

UMSL CHEMIST

Spring 2023

Department of Chemistry and Biochemistry

The department lost two icons in 2022 so as Editor I am taking the liberty of pre-empting the message from the chair to include their obituaries, the first is the official UMSL one and the second something I wrote. The Chair's message follows on page 2. Lol Barton

Charles W. Armbruster, who Chancellor of Missouri-St. Louis, begin- commencement in founding, died on May 27, 2022. He was 85.

Armbruster's arrival UMSL predated departments.

Tom George spent 35 years as a professor presented Armbruster with of chemistry at the University the Chancellor's Medallion at ning with the university's Armbruster spoke at the ceremony and even sang the alma mater before being the guest of honor at a reception atat tended by more than 130 alumni and friends of the Chemistry Department in the

-met dinner featuring classi- would not be so stable as the cal French cuisine. You might office staff became a revolvhave caught Dr. Armbruster ing door. as host of 'The Lively Arts,' a She retired in 1997 after series of programs produced spending 35 years at the Uniby KSD-TV, or heard him versity. She lived in Floris-KMOX after a Met broadcast. Where else could you find Charles Armbruster? Besides being anywhere that music is happening, he might be water skiing, playing racquetball, or raising gardenias, camellias and hibiscus in his greenhouse."

Born in St. Louis in 1937, Armbruster studied voice and chemistry at the University of Notre Dame and the University of Heidelberg, eventually receiving his degree in chemistry. He went on to earn a PhD in chemistry from Washington University in St. Louis. Armbruster moved to Orlando after his retirement in 1998 and became a member of the Orlando Metropolitan retired in 1992 but continued picnics, Xmas Parties, and Bridge Club. He formally to teach organic and introduc- putting them through their tory, and serve as the College paces when they completed pre-med advisor until 1998 appointment forms, etc., in when he left the St. Louis the office, but Betty's major

Betty Eshbaugh, age 90, died on September 18, 2022. She joined UMSL in 1962 and and to keep track of the served in the Chancellor's funds. In the early 2000s, she Office before becoming the and her husband Ken moved Secretary to the Division of to their "home" state and Science from 1963 to 1968. lived in Miamisburg OH and She then served as the first began wintering in Texas. secretary of the Department Their place was in Pharr, TX, of Chemistry and ran the department office for 29 years. During that period she supervised at least seven other col- lost her husband Ken in 2014 leagues in the office during a and is survived by her daughperiod of stability in that area ter Lilo Mitz (Jonathan), The next 25 or so years grandson Erik, and 3 siblings.

Volume 40, 2023 **Editor:** Lawrence Barton

discussing German Lieder on sant and was an active square

Betty Eshbaugh dancer and later a line dancer.

Former students will remember her organizing float trips, contribution for so many years was to keep the department running on an even keel 4.5 hours south of San Antonio on the Rio Grande. She



Dr Armbruster doing what he enjoyed most, teaching organic chemistry.

Rather, the university had Millennium Student Center. divisions, and Armbruster Teaching was Armbruster's from 1963 until 1975. He Word. continued to teach mostly "You may have heard Charles organic and chemistry courses with dis- the baritone solo at a Bel tinction through his retire- Canto concert, or you may ment in 1998.

"Charlie was instrumental in establishing the graduate programs and in developing, especially, the sciences at UMSL and was among the best-loved faculty members ever," said Professor Emeritus Lawrence Barton, whom Armbruster hired in 1966.

served as chair of the Divi- first love, but he was a Resion of Sciences and later the naissance man, as detailed in Department of Chemistry a 1981 story in the West End

> introductory Armbruster, Ph.D., singing have seen him teaching a chemistry (or even Latin) class at UMSL," the story began. "You may have seen him down at Lake of the Ozarks building a vacation home with his own hands, or, if you were very lucky, you might have been invited to his beautiful home for a gour

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MESSAGE FROM THE CHAIR

The Department has welcomed two new faculty in the fall 2022 semester. Professor Jinjia Xu started as Assistant Professor of Organic Chemistry, taught the Advanced Organic Lab course in the fall semester, and has been busy setting up her lab and getting her research started first with the help of two very good undergraduates. She is currently seeking PhD students and to hire a postdoctoral associate. Dr. Lukasz Szatkowski has joined the Department as an Assistant Teaching Professor of Chemistry and has already taught Introductory Chemistry, physical chemistry lecture and is now engaged in the instruction of the physical chemistry lab together with Dr. McDowell. Our courses are now largely in person with a small number of online courses. Some of our Monday seminars are on Zoom since this allows us to have some additional speakers from further away. The Department held the Murray lecture and banquet for the first time since 2019. Professor Omar Yaghi of University of California - Berkeley presented an inspiring talk on Harvesting Water From Desert Air on September 26th with the banquet at Glen Echo Country Club taking place on Sunday night before the lecture and attended by about 50 people including many guests of the Department. The Department returned to Glen Echo Country Club on October 14th to celebrate the receipt of the Saint Louis Award by Professor Jim Bashkin attended by close to 70 people. The banquet was preceded by an all afternoon symposium at UMSL on Nucleic Acid Function. Probes. and Therapeutics featuring speakers from Georgia State University, Washington University and Saint Louis University. The Distinguished Alumni Lecture was presented by Dr. Sean Dingman BS 1993, who had done student



David Garin and Jim Chickos at Jim's retirement

research with Professor Stine. An in person celebration of the retirement of Professor Jim Chickos, after 51 years at UMSL, took place in June and was well attended with many speakers making remarks about their associations with Jim and for his work with them over the years. Research that is supported by the gift from **Dr**. Rajiv Banavali PhD 1985 and his wife Marysusan is now underway in the labs of Professors Bashkin, Bauer and Xu on a range of projects related to green and sustainable chemistry. Joycelyn Manore joined the department in November 2022 as Business Support Specialist and has been playing an absolutely crucial role dealing with requisitions, hiring and many other business matters. Although our enrollment has decreased recently, our graduates continue to be very successful at finding good jobs in chemistry and are highly sought after as evidenced by the large number of inquiries we receive from local industry seeking new employees. The department is proud of all of the accomplishments of its faculty and alumni and there is undoubtedly more success to come in the future.



Professors Bauer, Dupureur, Sine and Nichols at the annual research reception in April taking a selfie.

ALUMNI INFORMATION

EVENTS

We have three events planned for 2023. The first is arranged by the Chemistry Alumni Council and will Celebrate the Life of Charles W. Armbruster on Sunday April 23 from 2:00-5:00 pm in the Student Millennium Center. Invitations have been mailed or emailed and also be seen may at: umslalumni.org/charlie

The department will hold the Distinguished Alumni Lecture on Monday April 24 in conjunction with the presentation of most of the department awards. The speaker this year Justyce J. Jedlicka BS 2009 MBA 2018 and details may be found here.

The Chemistry Alumni Council will again honor a Golden Anniversary, this one for the class of 1973, which is the year that the Chair of the Council, Michael J. Finkes BS 1973, MS 1978, graduated. This will be the seventh such anniversary celebration we have held. The previous ones were for the classes of thr first six graduating classes 1967—1972 and were very successful. The Chemistry Alumni Council (CAC) partners with the Alumni Association in these celebrations. Indeed the CAC is now an Affinity Group of the Alumni Association and we appreciate all the assistance they provide to us. A link to this event is found here

1960s

Joseph P. Bono BS 1969 is a very experienced and well-known retired forensic scientist who has worked all over the world. Prior to retirement he taught Forensic Science at IUPUI in Indianapolis and then moved back to Virginia where he had been working with the US Secret Service. He and his wife Barbara spent a couple of years back in St. Louis where Joe had been helping out on the Chemistry Alumni Council but they moved back to Northern Virginia a year ago to be closer to their grandchildren. The Missouri to which they returned was unlike the one they left in 1981! They are now in a 55+ community and are convinced and appreciate that nothing will ever live up to the joy of experiencing the smiles on the faces of their grandchildren when they see them 4 times each week as compared to 1 or 2 times each year.

