical Education*, "Introducing Nonscience Majors to Science Literacy via a Laboratory and Lecture Beer Brewing Course". Research projects include investigation into humulone derivatives obtained from hops and development of synthetic methods for preparation of vaccine bioconjugates. Bruce was an invited speaker at 'Organic Chemistry Day' at U. Missouri-Columbia in April 2019 and presented 'Adventures in flow processes: from pharmaceuticals to beer'. **Aaron Boland** BSBB 2019 gave a poster presentation at the Undergraduate Research Symposium and received a 2nd place award for his efforts. Undergraduate Hunter Campbell and STARS student Raiden DeKoter investigated continuous flow methods for preparation of protein-polysaccharide bioconjugates. Undergraduate Matthew Murphy has been evalu-

ating isotopically labeled humulone derivatives as analytical internal standards. In the spring of 2020, Bruce organized and chaired the 'Analytical Chemistry of Beer and Brewing' symposium at Pittcon-2020 in Chicago, Illinois.

Jack Harms joined the faculty in fall 2019 as Assistant Teaching Professor. He received BA and MS degrees from SIU- Edwardsville, and his PhD from UMSL in 2019 under the direction of Jim O'Brien. He has been incorporating and developing new experiments for the physical chemistry labs (he teaches P Chem II in the fall and P Chem I in the Spring), and also teaches Quantitative Analysis (both semesters), Instrumental Analysis lecture (fall), P Chem II lecture (spring). He spends most of his time in the lab, demonstrating chemical techniques to students. He has also stayed involved with the O'Brien research group to a limited extent, and they have worked to make significant improvements to instrumentation (by an order of magnitude by multiple figures of merit). He has also tried to bring research into the classroom, using real data sets for in class analysis and software programs for research that help students to real analysis of their laboratory data. He is the faculty advisor to the Chem Club and they have developed demonstrations for recruitment - they gave science demos to the Introductory Chemistry Classes and also at ACS Career Day last fall. They are also working to build a Raman spectrometer out of departmental surplus equipment and have resurrected a monochromator with a CCD detector for it. The detector can be used to improve atomic emission experiments and as a tool for teaching in the P Chem and other advanced labs.



George Gokel with his patent *Molecular driving forces and kinetics in hairpin polyamide-DNA interactions*



Faculty colleagues Chickos, Stine and Nichols at the reception for the classes of 1969 and 2019 in the Science Complex Solarium

Steven M. Holmes had a doctoral student **Phil Ferko** BS 2010 graduate from his group and he took on another doctoral student, **Austin Stelling** BS 2019. Two undergraduate researchers joined his group as did a postdoc from Nanjing University. He had two STARS students over the summer, both from Clayton HS and one of them is now a student at Rice University. After nearly 18 months, Holmes was able to accept delivery and install a helium reliquefier for the Quantum Design PPMS 9 magnetometer and is now able to collect magnetic data. His research on "Late transition metal single-molecule magnets", funded by the NSF, continues. He was an invited speaker at the 2019 CIC meeting in Quebec City, and at meetings in Rhodes, Greece and Gainesville, FL. In his spare time, Holmes is also working with Jim Bashkin, SPEC Sensors, and KWJ Engineering to develop sensors for NASA in a new project, pending a Small Business Technology Transfer grant.

Rensheng Luo reports having a busy year and both NMR and MS labs are running well. The Joel 700 MS spectrometer was removed and the department has taken over Ben Bythell's instrument, the Bruker Maxis Plus HPLC-QTOF MS Spectrometer.

Lynda M. McDowell taught Introductory Chemistry 1111 and Physical Chemistry 1 during the past year. In spring of 2019, she began preparing to teach CHEM1111 during the day (instead of the small evening class). Not surprisingly, her first big project was updating the laboratory. Over the summer, she and Shelby Jarrett ordered, unpacked, and tested over 100 brand new pieces of digital laboratory equipment. All these new devices were used in the 2019 – 2020 academic year with a goal of increasing student engagement, satisfaction, and retention in chemistry. As lab instructors, Jim O'Brien and Jack Harms have also been key players in making change in CHEM 1111. When the campus closed and courses transitioned to remote delivery, due to COVID-19, she was delighted that she had dabbled with a considerable amount of classroom technology training in prior years. She wishes everyone good health in these trying times. She enjoys seeing the success of her former students and wants them to keep in touch and perhaps even stop by her new office in Benton Hall 321.

Michael R. Nichols was promoted to Full Professor and appointed to Associate Chair of the Chemistry & Biochemistry Department in Fall 2019. He continues to investigate Alzheimer's Disease (AD) and inflammation-related research.