Gary S. Jacob BS 1969, about whom we have written in recent volumes was in touch following the announcement that Dr Armbruster had died. Gary, like most of our early graduates, was profoundly influenced by Dr Armbruster. Since retiring from Monsanto about 25 years ago Gary has had a very successful career as scientist, leader and executive in several pharmaceutical companies. Earlier this year he was very busy for the company OKYO Pharma where he serves as CEO. In May, OKYO was listed on Nasdaq concurrent with a \$2.5 million capital raise underwritten by the investment bank ThinEquity. They are presently looking to file an Investigational Drug Application on their lead ophthalmic drug OK101 in the fall and open a phase 2 clinical trial in dry eye disease patients in the first quarter of 2023. This is a rather unique situation for him as his two brothers are both optometrists! Gary's twin brother Jimmy is a biology UMSL graduate and practices in Warrenton, MO.

Donald K. Kaesser BS 1969, obviously a chemist by training, changed fields and after receiving a PhD degree in Counseling Psychology from Iowa State University is now a licensed psychologist with his own practice. More information about him is available at: https://www.beherenowdesmoines.com/. and his wife Pat visit Sanibel Island, FM every January but the trip was cancelled this year due to the hurricane.

say, passed away in December 2022 at the age of 75. He was last in the department in 2019



Dr. Gary S. Jacob BS 1969

when his graduating class was honored at the 50th anniversary. This was particularly shocking news for the editor, since Doug was the first student to do research in his laboratory, a collaboration set up by then-department chair Charlie Armbruster, and had been a very close friend for more than 50 years. He was an excellent student, top of his class graduating Summa Cum Laude within three years. I tried to persuade him to go to graduate school in physical chemistry but he went to the Washington University School of Medicine, graduating in 1973. He served as a Lieutenant in the Medical Corps of the U.S. Navy from July 1974 through June 1976 and was stationed in Guam. The Navy had helped him pay for medical school, and following his service he completed a residency in orthopedics at the Campbell Clinic in Memphis. He had a private Orthopedic practice in Port Charlotte, FL for 20 years before moving to Blue Ridge, GA and starting Blue Ridge Orthopedics, another private orthopedic practice which was very successful. We learned about that when he gave our Distinguished Alumni Lecture in 2002. Following that excellent lecture, I successfully nominated him for a UMSL Distinguished Alumni Award which was Douglas G. Nuelle BS 1969, we are so sad to presented to him at the Founders' Dinner in

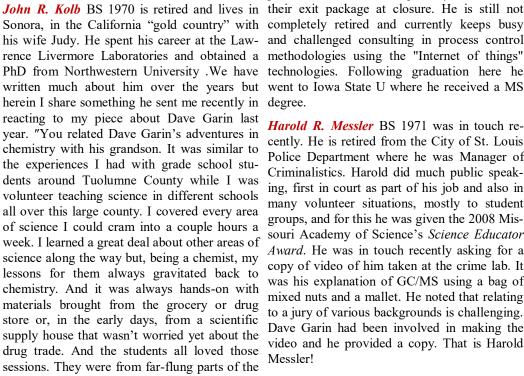


Douglas G. Nuelle BS 1969, 1947—2022, addressing the Alumni Association Golden Reunion Reception in May 2019.

often regaling his fellow students and faculty into science later but I believe I touched some members with his playing and singing with his five-string guitar. During his Charlotte career he was President of Charlotte Orthopedic Clinic. His career included being the first in the world to perform arthroscopic surgery of the Temporal Mandibular Joint (TMJ). He also held patents on devices relating to TMJ treatment and developed another device to assist surgeons in quantifying the soft tissue tension during total knee anthroplasty. He conducted lectures on joint replacement and TMJ. In Blue Ridge in mountains of North Georgia he was the only orthopedic surgeon without a radius of 30 miles and was Chief of Orthopedics at the Fannin Regional Hospital in Fannin County. He was proud of his two children, Rebecca who has a family in southwest Florida and Dylan his adopted son. The latter was a budding musician when he was 11 and Doug shared a U-tube video of him as a 10-yearold playing the drums.

Leslie E. Tucker BS 1969 is a Gastroenterology Specialist in Washington, MO who graduated from University of Missouri School of Medicine-Columbia in 1973. He was affiliated with Mercy Hospital Washington and retired in 2022. He and the editor played golf together in Fort Myers, in February this year.

1970s



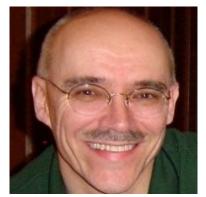
fall 2002. Doug was a very popular student, district and I never learned if any of them went of them with a fascination they would not have otherwise experienced. I had to give it up in 2017 after 16 years for health reasons. I was simultaneously teaching over at the local college as an adjunct much of the same time and I always found the little ones a great deal more enjoyable."

> Gene Bohn BS 1970 was also one of my first undergraduate research students and the one to coauthor my first significant independent paper in 1971. He was in touch in January. Gene spent a career in the chemical industry in various senior positions. Most of his career was with Borden Chemical as a Plant Manager in several locations but when the company was segmented and the segments sold, he "took a package". He then served as plant manager for Rehau, a smaller plastic extrusion facility in Elkhart, IN. At the time he and his wife Karen were near their young grandchildren, but when the company was purchased and moved south to Alabama, they decided not to relocate. However he was again able begin work with a PVC extrusion startup. Eventually Georgia Gulf, their PVC resin supplier, bought the company and a couple years later relocated the business closer to their Texas PVC resin plant. Gene did not want to relocate and so he managed the plant's closure over a couple of years and took their exit package at closure. He is still not completely retired and currently keeps busy and challenged consulting in process control technologies. Following graduation here he degree.

> Harold R. Messler BS 1971 was in touch recently. He is retired from the City of St. Louis Police Department where he was Manager of Criminalistics. Harold did much public speaking, first in court as part of his job and also in many volunteer situations, mostly to student groups, and for this he was given the 2008 Missouri Academy of Science's Science Educator Award. He was in touch recently asking for a copy of video of him taken at the crime lab. It was his explanation of GC/MS using a bag of mixed nuts and a mallet. He noted that relating to a jury of various backgrounds is challenging. Dave Garin had been involved in making the video and he provided a copy. That is Harold Messler!



Les Tucker BS 1969 and Lol Barton at his home after golf in February.



Harry W. Orf BS 1971



Gregory P. Noelken BS 1982 (1958-2023)



Dr Robert L. Lamberg BS 1972

tion as Senior Vice President for Research at Washington University in St. Louis and has Massachusetts General Hospital which he held practiced ophthalmology with Clarkson Eyesince 2012. He tells me he is currently serving care in St. Louis since 1980. As a student he part-time as Interim VP before completely re- was very active, serving as SGA President in tiring in a few months. His formal retirement his senior year and doing undergraduate reevent at MGH was on Feb. 16. Harry earned a search with three different faculty members, PhD with E. J. Corey at Harvard after graduating from UMSL where he did research with R. Corey. He presented our Distinguished former colleague Eric Block. He served as Director of Molecular Biology at Massachusetts erous and helpful to the department. Among General Hospital and Principal Associate in Genetics at Harvard Medical School for 21 years, among many other roles. In 2004 he was appointed Vice President for Scientific Operations and Professor of Chemistry at the Scripps Research Institute - Scripps Florida in Jupiter, FL. He retired in September, 2004 at the rank of Colonel from the 804th Medical Brigade, US Army Reserves, where he spent a year on active duty serving with the Brigade in Iraq and Kuwait, and earning a Bronze Star. He had joined the reserves during the Vietnam war when he was an UMSL student. He received a UMSL Distinguished Alumni Award in 1994 and served on the Chancellor's Council during the later stages of Chancellor Thomas F. Georges' term as Chancellor.