He spent much of 2019 planning to host the 2020 American Society for Neurochemistry National Meeting in St. Louis/St. Charles in April 2020 along with **Dr. Holly Pope** BSBB 2008, Admissions Representative for the UMSL Pierre Laclède Honors College. Graduates from the lab in 2019 were **Marina Villoch** BSBB 2019, **Kristen Schmutzler** BS Biology, 2019 and **Cristina Sinobas Periera** BSBB, 2019. He has three graduate students and researcher **Thao Pham** BSBB 2017, who will be heading to medical school in Fall 2020, BS/MS student Anna Hoffmeister Jones, and undergraduate researchers Tyler Obermark and Antanisha Parks. Several papers were published from the group this past year including a collaborative study with the Colonna group at Washington University that appears in *Nature Medicine*.

James J. O'Brien was inducted and honored as a Fellow of the American Chemical Society in August 2019, one of only 72 so honored in 2019. He has an active research group funded by the



Jack Harms PhD 2019, recipient of the 2019 Graduate Student Research Accomplishment Award, with his advisor Jim O'Brien and Cindy Dupureur

National Science Foundation. Graduate students **Kristin Bales** BS 2018 and **Brendan Ratay** BS 2019 are working on separate electronic transitions of tungsten sulfide, with manuscripts in progress. Former Ph.D. student **Jack Harms** PhD 2019 defended his thesis last May and finished very impressively with 6 publications in 2019 alone. Jim is pleased to have Jack as a new colleague at UMSL, where Jack is now an Assistant Teaching Professor in Chemistry. All three would have presented their results at the 2020 International Symposium on Molecular Spectroscopy in June, at the University of Illinois-Urbana Champaign, but sadly it was cancelled due to the coronavirus situation. Jim is a Director and an Alternate Councilor for the St. Louis

Section of the American Chemical Society (ACS) and serves as Chair of the Midwest Award Committee. Jim and Keith Stine continue to run HS Career Day for the ACS St. Louis Section.

Nigam P. Rath is delighted to report the installation of a new state of the art Bruker Venture Duo instrument with PHOTON-II detector in April 2019 purchased with NSF funding. (\$325K) The instrument has increased our capabilities significantly, both for research and teaching. It is currently the primary research instrument and it was also used for undergraduate lab courses- advanced organic and inorganic labs. It was going to be used in the crystallography course offered during spring 2020 but the campus went into online teaching a week before data collections started. We still have a 2nd single crystal instrument (Bruker X8 Apex-II installed in 2008).

Christopher D. Spilling continues as Vice Chancellor for Research and Graduate Studies and with the upper administration short one, since Tom George retired, we imagine he has been as busy as ever. He and his students were able to publish four articles in 2019 and he still has a research group of three doctoral students. He gave a lecture at the University of Birmingham, UK, in May 2019 titled "Synthesis of Biologically Active Phosphorus-Containing Heterocycles" after attending a "Trooping of the Colour" in London where his son Robert, a Grenadier Guard, was in the parade. Chris has started a web-based project called *Research Enabled* which connects industry with academic researchers.

Keith Stine, in addition to having become Department Chair, continues to work with a group of four PhD students, a postdoc, **Jay Bhattarai** PhD 2014, and several undergraduates and high school students. Research on applications of nanoporous gold continues, as does the collaboration with Professor Demchenko's Glycoworld lab on carbohydrate synthesis. They received additional NIH funding to continue the work for the period 2020 - 2023. He is a part of the tier 2 UM System grant for which Professor Demchenko is the PI for developing a glycoscience consortium at UMSL with an initial focus on molecules that could be used to treat sepsis. He also was a part of the tier 1 grant from the UM System for which Professor Dupureur is the PI that will soon bring new and advanced instrumentation to the UMSL Microscope Imaging and Spectroscopy Technology Laboratory (MIST). A project on lipid monolayers and their interaction with glycoalkaloids with a view towards drug delivery applications is being pursued by graduate student Bishal Nepal. Papers