Kenneth O. Henderson BS 1972 was delighted to receive the ASTM Presidential Award at the December 2022 meeting. Ken has been associated with ASTM International, formerly known as the American Society for Testing Materials, for 40 years. He retired in 2009 as Vice President of Cannon Instrument Company in State College PA, and now has his own consulting company, McEinri Associates LLC in Port Matilda PA. Formerly he was Program Manager for Engine Lubricants with Castrol North America in Piscataway, NJ. Ken began his career in lubricants in St. Louis following graduation when he worked with Ethyl Corporation where he rose to Senior Rheology Specialist in the Petroleum Additives Division. He moved to Castrol in 1992 and joined Cannon in 1998. As a student, he had a part-time photography business and recently sent the editor, and his undergraduate research advisor, David Garin, many scanned photographs from his days in the chemistry department at UMSL. They included lab pictures, float trips and other memorabilia.

Robert L. Lamberg BS 1972 was the only 1972 chemistry graduate who was able to attend the celebration last May of the 50th anniversary of

Harry W. Orf BS 1971 retired from his positive class of 1972. Bob received his MD from Alan F. Berndt, Robert W. Murray and Eugene Alumni Lecture in 1996 and has been very genother things, he funded an undergraduate scholarship in the 1990s.

> Mark H. Owens BS 1976, MS 1982 continues to fight his lung cancer. I was very worried when I was unable to reach him but very pleased, eventually, to speak to his wife Theresa A. Owens MS. Ed 1982, in February. They live in Branson MO, and when I spoke Mark was away having a chemo infusion. We miss our regular but infrequent visits to the Ferguson Brewhouse with other alums and faculty members but I hope we can reconnect this summer. [Added 3 17 2023: Mark informed me that his treatment was not working and he would be receiving palliative care and likely hospice care soon. He fought a very hard fight bravely and we are pulling for him].

Helen (Janoski) Anderson BS 1981 spent almost 25 years with the Monsanto/NutraSweet/ Pfizer companies, developing expertise in the pharma business. Since then she has had several senior appointments in pharmaceutical companies including Vice President for Commercial Development at The Harvard Drug Group, and Senior Director for Business Development and Commercial lead with Aspen Pharmacare. In December 2022 she was appointed Director Program and Business Development, biologics, with Thermo Fisher Scientific in St. Louis.

Gregory P. Noelken BS 1982 passed away on Wednesday, Jan 11. Before retirement in January 2016, Greg joined the Washington University Chemistry Department in March of 1999 as a Computer Specialist, then retired as Computer Systems Manager in January of 2016. He was loved and respected by his former colleagues. Greg had been with Petrolite in St. Louis for several years prior to the sale of the company and its move to Houston. Like many others he chose not to move south and was fortunate to find a most hospitable and rewarding home at Washington University.

Dean for Undergraduate Affairs, Science Edu-University in Philadelphia. She is so proud of her daughter Grace who is doing well in her third year at Hofstra University. Sue did her PhD with M. Thomas Jones at UMSL and postdoctoral research with Nobel Laureate Roald Hoffman at Cornell University before joining Temple.

Dennis Parazak BS 1982, PhD 1996, another classmate of Greg Noelken was also in touch in February. Dennis worked at Petrolite in St. Louis for almost 11 years following graduation and during that period completed a MS degree in chemistry at UMSL. In 1992, at the advice of the editor, he returned to UMSL and completed a PhD degree with Keith Stine in 1996 and went to work for Hewlett Packard, first in Corvallis OR and later in San Diego, CA. In 2015 he moved to Boulder CO to work at RICOH Imaging Americas Corporation. He is retired and lives in Escondido, CA. As a student, he



Dawn and Bill Shiang with their sons Alex and Wil and Bill's mother on their farm near Eminence MO.

Susan (Jansen) Varnum BS 1982, PhD 1986 subsidized his income by playing in a rock was in touch in February following the news band. In 1996 I recall attending a very noisy about *Greg Noelken* her former classmate. Sue bar/club in old St. Charles where Dennis and is Professor of Chemistry and Senior Associate his group were performing for the last time before leaving for Oregon. Several faculty cation, & Community Engagement, at Temple members and students attended. He tells me he still plays music, with two groups, one which he started with in 2001 when he first moved to San Diego. He tells me that the apple doesn't fall too far from the tree. His son Eric is attending a Masters program at the University of Idaho, Boise in field biology, monitoring wildlife populations and migration patterns. It is a 10 month program and Dennis hopes that he returns to San Diego and finds similar work there.

> Dawn L (Johnson) Shiang BA 1983, PhD 1988 was in touch recently. She and husband William R. Shiang BS 1984, PhD 1989 are so enjoying their retirement, though Dawn plans to start substitute teaching at the area high schools, trying to encourage kids to go into STEM. They have a hobby farm near Eminence MO where they have been since retirement from the Dow Chemical Company after more than 23 years. They are so proud of their two sons. The older one Wil finished his Air Force career having made Captain, and now is working with his wife Kelsey as Financial Planners for military families. Alex, the younger one, a graduate of Washington University School of Medicine, matched for his residency in Urological Surgery at Cedars Sinai in LA, his first choice, an outstanding medical facility and #3 program in the US (behind Mayo and Cleveland clinics). After a 5 year program, he intends to come back to the Midwest to practice, focusing on robotic surgical techniques for kidney, bladder and prostate cancer.

> Rajiv M. Banavali PhD 1985, after 35 years in corporate R&D, has decided to step away and transition to a more leisurely pace with his wife Marysusan (BA Education/English 1979) doing some R&R with lots of travel planned. However, he will stay involved in chemistry via boards of directors or scientific advisory roles and some consulting. He has become an independent member of the board of directors of a public specialty chemical company in India. He is also involved in a couple of chemical technology startup companies. He plans to focus on green and sustainable chemistry areas working on climate change solutions through both for profit and non-profit organizations. He

innovation at WestRock Company in Atlanta Monsanto roles included work in environmensince June 2020. Rajiv received his PhD with tal fate, ecotoxicology, and exposure modeling Robert Murray and was the last postdoc in the for crop protection products. Her husband laboratory of the late Paul Bartlett, at TCU, Rocky (high school shop teacher) retired in from 1985-87. He then joined Rohm and Haas 2017; and they moved late that year to the in Houston in 1987 and was with the company country to escape suburbia and be close to until 2009, moving when the company was family. They now live on 30 acres near purchased by Dow when he was Global Re- Moberly, Missouri, enjoying the solitude and search Director, Process Chemicals. He then the open spaces. She is still doing remote conjoined Honeywell and was with them until sulting work part-time. We last met either at 2018 at which time he was VP and Chief Mike Finkes BS 1973, MS 1978, retirement Technology Officer. He spent two years with party at Monsanto, or perhaps at an ACS na-Huntsman Corporation in Singapore, as Glob-tional meeting. al Vice President, Research & Technology before joining Westrock. Rajiv was honored with a UMSL Distinguished Alumni Award in 2021 and presented the department's Distinguished Alumni Lecture in 2005. In 2022 he funded the Banavali Initiative in Green and Sustainable Chemistry in the department.

Quality Engineer III, at Thermo-Fisher Scien-Petcare where he served for 22 years and was Inorganic Team Leader when he joined Thermo-Fisher Scientific in August 2022.

Ko-Chung Lin PhD 1988 was President and co-founder of PharmaEssentia Corporation and was splitting his time between Boston and 2000s Taiwan, when I wrote about him in 2001. We noted a recent paper by him from the same company. He is now CEO of the company which develops and distributes therapeutic products for treatment in human disease. The Company develops drugs to treat hepatitis, chronic myeloid leukemia, essential thrombocythemia, myeloid fibrosis, polycythemia vera, hepatitis and cancer. He graduated from the research group of former colleague, Mi-L. Neuman PhD 1988 and Humayun Ateeq PhD. 1989.

1990s

Katherine H. Carr MS 1990 was in touch in February. She retired in January 2016 from Monsanto Company (now Bayer Crop Science), just a few weeks shy of 34 years with the company. Her BS degree in chemistry was earned at Indiana University, and in 2006, she completed a BS degree in computer science

was Senior Vice President for Science and from Maryville University - St. Louis. Her

Kevin J. Koeller Ph.D 1994 took a position as Staff Scientist at Mallinckrodt Pharmaceuticals in St. Louis in Oct. 2022. He graduated from Chris Spilling's group and did postdoctoral research at the University of Nebraska, before joining Pfizer in St. Louis. He was a casualty of the major layoff at Pfizer when the William Lesko BS 1988, MS 1992, is now a company changed directions and joined Jim Bashkin and his company Nanovir at UMSL. tific in St. Louis. Following graduation he He spent 14 years with Jim and when the latter spent eight years with Quanterra Analytical was awarded the ACS St. Louis Award in Services, ending up as Inorganic Chemistry 2022, Jim acknowledged all of the outstanding Lab. Manager. He moved to Nestle Purina work that Kevin did with him and said Kevin was the prime mover behind the success of five major NIH grants. Kevin got back to industry in 2016 and spent six years with Monsanto/Bayer Crop Science as a senior Research chemist before moving to Mallinckrodt.

Katherine M. Block BS 2001 started a new position as Senior Development Leader Companion Diagnostics (CDx), Oncology Biomarker Development at Genentech in South San Francisco in Aug 2022. She was previously with Sangamo Therapeutics, Inc

Jamila Owens-Todd BA 2001 is a Neuropathic Doctor at the Meridian Institute for chael Sworin, and was a lab-mate of *William* Naturopathic Therapies in St. Louis. She received her doctorate from the Canadian College of Neuropathic Medicine, in Toronto and is Board of Trustees Member of Crossroads College Preparatory School in St. Louis, Chief Scientific Officers at Midose Life and an Adjunct Professor at St. Louis University. She was formerly R & D Manager at Beleaf Medical, a Marijuana manufacturing company in St. Louis, and a colleague of Stephanie (Cowin) Cernicek BS 2011 PhD 2017.



Ko-Chung Lin PhD 1988



Jamila Owens-Todd BA 2001

the University of Wisconsin with J. F. Berry as Senior Chemist at American Bottoms Rehaving started with Larry Dahl, who turned out gional Waste Water Treatment Facility in Sauto be a second mentor to her. Shu was CEO and founder of Green & Clear World Environmental Engineering Inc., in Brossard, Quebec, Canada but since Sept 2021 she has been Director, R&D science for Santai Technologies & Santai Science Canada Inc. She directs and manages the R&D team for the development of new products CannFlash, a specialty flash column chromatography cartridge for the extraction of active compounds in Cannabis among several other responsibilities.

Hui Zhao PhD 2006 sent us a very nice message to be read by me at the reception we held in honor of her PhD advisor, Jim Chickos. She joined Agilent Technologies as an LCMS Specialist in Wilmington, DE in 2018 after learning that Eurofins would acquire Covance Food Solutions. She and her family now live in West Chester, PA and they like it there. She was a Senior Analytical Scientist with Covance in Madison, WI since early 2013 and was with Tate and Lyle in the Chicago area for 2 years. Prior to that she was with EPL bioanalytical services in Decatur, IL, for 4 years.

Henghu Zhu PhD 2001 attended the reception honoring Dr. Chickos' retirement in June. He made some very nice public comments about Dr. Chickos, the faculty and the department. He is self-employed as a international consultant doing work in educational business. He also brought greetings from *Hong Gu* PhD 1995

Jennifer N. Desotil BS 2007 has been a Quality Assurance Coordinator with Hydrite in the Iowa City-Cedar Rapids Area since July 2022. She spent seven years with Covidien/ Mallinckrodt in St. Louis doing Quality assurance work before relocating to Iowa in 2104. She spent 15 months with NantPharma in Oelwein, Iowa and then two years with Proctor and Gamble in Iowa City as a manufacturing chemist. After another four years as a Formulation Chemist with Unicorn Chemist she moved to her current position in July 2022.

John Schmitz BS 2007 in March 2019 took an appointment as Production Manager at Thermo -Fisher Scientific at the biological site (formerly Patheon). In August 2022 he was promoted to Senior Manager of Strategic Initiatives -ThermoFisher Scientific.

Shu Yao BS 2005 received a PhD degree from Craig Bruton BS 2008 started a new position get, Illinois, where he has been since 2012. Following graduation he was with KV Pharmaceutical for almost two years and prior to that with Monsanto.

> James B. (JB) Carroll BS 2008, PhD 2013 has been an analytical chemistry lead engineer at Boeing since 2015 He tells me his is keeping very busy at work with the new programs launching, "so it's good to be needed". He is thinking about doing some more study looking at data science and possibly chemometrics.

> Maria L. D. (Udan) Johns PhD 2009 will be giving a Friday seminar in the department in April. She has been Senior Manager for Quality Control Operations at Pfizer in St. Louis since May 2022. She did a postdoc at Washington University School of Medicine following graduation from the Nicholls lab. She then spent two years each at Millipore and then at Eurofins, in leadership roles in St. Charles before joining Thermo Fisher Scientific in St. Louis. After almost six years there, rising to Senior Manager, QC analytical and support services, she moved to her current position.

> Katherine (Cibulka) Lampe BA 2012 is now Quality Assurance Specialist at Millipore Sigma where she has been since 2019. Previously she was Senior Manager of Chemistry Operations at Dynalabs LLC in St. Louis. She joined the company in 2013 following an appointment with Covidien where she was a Quality Analyst for about 8 months. At Dynalabs she held positions as Lab Analyst and Chemistry Lead, and Chemistry Supervisor.

2010s

Pushkar Shejwalker PhD 2013 a graduate from the Bauer lab has established his own firm in India, to synthesize some dyes/perfumery chemicals and natural products. He is looking for business. We include a picture here of his lovely family.

Jordan Rabus BS 2015 received his PhD degree at Ohio University in 2022 (with former UMSL faculty Benjamin Bythell). He performed undergraduate research in the Bauer group and joined the Bythell group, moving with Dr. Bythell when he moved to Ohio University. Jordan is now a postdoctoral researcher at Pacific Northwest National Laboratory.



Pushkar Sheiwalker PhD 2013 and his family.



Jordan Rabus BS 2015

Magnus Creed BS 2016 (also BCBT and Bi-graduation to her husband, Devin, and they ology) is a biological chemistry doctoral candi are enjoying the married life! - date and National Institutes of Health Fellow (NIH F31) working in the lab of Dr. Sarah Franklin at the Nora Eccles Harrison Cardiovascular Research and Training Institute, University of Utah. He has hopes to graduate in 2023 and move with his wife *Lahoma Kana*day, BA 2017 to Florida to do postdoctoral research.

Joseph W. Frye BS 2108 a PhD student at Florida State University expects to graduate in the spring of 2023. He works in ultra-high resolution FT-ICR MS to analyze complex mixtures, such as petroleum and dissolved organic materials, in the National High Magnetic Field Laboratory. Joe was recently a coauthor of an article in Science of the Total Environment. He tells me he is leaning towards finding an industry position around Boston at the moment, but also keeping an eye for a postdoc position at PNNL too.

Chase P. Gobble PhD 2016 is Quality Assurance Associate Manager at Nestle' Purina in Lincoln, NE. He attended the celebration honoring the retirement of Jim Chickos after 51 years on the faculty, and Chase was one of Chickos' former students who made some public comments at the reception.

Matthew Fischer PhD 2018 has been fulltime with Novus international in the Missouri Research Park in St. Charles County for more than 10 years. He completed his PhD dissertation research with Professor Alicia M. Beatty, after receiving Bachelors and Masters degrees at St. Louis University where he did his research with Professor Paul Jellis. Matt was actually a part-time PhD student while at Novus from 2007—2012.