based on the collaborations appeared in *Carbohydrate Research* and *Journal of Organic Chemistry*. His group published review articles in *MDPI Processes* and *MDPI Biosensors*. He hosted a STARS associate student in his lab over summer 2019 and two high school students from the Gateway Science Academy to do some work they could use to present posters at their school's science fair. These students worked with their teacher Hamit Yilmaz, a student in our M.S. degree program who took Professor Stine's new special topics graduate course in nanoscience in the Spring 2019 semester. Hamit also carried out research in Professor Stine's lab during summer 2019. Together with Prof. Bauer and others from campus, he has been working to run the Missouri Louis Stokes Alliance for Minority Participation that seeks to promote the success of under-represented minority students in the sciences. They both, along with other UMSL faculty and a number of UMSL students, attended the *Louis Stokes Midwest Regional Center of Excellence 2019* meeting in Indianapolis. He introduced the new orientation course for chemistry majors *Chemistry: The Central Science* in Fall 2019. In the Spring 2020 semester, he is presenting the first offering of the course *Introduction to Macromolecular, Supramolecular & Nanoscale Chemistry* to meet the new ACS requirements for BS degree majors.

Janet Braddock-Wilking continues to collaborate with Cynthia Dupureur's group on the biological applications of some of the luminescent silafluorenes and germafluorenes synthesized in her research group. Janet was recently inducted into the National Academy of Inventors for the patent, *Cyclic germanium compounds and applications thereof*. The patent was issued on May 21, 2019, and provides a new series of compounds that are excellent candidates for chemical or biological sensors, host materials for electroluminescent devices and solar cells, and electronic transport layer components in organic light-emitting-diode devices. Co-inventors were her former graduate students **Teresa Bandrowsky** and **James B. Carroll II**. Both BS 2008 and PhD 2013.

Chung Wong's former undergraduate research students **Howard Mayes** BS 2015, MS 2017 and **John Mayginnnes** BS 2015, both now in the PhD program, have joined Chung's lab, so has post-doctoral research fellow Justin Spiriti. Undergraduate researchers include Khamhbawihum Cenhrang and Michael Pollihan from the department, and Samuel Wihelm, Sinhareen Al Oleihi, Mai Ngo, and Kim Dang from the program in



Professor **Janet Braddock Wilking** (BA 1985) with a copy of the 2019 patent awarded to her and her students **Teresa Bandrowsky** and **James B. Carroll II**.

Biochem. and Biotech. High-school students Jason Yang and Tanay Chandak also performed research in Chung's lab through the STARS program. The big news is that Chung was promoted to Full Professor, effective Fall 2020.

Zhi Xu retired in September 2019. He received his B.S. degree in Chemistry, and an M.S. degree in Electrical Engineering from Tsinghua University, Beijing, China, and his Ph.D. in Chemistry from the University of Pittsburgh. He held a postdoctoral position at the University of Illinois, Urbana, prior to joining the UMSL faculty in 1994. His research interests were development of new optical analytical instrumentation, investigation of new photonic materials, and study of solid-liquid interfacial chemistry. His most prominent results involved development of new technology has which increased the sensitivity of most commonly used optical analytical instruments 100 to 1000 fold over that of state-of-the-art commercial instruments. A noteworthy application was a system for non-invasive optical blood glucose detection utilizing spectral data analysis. He was awarded many patents for his work and won awards for entrepreneurship from the university and the St. Louis business community.

EMERITUS, RETIRED, AND FORMER FACULTY

Charlie Armbruster and the editor were in touch this spring but unable to meet due to the coronavirus. He says he is doing well, continues to play bridge regularly when possible but is not as spritely as he once was - especially when he was on the racquetball court.

Kenneth W. Barnett who taught and did research in organometallic chemistry here from 1970 to 1979 died in June 2019 at age 79 after a battle with Alzheimer's Disease. He joined UMSL from Shell Chemical Co., where his proudest moment was the award of a patent for his work on ethylene oligomerization. Ken joined Ashland Chemical Co., in Dublin Ohio in 1979 and retired from there in 2003. He was a very popular teacher, had many undergraduate research students work with him and directed the research of two of our very first doctoral students, **David L. Beach** PhD 1977 and **Donna G. Friedman** PhD 1980. Ken is survived by his wife Pat and children Lisa and Chris and their families.

Lawrence Barton and his wife **Patricia J. Barton** BA 1978 are spending much more time in Fort Myers than in St. Louis but he continues to maintain an office on campus and works on alumni affairs and with the Chemistry Alumni

Council and also updates the website and the graduate brochure. He continues as an Ex Officio Board member of the UMSL Alumni Association and of the UMSL Retirees Association where he serves as webmaster. He and Pat took an interesting train trip across the Canadian Rockies to Toronto after a week in Vancouver in September 2019, following the San Diego ACS meeting. They were thrilled to attend their oldest grandson Kyle's wedding on Clearwater Beach last June but were disappointed to miss meeting with the Alumni Association at a party in Jupiter for Cardinals Spring Training which was cancelled due to the Coronavirus. He still plays lots of golf and just won his flight in the club championship at Shell Point Golf Club in Fort Myers.