Michael S. Barnes BS 2019, MS 2021, who did research with Dr. Bauer and was recently employed at Linde in Arizona, relocated to Greece in January 2023 and co-founded Aegean Analytical. The company provides on-site service, troubleshooting, and method development for all Agilent and legacy HP GCs in Southeast Europe.

tion Scientist. She also got married just after ing 51 years on the faculty held on Saturday

2020s

Patrick Gleason BS 2022 joined RD Laboratories, a contract testing lab in Washington, MO. As a student, he did research with Bruce Hamper and presented a poster at the 2022 Undergraduate Research Symposium based on his investigations of deuterated analogs of humulone natural products.

Michael McKeever PhD 2022, who worked in laboratory of Professor George W. Gokel, started in Fall 2022 as Lecturer in Pharmaceutical Chemistry at the University of Swansea in Wales, UK. He came to UMSL having earned a BSc degree in chemistry at Queen' University Belfast and a MA degree, from St. Louis University also in chemistry. The University of Swansea is where Juan Maregue-**Rivas** PhD 1998 is Professor of Chemistry.

Kaitlin Murphy BS 2022 is currently an Enzymatic Quality Control Technician at Elemental Enzymes in St. Louis. The editor was thrilled to have lunch with her and her father at the reception for the class of 2022 last May. Her father and the editor's late son Andrew played on the same youth soccer team in St. Anne's Parish, Normandy.

Caroline Welch BS 2021 is a lab technician at EAG Laboratories-Eurofins in St. Louis.

Evan Stephenson BS 2022 transferred from the Community College System to UMSL to complete his degree in 2020. He just accepted a job at Sensient Colors in Saint Louis.

THE CHEMISTRY ALUMNI COUNCIL

This year the CAC was able to hold in-person events and they were very successful. We began by honoring the class of 2022 at a luncheon in the Whitaker Room of the Touhill PAC. This was followed by a reception for the 50th anniversary of the class of 1972. Since 2017 we have held Golden Anniversaries for the classes of 1967, 1968 and 1969 and in 2022 we held a virtual event for the classes of 1970 and 1971. The one for 1972 this past Haley (Steber) Howarth BS 2019, MS 2021 year was not attended so well as the others due who did some research with Professor Dem- to uncertainties associated with the pandemic, chenko, after receiving her masters degree in however we saw some faces we had not seen May, 2021 started work at Millipore Sigma in for some time. A big event was the reception St. Louis and is now Senior Associate Produc- honoring Jim Chickos' retirement after serv-



Joseph W. Frye BS 2018



Chase P. Gobble PhD 2016 speaking at the reception honoring the retirement of his advisor Jim Chickos



Michael S. Barnes BS 2019, MS 2021

June 6, and it was very successful. In the foyer of the JC Penney Building almost 70 former students, current and former faculty members, Biochemistry and Biotechnology friends and family helped honor him. Several former students and faculty members made some very nice comments. There are several photographs taken at the event shown in this newsletter.

GRADUATES 2022

DECEMBER 2021

Mariam Abed Ali BA Jessica Raj Doshi BA Dhanbir Lingden MS William F. Shofner MS Alexander G. Sanderson BS **Dustin Barton BS** Dilan J. C. Dupre BS Alan T. Scheibel MS Samira Escopy PhD

Biochemistry and Biotechnology Akosua A. Acheampong MS Jacob M. Bagwell BS Daniel Z. Dyszlewski MS Diana M. Lund BS William L. McConnell II Maisoon Qassem MS

Benjamin J. Alvey MS Srilakshmi Dangeti MS Nathaniel Letcher MS Roberto T. Maiocco MS Vyacheslav Pernik BS Nathan Schmidt MS

MAY 2022

Shelly E. Coggins BA Dilan J. C. Dupre BS Jonathan A. Riezman BA Philip P. Hudson BS Eric Markham BS Michael McKeever PhD Cristina S. Pereira MS Shanheng Yin MS,

Samuel P. Wilhelm BS

Daniel A. Dougherty MS Rasha H. Ouz BA Saba Y. Sheikh BA Dominik J. Kosican BS Michael J. McDonald BS Kaitlyn D. Murphy BS Teodora Sandic MS,

BS in Biochemistry and Biotechnology

Hussam Alsaliti. Meranda Diane Breece, Olivia G Herman, Diana M Lund Hania S Nuraini .Baylor Smith Megan M. Stahr Philip O Yusuf

Hillary Ann Birtley Amy Joyce Crawford Keona L Hughes Hajra Malkic Shakeel.Memoona Tatiana A. Sparks Kristina Williams

MS in Biochemistry and Biotechnology

Ryan J. Domalewski Joseph G. Taylor Atika N Malique, Nathan T. Zeller

Brittany E. Foy Colleen Hatley Gabriel J. Riggio

AUGUST 2022

Kevin J Becerra BS Patrick M. Gleason BS Brandon D. Vestal MS Kapur B. Dhami PhD Shelby Jarrett PhD

Biochemistry and Biotechnology

Yerim N Cho BS

DECEMBER 2022

Mauriel Clay MS, Shrestha Ganesh PhD Mikayla Kingsley MS Huy Q. Nguyen PhD

Bikram Sitoula MS Deva S. Talasila PhD

Helena J. Spikes PhD Hannah Vietor MS

Ahmed H. A Almoheef, BS Dominic C Bottini BS Radostina Marinova MS Ellen E. Meystrik BS Jacob D. R. Moore BS Omar Saffaf BS Kenneth G Sipe, MS Nastasia G. Zyryanova BS

Loren K. Beck BS Kelli J. Dockery BS Annie Knapp-Migdal MS Nicole M. Miller BS Ryan R Russell BS Omar Saffaf, MS Jesse T. Wilson BS

THE FACULTY

James K. Bashkin received the St. Louis Award of the St. Louis Section of the ACS. It was presented at the St. Louis Award Banquet at the Glen Echo Country Club on Oct. 14, and this followed the award symposium which was held on the UMSL campus. On the day following the festivities, on the Saturday morning, he took second place in the UMSL Alumni 5K race for the 60-69 age group. This race benefitted veterans. Jim is also the Chairelect of the St. Louis Section for 2023. He was recently appointed Associate Member of Siteman Cancer Center, and will contribute to the Solid Tumor Therapeutics Program initiatives. He is already a full member of the Ellis Fischel Cancer Center at UM-Columbia. Jim is always anxious to describe the successes of his students, For example chemistry major Zahria Patrick, an undergrad researcher from his lab, presented their research work at the 2023 Emerging Research National Conference in STEM, in Washington DC and won the second place at the undergraduate poster session. Huy O. Nguyen successfully defended his PhD thesis on fighting cancer in the fall and presented his work earlier at Missouri Organic Day, the UMSL Graduate Research Fair in the spring of 2022 and two Midwest Regional ACS meeting sessions in Iowa City in the fall of 2022. Annie Knapp-Migdal finished her MS degree in BCBT in the fall while working in his lab. She ran the cell-culture part of his team and was instrumental in training new students and maintaining good laboratory practices. He received a MU System-South Africa grant to collaborate with Dr. Henry Adeola of the University of the Western Cape. Dr. Adeola was to visit his lab for three weeks in early March 2023 to exchange research techniques. In addition, the MU System granted him a travel scholarship to attend a research conference in South Africa in late March 2023. These grants helped start a new collaboration to discover biomarkers for head and neck cancers with the South African team headed by Dr. Adeola and joined by Professor Badri Adhikari of UMSL Computer Science.



Jim Bashkin giving the 2022 St. Louis Award address at the Glen Echo Country Club.



Zahia Patrick, a junior chemistry major who works in the Bashkin laboratory, showing the award she received for the poster she presented at the 2023 Emerging Research National Conference in STEM, in Washington DC

search grant to discover new green pharma- retaking ceutical syntheses. He was pleased to host undergraduate and High School STARS students during the year. He also presented two invited lectures during the year and published two articles in 2022.

Eike B. Bauer is always proud to talk about his students. He reported to me that **Deva Ta**lasila MS 2018 was to graduate with her PhD last December. Deva received the Graduate Student Research Accomplishment Award in spring 2022 and was married during the previous year in India. Undergraduate research student Chloe Wilke (2+3 BCBT program) received an "Excellence in Undergraduate Research Project Content" Award at the 2022 Undergraduate Research Symposium and was invited to present her research at the Board of Bruce Hamper will retire at the end of the Curators meeting at UMSL in November, 2022 (see picture). She is now as a MS student take research students in his lab. Bruce a Sciin his group. Jessica Thompson, PhD student ence Fellow at Monsanto retired in 2010 and in his lab, received a scholarship to attend the joined UMSL. Two of his research students "My Green Lab Summit 2022" virtual symposium on 5/6/22. The whole Bauer group pre- presented a poster at the 2022 Undergraduate sented their research at the Missouri Organic Research Symposium on humulone natural Chemistry Day in April 2022 and at the ACS products and joined R&D Laboratories in Midwest regional meeting in fall 2022 in Iowa Washington, MO. Kait Murphy BS 2022 City. He hosted Hazelwood East graduate completed a literature based research thesis Shawn Robinson for several weeks during the investigating the biological properties of isosummer in the Collaborative Laboratory In- humulones and is currently an Enzymatic ternships and Mentoring Blue print (CLIMB) Quality Control Technician at Elemental Enprogram. Other faculty colleagues who participated in the program were Drs Stine and Smith, MS, joined his research group, and will O'Brien. Personally, his sister and her family study carbohydrates as potential antibacterial visited him for the first time in St. Louis, and vaccines. Bruce has helped the department he was happy to be able to travel to Germany with maintenance of mass spectrometers and over Christmas, for the first time since 2019 HPLC instruments. In the last year, he has due to the pandemic.

Alicia M. Beatty since the onset of Covid has been doing her teaching online. For updates see the next UMSL CHEMIST.

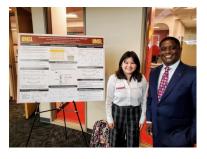
Valerian T. D'Souza is now teaching Organic the first post COVID in per-Chemistry I presume due to the faculty shortage in the department. However, the pedagogic system, he tells me, he developed to teach which in two students went Intro Chem is proving to be an incredible fit teaching Organic Chemistry. It truly is his National Chemistry Olympidream come true to have students draw complex organic molecules in Chem Draw and one of them is now an UMSL have the system grade it accurately all the time irrespective of how the molecule was drawn as long as the connectivities are correct. This allows me to give students unlimited op-

Bashkin also received a Banavali Fund re-portunities to show their mastery of topics by See exams. https://youtu.be/EW9sJUYvHG4

> Cynthia M. Dupureur completed her two year stint in the Provost's office as a Faculty Fellow for Faculty Success, when the new Associate Provost was appointed. Her research lab is empty but she co-authored a paper in 2022 with Jim Bashkin and published one in collaboration with Dr. Braddock-Wilking in winter 2023. She is coPI on a NSF ADVANCE grant, and continues Diversity Equity and Inclusion work. Bettina Casad (Psychology) and she started a faculty mentor training program associated with the grant. She is also active as a Search Advocate (for faculty searches), but remotely with another university since there are currently too few searches at UMSL.

> spring 2023 semester but he will continue to graduated in 2022. Patrick Gleason BS 2022 zymes in St. Louis. A new MS student Trevor

assumed responsibility for the St. Louis ACS Section Chemistry Olympiad. With assistance from Profs. Keith Stine and Hal Harris, UMSL held son Chemistry Olympiad. It was a very successful event on to participate in the US ad summer camp in 2022 and science student.



Chloe Wilke with University Board of Curators (BOC) member Michael Williams at the BOC meeting in Columbia in Nov., 2022. She is a student in the Bauer group



Jack Harms resigned his posi- Bauer research group last year: Mike Barnes MS 2021, tion and took a job in industry. Kellsie Jurkowski MS 2021, Deva Talasila PhD 2022 and Jessica Doshi undergraduate.

Steven M. Holmes has a doctoral student research group continued work on the basic Mark Eissler BS 2019 in his lab, his postdoc biochemistry of Alzheimer's disease along Fuxing Shen from Nanjing University left in with ongoing collaborations with Demchen-Oct. 2021 and he sponsored two High School ko, Stine, Spilling, Bauer and Wong restudents in the STARS Program in summer searchers. Doctoral students Kapur Dhami 2022. His laboratory relocated to the CNS and Shikha Grover attended the 2022 Ameribuilding and he installed a new magnetic can Society for Neurochemistry national measurement probe, acquired a tunable light meeting in Roanoke, VA with Dr. Nichols. source for programmed magnetooptical meas- Graduates from the Nichols lab this past year urements and acquired a new photomagnetism were Gabe Riggio, MS BCBT, Brandon measurement probe. He gave three invited Vestal, MS Chemistry, and Kapur Dhami, Magnetism Symposium, Las Vegas, NV. He (BCBT), began work in the lab this past year. has submitted two articles this year, one has appeared in *Dalton Trans* and one is in press. He has been busy serving as the Graduate Admissions Chair and teaching a heavy load.

Rensheng Luo who runs the NMR and MS facilities tells me that the NMR facility runs well as usual, but the Bruker Maxis Plus had been down and they were are trying to get it running. He published one article in 2022.

Lynda M. McDowell enjoyed the multidisciplinary Summer C.A.M.P. (Collaborating to Advance Meaningful Partnerships) offered by the Center for Teaching and Learning in 2022. Topics of interest included ungrading, social annotation tools, a collaborative rubric for grading discussions, ways to ask for evidence fresher on the Transparency in Learning and Teaching model for inclusive and transparent assignment design. They also tried out some new Technology tools. A potential collaboration on teaching Critical Thinking Skills and is not! strategies for connecting with students after graduation are ripe for follow up in the future. Now she is happy to be back to in-person teaching, returning to Quantitative Analysis, and having a couple different classes this year. She will be presenting a short talk at the Spring 2023 ACS meeting in Indianapolis and hopes to connect with some alumni there.

role as Associate Department Chair, and his nology. His lab continues to collaborate with

presentations in 2022, at the Gordon Research PhD Chemistry. New doctoral lab members Conference: Electron Donor-Acceptor Interac- are Nathan Zeller and Ryan Domalewski. Ontions, Salve Regina Univ. on Aug. 2022, at the going doctoral lab members are Shikha Grover Molecular Magnetism in North America Con- (5th year) and Cristina Sinobas Pereira (3rd ference, Gainesville, FL, May 2022 and at the year). Two new undergraduate researchers, Western Regional ACS Meeting, Molecular Bree Carlton (BCBT) and Emma Alberty

> James J. O'Brien's student Kristin Bales, BS 2018 will give her exit seminar in April and is expected to receive her PhD this summer. Jim was a coauthor of a paper presented at the Chicago ACS meeting in fall 2022. For updates see the next UMSL CHEMIST.

Christopher D. Spilling has been busy in his role as Vice Chancellor for Research and Economic & Community Development. A great position but a very clumsy title! However he continues his research program and published two papers and a book chapter since the last issue of the UMSL CHEMIST appeared. His research was presented at the ACS meeting in Chicago last fall and also at the ACS Midwest Regional Meeting in Iowa City, also last fall. that digital reading was completed, and a re- He just submitted a large proposal to the NSF on active pharmaceutical ingredients and his current doctoral student Saroj Kafle expects to graduate this summer. He says this may be his last graduate student, but we certainly hope it

Keith Stine is in his second term as Department Chair. His research group consists four continuing PhD students: Palak Sondhi, Dhanbir Lingden, Taiwo Adeneji and recently joined Naila Haroon. Naila will be a student jointly with the lab of Professor Xu. In summer 2022, his lab hosted students again in person for the CLIMB and STARS programs. Michael R. Nichols says that 2022 began to B.S. degree student Samiksha Yogi did underresemble a more normal year in his research graduate research in his lab in spring 2022. lab. This academic year he was appointed Pro- Recently, research publications appeared in gram Director for the Biochemistry & Bio- Journal of Electroanalytical Chemistry and technology (BCBT) program in addition to his Journal of Drug Delivery Science and Tech-



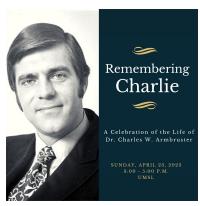
Chris Spilling, Kevin Trankler BS 1998, PhD 2003, Anchalee (Amy) Thanavaro, PhD 2003 and Jim Chickos at the reception honoring him



Palak Sondhi, Dr. Stine's graduate student received a Graduate School award in February 2023.