Joyce Y. Corey is still a fixture in the department where she reviews and writes articles and attends some meetings. During the lockdown, she was the only person on the 3rd floor of Benton Hall. She had booked to go to the International Organosilicon Symposium in Toulouse, France with a stop in Montpellier to visit friends but the University banned travel to several European countries including France. She is usually in Maine, in June but had to cancel that trip too and is unhappy to have to obey the rules and wear a mask in Schnucks.

David L. Garin was the leadoff speaker in a symposium featuring former Congressional Science Fellows at the Fall 2019 ACS National Meeting in San Diego. His talk, titled "Science and public policy: Career choices and social responsibility" was taped by the ACS. In November, David returned to California, visiting family and friends in Escondido, Santa Barbara, and Sacramento (where he did a bicycle ride on the American River trail, which was beautiful). Also in November, Garin received a plaque as



David Garin with Peggy Hermes at the 2019 Founders' Dinner where he was honored for his receiving the inaugural UMSL Retiree of the Year Award.



*Hal and Mary Harris with Cindy Dupureur and the Mary and the Hal and Mary Harris Scholarship recipient **Tram Tran**.*



Leah Trimble who returned to the department to run the office in January 2019.

the first recipient of the new UMSL Faculty Retiree of the Year award. Garin thanked the editor for nominating him and others for supporting his nomination but it was a no brainer. He served as President for 10 years and was responsible for keeping the Association going through thick and thin. In January, David and longtime partner, Margaret, visited Pat and Lol Barton in Florida where they had a grand time notwithstanding some surprisingly cool weather.

Harold H. Harris has been helping Jim Chickos to set up the "new" LC-TOF instrument in the mass spectrometry lab and also resurrecting a donated GC-MS that may become a versatile workhorse for the department. They had just got everything working fine when the virus event forced the closing of the laboratory. Hal and Mary had a great vacation in Hawaii last year. Hawaii was the 50th state that Hal had visited. They also spent the Christmas week with their two grown children and their families in Hilton Head, South Carolina.



Harper Weidt 2019 recipient of the Eugene and Joyce Corey Scholarship with Professors Dupureur and Corey.

Wesley R. Harris retired last September after 31 years at UMSL. If Wes had only known that his leaving St. Louis was the essential requirement for a Stanley Cup Championship, he would have retired sooner. He and his wife Marion have moved to Hawaii, on the island of Kauai. They have built a new home on a piece of land that was part of the family farm on which Marion grew up. It turns out that shipping your household half-way across the Pacific is a lot more complicated than driving it cross country, but fortunately for Wes, Marion managed the process. Even the family dog made it safely to Hawaii. The new house is working out very well, but given the rate at which plants grow on Kauai, Wes is now doing

more yard work than he ever could have imagined. Their son Jonathan and his family were able to visit the island from San Diego before all the coronavirus travel restrictions.

Rudolph E. K. Winter continues to spend time in the department where he still maintains an office. He and Margaret are well and note that their oldest grandson has been accepted to college. That made him realize how old he is!

STAFF MEMBERS

In September 2018 we were very disappointed to report that **Leah Trimble** had moved to the College of Arts and Sciences as Business Support Specialist. Well we are delighted to report that she is back running the department office and that of the Physics Department. In Leah's former position in the department is **Jasmine Maloney**. Our third permanent staff member is **Daniel Cranford**, Coordinator Lab Operations (Stock room Manager). We also have a part-time glassblower **Matthew Reinsch** who actually lives in the editor's neighborhood.

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. The Scholarship is given to incoming Missouri resident undergraduate transfer students, For 2019-20 it went to **Joseph Bagwell**

The Lawrence Barton Scholarship is designed primarily for junior chemistry majors who are first generation college students and who have financial need. For 2019-20 scholarships were awarded to **Trevor Hick, Devin Donahue and Harper Weidt**.

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 who has worked on behalf of and supported the department for many years. The 2019-2020 fellowship went to **India Session**.

The Eric G. Brunngraber Undergraduate Research Fellowship honors the late Dr. Eric G. Brunngraber. He was the first regular biochemistry faculty member. For 2019-2020 the fellowship went to **Moriah Swoboda**.

The William and Erma Cooke Memorial Scholarship 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. **Tyler Obermark** received

the scholarships for 2019-20. This was the first major alumni supported scholarship at UMSL.

The Eugene and Joyce Corey Scholarship goes to an outstanding undergraduate who has excelled in service to the department. It honors the late Eugene Corey who served on the faculty from 1969 to 1988, and Professor Emerita Joyce Corey. The 2019-2020 award went to *Harper Weidt*.

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. For 2019-20 one was awarded to *John Crumpton*.

The Hal and Mary Harris Scholarship is awarded to juniors seeking a degree in chemistry with a minimum GPA of 3.0 and enrolled in a minimum of 12 credit hours. The 2019-20 award went to *Tram Tran*.

The John J. Taylor Scholarship was established by his family. *John J. Taylor* BA 1979 had directed funds from his estate to a need-based chemistry scholarship. For 2019-20 *Sinhareeb Al-Olewi* received a scholarship.

The M. Thomas Jones Memorial Fund honors Dr. Jones who was in the department for 21 years. It funds an annual award for the top graduate student seminar in each semester. For fall 2018 an award was made to *Jack Harms* and for spring 2019 to *Michael Mannino*.

The Stephen S. Lawrence Scholarship was established by *Steve Lawrence* BA 1982, PhD 1989 and is awarded to junior or senior chemistry majors who are good departmental citizens. 2019-20 awards were made to *David Auston* and *Harper Weidt*.

The Rath Family Scholarship, established by Nigam and his family, is for full-time undergraduates studying STEM and preference may be given to Chemistry/Biochemistry students. The 2019-20 award went to *Antanisha Parks*.

The Linda and Michael Finkes Chemistry Scholarship is funded through the generous contributions of *Linda* BA political science 1970 and *Michael J. Finkes* BS 1973, MS 1978. The recipient for 2018-19 was *Sinhareeb Basim Al Olewi*.

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 and it went to *Sinhareeb Basim Al Olewi*.

The Rudolph E. K. Winter Graduate Scholarship, initiated by *Robert Zehr* BS 1976, MS 1979 and supported by alumni and friends, provides stipend supplements for worthy incoming PhD students preferably majoring in some aspect of organic chemistry.

STUDENT PERFORMANCE AWARDS

Undergraduate

The award for the *Outstanding Student in Introductory Chemistry* went to *Mark Clark* 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 *Hunter Campbell*. The *ACS Award for Organic Chemistry* went to *Michael Barnes-Flaspoler*; and the *ACS Award for Analytical Chemistry* went to *Alan Scheibel*. The ACS Awards in *Inorganic* and *Physical Chemistry* went to *Alan Scheibel* and *Austin Stelling*, respectively and the *ACS-St. Louis Section's Outstanding Junior Award* went to *Michael McDonald*. The latter award was presented at the Annual ACS High School and College Awards Night in April. *Alan Scheibel* also received the *Alan F. Berndt Outstanding Senior Award*. Awards for *Outstanding Service to the Chemistry Department and Campus Community* and for the *Outstanding Undergraduate Teaching Assistants* went to *Michael Barnes-Flaspoler* and *Haley Steber*. The 2019-20 Undergraduate *Chemistry Aid to Education Awards* were given to: *Mark Eissler*, *Michael McDonald*, *Matthew Murphy*, *Alexander Sanderson*, *Tram Tran* and *Harper Wiedt*.

Graduate

The 2018-19 *Outstanding Graduate Teaching Assistant Award in Memory of Jack Coombs* went to *Kristin Bales*. The *Outstanding MS Student Award* went to *Ryan Uding*. The *Graduate Student Research Accomplishment Award* went to *Jack Harms* who graduated with a PhD degree from the O'Brien lab in 2019.

THE ROBERT W. MURRAY LECTURE

On Monday April 21, 2019 the 22nd Annual Robert W. Murray Lecture was presented by *Dr. James Paulson*, Cecil H. and Ida Green Professor and Co-Chair, Department of Molecular Medicine, Professor, Department of Immunology and Microbiology, The Scripps Research Institute, La Jolla, CA. His lecture was titled "*Glycan Recog*



Professor James Paulson the 22nd Annual Robert W. Murray Lecturer.

of *Self and non-Self*". He was also honored at a banquet at the Glen Echo Country Club on the previous evening.

The **23rd Annual Robert W. Murray Lecture** was to be presented by **Dr. Omar M. Yaghi**, *James and Neeltje Tretter Professor of Chemistry* and Co-Director of the Kavli Energy Nano-Sciences Institute at the University of California-Berkeley, on **Monday April 20, 2020**. The title of his seminar was to be "Harvesting Water from Desert Air". However, due to the Covid-19, the lecture has been postponed until further notice.