The leadership of the 2022-23 Chemistry Club, from left Joey Reed (Vice President), Prof. Lukasz Szatkowski (Faculty Advisor), Gregory Giovine (Treasurer), Zahria Patrick (President), Emma Stovall (Secretary,) and Samiksha Yogi (SGA Representative).



The invitation to attend the celeclick umslalumni.org/charlie

to liver cancer cells using mesoporous silica nanoparticles. He and 8 UMSL Ph.D. students, an undergraduate and two UMSL faculty atthe ACS in Iowa City where his group presented two talks and two posters.

Chung Wong's research group suffered this past year when Covid-19 took out a second member for a long period. On the other hand, Ibidun Isaac is expected to join the lab as a first year student in the PhD program. The lab has added several new heavy workstations this year, in anticipation of more work on computational intensive simulations data analysis. Former high-school research student Michael Rizzo graduated from Harvard and completed medical school at Washington University. He is completing an Orthopedic Surgery residency in Miami. Another former high-school research student, Jason Yang is now in his third year at Purdue majoring in Computer Engineering.

bration of Life for Charles W, Jinjia Xu, I am told, has been very busy setting Armbruster. For further details up her new research laboratory and her research group. She has installed a preparative GPC instrument and is having an analytical GPC installed soon and ordered a UV-VIS-NIR spectrometer. She has research proposals to NIH and ACS-PRF pending and was about to extend an offer letter to a postdoc, at the time of writing this. She has two undergraduate students working with her and has some support from the Banavali Green and Sustainable Chemistry Initiative.

EMERITUS, RETIRED, AND FORMER **FACULTY**

where in this newsletter died on May 27 in Or- ated with alumni. I was in St. Louis in March to

Alexei Demchenko, who moved to Saint Louis lando FL. I had been in St. Louis since mid University in 2021. He is also a part of the con- May when I heard via Keith Stine who was sortium of UMSL faculty who together with contacted by an old friend of Charlie's. As Professor Demchenko are involved in a project most of you know, Charlie was the founder of to develop compounds that are Lipid A analogs the Department and was Chair of the Division for the treatment of sepsis. Closely related is a of Science at UMSL when Dave Garin and I collaboration with the Bauer lab on curcumin joined the faculty in 1966. He was in a rehab derivatives that also are promising for the treat- center after surgery following a fall in which he ment of sepsis. The paper in Journal of Electro- broke his leg. I had lost touch with him for over analytical Chemistry is largely the work of PhD a year and after writing letters to him and relastudent Palak Sondhi and concerns a new form tives, and calling them to no avail, in desperaof nanoporous gold with a hierarchical pore tion I called the Orlando Bridge Club where he structure. The paper in Journal of Drug Deliv- played and had become a Life Master. I spoke ery Science and Technology is the work of to the President who knew Charlie very well Bishal Nepal PhD 2021 and concerns the deliv- and eventually I was able to reach Charlie in ery of a natural product found in tomato plants the rehab center. That was just before I came back to St. Louis for a month, and it was my intention to write to him. During our conversation he had trouble getting his words out but tended the recent Midwest Regional Meeting of understood everything I said to him. Anyway, he never left that center and died a couple of weeks later. Pat and I and several of you and other alumni visited Charlie, some of us regularly, in Orlando but the past two years have been very difficult for him. Much more has been and will be written and said about Charlie who was a close friend to many of us and to whom we owe a lot.

Lawrence Barton and Patricia J. Barton BA 1978 had a very difficult 2022 and also made a life-changing decision. The difficult part, of course, included Covid-19 when daughter Hilary and grandson Sam were infected by Covid during the family get-together at Christmas. One of the final activities of my role as President of our Home Owners Association was settlement and dissolution of a lawsuit/ complaint leveled against me and the Association. In spring we put our townhouse, where we had been for almost seven years, on the market and began the paperwork to move into a Continuing Care Retirement Community. We are now settled in a fifth floor apartment on a peninsular in the Caloosahatchee River estuary with a fabulous view. On Sept. 28, Hurricane Ian made a direct hit on Fort Myers. We were evacuated and spent 48 hours in a hurricane shelter, being taken care of very well by the community staff and administration. The devastation within the Fort Myers area was horrific and, although much has been done, it will take years to completely restore it. I continue to Charlie Armbruster as you have seen else- work on several UMSL projects, mostly associ-

attend an Alumni Association meeting, in per-currently repairing a newer GCMS they son for a change. I spent five weeks there in picked up from Washington University. Last May/June attending the Jubilee Celebration spring his former graduate student, *Patama*for the for the class of 1972 on May 14/15 and later that week a reception honoring the 50 years Chuck Granger, biology, has spent at UMSL. A couple of weeks later I heard from lishing but it seems to take a lot longer to the brother of **Steve Mestemacher** BS 1969, Don Mestemacher, via Keith Stine, that Charlie Armbruster had died. That was a major shock to me and a week later it was bittersweet for me to attend what was almost an all day celebration of his life, beginning with the viewing, followed by the burial and finally a nice dinner with about 20 of his family and close friends. At that time I was recovering from a 10 day bout with Covid. More about Charlie elsewhere in the volume. At the end of this stay, on June 11, we finally celebrated Jim Chickos retirement after 51 years on the faculty. This was a Chemistry Alumni Council (CAC) event which I helped organize. I continue my work with that group but am enormously indebted to Michael Finkes BS 1973, MS 1978, who now leads the group and is responsible for the group's continuing activity. In October, I was back in St. Louis again, this time to attend Founders' Dinner and more important to help honor Jim Bashkin as he received the 2022 St. Louis Award of the ACS. One would think that after experiencing a 100-year hurricane, such problems would be over for a while, but as I type this now, the US is suffering from some of the worst snow storms in history. In in spite of my problems flying during Covid, the flight over the Christmas holidays was quite simple. We had expected to host the family in Fort Myers, but the house we had reserved to handle the overflow of family members was destroyed in the Francis, and is finishhurricane so Pat and I returned to St. Louis to spend the holidays with family. I continue to serve on the ACS Senior Chemists Committee and was appointed to a new term in 12/2022.

James S. Chickos was honored, finally, on his retirement after serving 51 years on the UMSL faculty. An event was held on Saturday June 11, in the fover of the JC Penney building, attended by about 60 guests including friends, family alumni and others. He continues to come in to the department, sometime more than other faculty. He and Hal Harris have disassembled the JEOL M-Station mass spectrometer piece by piece and the old GCMS

help Cathy with the yard and also was able to and have had most of it removed. They are porn Umnahanant, PhD 2007, spent a couple of months in his lab and he is currently completing writing up their work. He is still pubcomplete a project. However, it is still fun!

> **Joyce Y. Corey** is living comfortably at home, with 24-hour care. She attended the memorial celebration of the life of her great friend, Jane Miller, on February 19.

> **Dennis Diestler** a colleague (1967-69) who moved from UMSL to Purdue, retired there and took an appointment at the University of Nebraska-Lincoln. He fully retired in 2009 and recently moved to a Life-Care communi-

> **David L. Garin**, who continues to serve on the Board of the Missouri Coalition for the Environment, developed an award for statewide high school students who have initiated or contributed to innovative projects that have, or will, result in a strong environmental impact (see Student Environmental Action Award at www.moenvironment.org). He is also in process of establishing a related lecture program within the department.