DISTINGUISHED ALUMNI LECTURE

The 32nd Annual Distinguished Alumni Lecture was given by **Martin E. Hayes** BS 1999. Martin obtained a PhD degree in synthetic organic with Professor Rick L. Danheiser at MIT in 2004. Since then he has been with Abbot and more recently with AbbVie in Worcester MA., working in the general area of medicinal chemistry. His position was Director ADC (antibody drug conjugates) Platform Strategy but since December 2019 he has been Director, Tumor Targeting Biologics. His lecture was: titled "Insights from a Chemist in Today's Pharmaceutical Industry".

The 33rd Annual Distinguished Alumni Lecture was to be given on May 4, 2020 by **Dr Elizabeth (Betsy) Keath** BA 1978, Associate Professor of Medicine, Research Development Program Director in the Institute of Clinical and Translational Science, in the Washington University School of Medicine. Her title was to be: "When You Come to a Fork in the Road, Take It (Reflections of an UMSL Chemistry Graduate)". However, it had to be postponed and will be rescheduled. Dr. Keath obtained BA degrees in chemistry and biology, Summa Cum Laude, from UMSL. She was on the faculty at Saint Louis University (Department of Biology) and served in Ireland as a Scientific Program Officer for the Science Foundation Ireland, and consultant for the Irish Cancer Society.

EDITOR'S COLUMN (LAWRENCE BARTON)

I will begin by apologizing for the fact that the 2018 UMSL CHEMIST was not delivered until well into 2019 and some of you may not have received it until late spring. We now have only two office staff members, one of whom does the work for chemistry and physics and the other spends half her time in biology and the rest in chemistry. The coronavirus has added additional stress, so I have decided we should try an online

version only. We struggle to maintain contact information from all of you so if we don't have your e-mail address, please let us have it. This volume will be available on the website as well and also announced on LinkedIn site and also Facebook.

These are tough times for the University and for the department but from my perspective it is good to see that most of the department activities are going well. We continue to graduate outstanding students who go on to do well in their careers and in graduate and professional school. Faculty colleagues are doing well in their research and getting the best out of the great students they have working in their labs. External funding is tough to obtain but the department has held its own and colleagues continue to be honored by their peers. The downside is that staff and faculty numbers have dropped. Shared instrumentation is nowhere as good as it was 20 years ago but that is the story on most campuses. I am somewhat out of the loop these days so I am going to address the big picture and just a few details.

The major change on campus this past year was the departure for retirement of Chancellor Thomas F. George and his wife Curators' Professor of Music Barbara Harbach, and Tom's replacement by Provost Kristin Sobolik who becomes our eighth permanent Chancellor. Tom George was our longest serving Chancellor 2003-2019. The others were James Bugg 1965-69, Glen Driscoll 1969-1972, Joseph Hartley 1973-4, Arnold Grobman 1975-1985, Marguerite Ross Barnett 1986-1990 and Blanche Touhill 1990-2002. Others served ably as Interim Chancellors including Emery Turner, Arthur McKinney, Donald Driemeier and of course Kristin Sobolik. After Marguerite Ross Barnett left in 1990 there was a search for a new Chancellor and the final decision was made between two candidates. They were Blanche Touhill, Vice Chancellor for Academic Affairs and Tom George who at the time was Dean of Natural Sciences and Mathematics at SUNY Buffalo. There was a session for department chairs to meet with the candidates and I went to both and introduced myself to Tom. As we all know he didn't get the position and eventually became Provost and Academic



Dr. Martin E. Hayes BS 1999, the 32nd Annual Distinguished Alumni Lecturer with his undergraduate research advisor *Chris Spilling*.

Vice-President at Washington State University. But that was not the end of it. For about six months or so he would send me copies of research papers, especially those related to atomic clusters, analogous to the borane clusters that I was studying. Two years later in July 1992, I was attending the Third Boron USA Workshop in Pullman, WA. The conference ended on the Saturday evening with a banquet and awards ceremony. As I was walking to the event I passed the Chemistry Department. A van stopped and Tom George got out, wearing running gear, and walked towards the building. We recognized each other and briefly chatted. During the next few months Tom would again start sending me reprints of his research. He is an extremely productive researcher. Then in 2003 I was asked by Don Driemeier serve on the Chancellor Search Committee. The committee Chair was Doug Smith from the Business School and we worked very hard. It was in the spring and we had considered many candidates including Tom George.