> Thomas F. George our former chancellor and of course a chemist was in touch last fall. He and Barbara Harbach are still active in their research/scholarship since moving to New Mexico. He continues to publish papers and his count is now 805. Last year he co-authored a book on ultrafast phenomena published by

CRC Press / Taylor & ing one on quantum mechanics to be published by De Gruyter. On the music front, Tom put out a jazz CD in 2020 which received strong reviews at the national level. Barbara is as active as ever, and earlier last year she was in England where the London Philharmonic Orchestra recorded her latest orchestral composition.



Don Hesse BS 1984, PhD 1990 with his advisor Jim Chickos at Jim's retirement reception last June.



PhD graduates at the December 2022 Commencement, Huy Nguven (Bashkin), Deva Talasila (Bauer), Helena Spikes (Gokel), Kapur Dhami (Nichols), and Ganesh Shrestha (Demchenko).

partment but continues professional activity. India: "An academic crystallographer's jour Two of his students graduated last year, Mi-ney", (Alumni Lecture), Khallikote Col chael McKeever, a native of Northern Ireland, lege, Berhampur, and "Crystallography in reearned his PhD in May 2022 and returned to the British Isles and is now Lecturer, in at Swansea University in Wales, UK. Helena Spikes, who earned BS, MS, and PhD degrees at UMSL, the latter in December 2022, has received offers but is looking for the right one During her studies at UMSL, she worked in the laboratories of Professors Dupureur and Gokel and had publications with both. George published an article in 2022 and successfully nominated Jim Bashkin for the 2022 ACS St. Louis Award.

Harold H. Harris is captaining two USTA tennis teams, and playing too many times per week. He is also Chair of the Investment Committee of the St. Louis ACS Section, but he says this is the last year for him on that (after about 15 years of service). He chairs the Energy and Environment Committee of his town of Creve Coeur and is Treasurer of the St. Louis Chapter of Americans United for Separation of Church and State. His wife Mary volunteers at the NCJW Resale Shop and makes very creative art projects out of recycled men's ties. Hal and Mary circumnavigated Lake Superior on electric power last summer, including a visit with Hilary Barton Billman in Marquette and Jim Chickos at his cabin near Garden in Michigan's Upper Peninsular.

Nigam P. Rath and his wife Suchitra are enjoying their new home in the Pacific Northwest

working remotely. have hold due August (Norway,

where Suchitra is still started traveling which was COVID. They trav-

George, W. Gokel is now retired from the depresented two invited lectures in fall 2022 in search and teaching" (Presidential Distinguished Lecture Series), at Pondicherry Univer-

> James P. Riehl who taught and did research at UMSL from 1977 through 1993 is retired and lives with his wife Cecilia near Ashville, NC. We wrote about him last year. In April they visited the Bartons in Fort Myers and played golf. Jim and Cecilia celebrated their 50th Wedding anniversary in the English Lake District with the whole family last summer. They also they welcomed their first grandson Dominic Max Riehl in July, who was born in Cambridge, England to younger son James and his wife Mónica, where they live. Both sons have done very well and earned doctorates, Patrick in Electrical Engineering and Computer Science from Berkely, and James in Electrical and Computer Engineering from UC-Santa Barbara. Patrick lives in Boston with his wife Jenn.

> **Rudolph E. K. Winter** and his wife Margaret sold their house in Parkview, University City and moved into a retirement community in Old Webster Groves. The editor was pleased to be able to visit them on one of his trips to St. Louis last year.

> Janet Braddock-Wilking who retired in 2022 told me she didn't have much to report although we note that an article just appeared in Chemsensors, "Solvatochromic Behavior of 2,7 -Disubstituted Sila-and Germafluorenes," on her compounds written by Prof C. M. Dupureur, on which Janet is a coauthor.

STAFF MEMBERS

Turnover in the office staff continued last year. elled to California in I thought Leah Trimble Business Support Spe-July, spent 10 days in cialist had decided to stay but she went to St. Europe Louis University last spring. When I was there Denmark last summer, I was happy to meet and work and Sweden) and then with **Keila Gonzales** but she left too and now visited India for 4 Joy Manore is running the show and I look weeks for the first forward to meeting her each year I visit going time in more than 2 forward. The second position in the office is years. As expected vacant, **Daniel Cranford**, continues as Coordi-Nigam is still active nator of Laboratory Operations and our partprofessionally. He was time glassblower is **Brent Dummit**. Fortunately coauthor in 15 publi- our two professional staff members **Bishal Ne**cations in 2021-22 and pal PhD 2021 (with Dr. Stine) Microscopic



Recent faculty retirees, Janet Wilking BA 1985, Jim Chickos and George Gokel

Director and Dr. Rajamoni Jagan X-Ray Diffraction Lab Director continue.

SCHOLARSHIPS AND FELLOWSHIPS

Because of the generosity of alumni, friends and faculty members, the department is able to provide support in the form of scholarships. and fellowship to deserving and needy students.

The Charles W. Armbruster Undergraduate Chemistry Scholarship honors the late Dr. Charles W. Armbruster, who was Chair of the Division of Science and as the first department chair. It is given to incoming Missouri resident undergraduate transfer students. For 2023 it went to Samantha Aarons

The Lawrence Barton Scholarship is designed primarily for junior chemistry majors who are first generation college students and who have financial need. It honors Dr. Lawrence Barton who served as Department Chair from 1980 through 1998. For 2022-2023 one scholarship was awarded Zharia Patrick.

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 worked hard for the department for many years. The 2022-2023 fellowship went to Natasia Zyryanova.

The Eric G. Brunngraber Undergraduate Research Fellowship honors the late Dr. Eric G. Brunngraber. He was the first regular biochemistry faculty member. For 2022-2023 the

fellowship went to *Ermioni* Dhefto.

for sophomores. It was endowed by Dr. Dorothy C. her parents William and Erma Cooke, in 1989. Shyscholarships for 2022-2023. This was the first major alumni supported endowed scholarship at UMSL.

The William and Erma Cooke Memorial Scholar**ship** is designed primarily Cooke BS 1971, in honor of lin Collier received the

Imaging and Spectroscopy Technology Lab 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 2022-2023 award went to Max Ammentorp.

> Friends and Alumni Scholarships are needbased and were established after an appeal made to alumni and friends and matched by the University in 2005. For 2022-2023 one was awarded to **Samantha Aarons**.

> 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 2022-2023 award went to Melody Francis.

> The John J. Taylor Scholarship was established by his family. John J. Taylor BA 1979 had directed funds from his estate to a needbased chemistry scholarship. For 2022-2023 Chloe Wilke received a scholarship.

> The Gary S. Jacob PhD and Karen A. Jacob **Endowed Scholarship** was established by Kathy and Gary Jacob BS 1969 and is awarded to full-time students in chemistry or biochemistry/biotechnology programs who have achieved a 3.00 GPA or earned an ACT score of at least 24 for incoming students. For 2022-23 it was awarded to Abigail Foust.

> 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 2021 an award was made to Shelby Jarret (Dupureur group) and for spring 2022 to Melanie Shadwick (Demchenko group).

> 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. 2022-2023 awards were not made this year.

> The Rath Family Scholarship, established by Nigam wife Suchitra and their family, is for full -time undergraduates studying STEM and preference may be given to Chemistry/ Biochemistry students. The 2022-2023 award went to Ermioni Dhefto



Tim Miller BA 1969 and Michael Finkes BS 1973, MS 1978 at the Chemistry Alumni Council Event honoring Jim Chickos.

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 for 2022-23 it went to Aimee Kristine Moore.

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. Awards this year went to Sai Anvesh Bezawada and Fnu Khushboo.

STUDENT PERFORMANCE AWARDS

Undergraduate

troductory Chemistry went to Abigail Foust dependent Laboratories Institute, member of who received a certificate and the Handbook the International Association of Food Protecof Chemistry and Physics from the