The recruitment company had asked him to apply but he indicated that he was quite happy as Chancellor of the University of Wisconsin-Stevens Point. At the time Elson Floyd was President of the University of Missouri and he knew Tom from his time at Eastern Washington University when Tom was at Washington State University. Floyd was very supportive of our recruitment of George, so I was deputed to call Tom. He was hesitant but we were able to set up a very secret visit to St. Louis. I arranged for a late evening dinner at Glen Echo Country Club and Doug and I met Tom and Barbara at Lambert and took them to the country club where our wives, Pat Barton and Ruth Smith, were waiting for us. We had an excellent meal and the following day Tom met several important campus people and Pat Barton gave Barbara a tour of the St. Louis area.

The rest is history. Tom served for 16 years and developed a reputation for a very transparent administration. He was always accessible to everyone, from staff and students to senior staff and faculty. If I ever e-mailed him, he would respond within an hour. His many accomplishments as chancellor and his background are to be found on the UMSL website.

My first experience with Kristin Sobolik was a few weeks after she had joined the campus. I serve on the Governing Board of the Alumni Association as an ex-officio member and she visited a Board meeting during summer 2017. She described her first visit to the campus. She had stayed at the Hilton Garden Inn and instead

of contacting someone on campus when she arrived she decided to take her own tour of the campus. She walked from the hotel to the campus and went just about everywhere. This was before she was interviewed and before she took the position. She presented herself extremely well and of course has served as head of academic affairs on campus for almost three years, promoting transparency and openness during difficult times.

The following highlights the growth of the faculty here under the various "Department Administrations". Charles Armbruster was Chair of the Division of Science when in 1966 Dave Garin and I joined 6 full time regular faculty members including Dave Larsen, Alan Berndt, Marcel Halberstadt, Jane Miller and Stuart Weidman. Larsen was a Northwestern PhD having postdoced at Washington University. Berndt was a Caltech PhD working at Argonne National Labs and Halberstadt a Yale PhD doing postdoctoral work at what is now NIST. Jane Miller was a Tulane PhD working at Washington University before she came here and Stu Weidman was a Chicago PhD. Garin had a PhD degree from Iowa State University and postdoctoral experience at the Weizmann Institute of Science and Indiana University. My PhD degree was from Liverpool University and I did postdoctoral research at Cornell University. Charlie would go on to hire another 11 faculty colleagues.

In 1967 we recruited Eric Block a Harvard PhD and Dennis Diestler a Caltech PhD, both coming directly from their respective institutions. In 1968 we hired our first colleagues with academic experience. Eugene and Joyce Corey, both Wisconsin PhDs came from the faculties of the University of Cincinnati and Thomas More College, respectively. Bob Murray, another Yale PhD, had been at Bell Labs for 10 years and was a veteran when he joined us. Diestler was a theoretical chemist and since we didn't have the computer facilities to suit him he left for Purdue in 1969. That year we hired another four colleagues. Tom Jones and Rudi Winter were both experienced academicians. Rudi was at the Polytechnic Institute of Brooklyn, having obtained a PhD from Johns Hopkins and had postdoctoral experience in Karlsruhe and Harvard and Tom was at St. Louis University having spent three years there and five years previously at Dupont. He was a Washington University PhD. We also hired two junior colleagues, Jim Chickos whom I mention elsewhere and Bob Rouse, a postdoc at Harvard who had obtained a PhD from Northwestern. Bob was a replacement

Department Distinguished Alumni Lecturers.

- 2019 **Dr. Martin E. Hayes** BS 1999
 2018. **Yanina Levchinsky-Grimmond** BS 1997, MS 1999
 2017 **Dennis P. Parazak** BS 1982, MS 1986, PhD 1996
 2016 **Michael J. Finkes** BS 1973, MS 1978
 2015 **Dr. Michael D. Groaning** BA 1995, MS 1997
 2014 **Dr. Katherine M. Block** BS 2001
 2013 **Kim S. Gorman** BA 1992
 2012 **Stephen A. Kolodziej** BA 1987, PhD 1992
 2011 **Elizabeth A. Amin** BA 1996, PhD 2002
 2010 **Dr. Barbara W. Brown** BA 1984
 2009 **Donald G. Hesse** BS 1984; PhD 1991
 2008 **Dr. Timothy T. Wenzel** BS, 1978
 2007 **Joseph P. Bono**, BS, 1969
 2006 **Dr. Alicia M. Beatty**, BS 1989
 2005 **Rajiv M. Banavali**, PhD, 1985
 2004 **Jean Huhmann-Vincent** BA 1992; PhD 1996
 2003 **Jerry Ronecker**, BS 1982
 2002 **Douglas G. Nuelle** MD BS 1969
 2001 **Ken Owens** BS 1980
 2000 **Dr. Deborah F. Bergstrom** BS 1980
 1999 **Dr. Michael D. Ennis** BS 1978
 1998 **Dr. Karl Seper** BS 1982
 1997 **Dawn L. Shiang** BA 1983, Ph.D. 1988 ,
 1996 **Robert L. Lamberg**, MD BS 1972
 1995 **Dr. Janet Braddock-Wilking** BA 1985
 1994 **Dr. C. Michael Drain** BS 1982
 1993 **William L. Neuman** Ph.D. 1987
 1992 **Susan A. Jansen-Varnum** BS 1982, Ph.D. 1986
 1991 **Dr. Gary S. Jacob** BS 1969
 1990 **Harold R. Messler** BS 1970
 1989 **Dr. David Henton** BS 1967
 1988 **Dr. Sanford A. Asher** BA 1971

for Diestler. In 1970 we hired Hal Harris and Ken Barnett. The last and 19th regular faculty colleague Charlie hired was Bob Penn in 1972 from Texas-Austin where he was a postdoc.. His PhD degree was with Robert Curl at Rice who would later share the Nobel Prize for work on C₆₀. When Jim Chickos retires in August 2020, none of those 19 will still be teaching here. Bob Murray, chair for 5 years 1975-80, hired Jim Riehl, who had done his PhD degree with Dennis Diestler at Purdue, as Rouse's replacement.

During my 18 years as chair we hired 15 faculty and among them only Vally D'Souza, Nigam Rath, Chris Spilling, Jim O'Brien, Keith Stine and Janet Wilking are still on the faculty. Gordon Anderson served as chair following me for six years and then left to become a Dean at East-Tennessee State University. His hiring legacy includes Alexei Demchenko, Cindy Dupureur, Jim Bashkin, Mike Nichols and Chung Wong. Chris Spilling served from 2004—2015 and hired Rensheng Luo, Eike Bauer, George Gokel, Steve Holmes, Alicia Beatty, Bruce Hamper and Ben Bythell. Cindy Dupureur was the smartest and only served one 3-year term and hired Lynda MacDowell and Jack Harms.

It must now be obvious why the name Charles Armbruster comes up so often. He founded and built the department. I hope you found this interesting. Anyway, I enjoy keeping up with you all and knowing your successes both personal and professional. Please keep sending me material. You can be very proud of your alma mater. We are now working on the second 50 years and I hope this tradition I and others began with this tome will be continued in the future. I will do it as long I can.

Best wishes to you all for a great recovery from this awful crisis we are in. Stay safe and healthy.

Thanks to Generous Contributors 2019-20

Below we list the individuals, chemistry alumni and friends, and matching employers, who made contributions to the department processed since December 15, 2018. We are most grateful for your support. Recent gifts will appear next year.

Abb-Vie
Dennis and Marta Anglim
Phillip Asaro
Sanford Asher
Pat and Lol Barton
Boeing
Edward Brunngraber & Jacqueline Szmuskovicz
Eric and Ann Brunngraber
Lori Buffa
Sidnie Campbell
Vincent and Sarah Chang

Kevin Criscione
Edith Csiki-Fejer
Carol Daus
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I wish to thank Eike Bauer, and Jim O'Brien, for the photographs and *Patricia Barton* BA 1978 and David Garin for proofreading. Any errors, especially in content are mine.

Please follow the department on Facebook. The following was established by and is managed by Eike Bauer

<https://www.facebook.com/UMSLChem/>

Or the one with Alumni in the title established and managed by *Yana Levchinsky-Grimmond*, BS 1997, MS 1999

<https://www.facebook.com/groups/62146141544/>

UMSL Chemistry Alumni Fund

**UMSL CHEMIST
SPRING 2020**

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:

We are doing something quite unprecedented this year. We have been struggling for years, not receiving adequate funding from the state but this year the Coronavirus pandemic will severely affect the university budget. Thus we are not listing the individual funds as we normally do but are giving you the opportunity to build the department endowment or to make an unrestricted contribution to the department. We hope you understand.

Chemistry Department Endowment _____
Unrestricted _____

Feel free to contribute to any of the funds described on pp 18 and 19.

Name of Fund _____
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. Select the option "other" and type in the designation (e.g. Chemistry Department Endowment).

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

INFORMATION UPDATE SPRING 2020

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

Name _____ UMSL Degree _____ Year _____

Current mailing address: _____

Employer: _____

Current Position: _____

Recent Activities and Other News:

News of other alumni:

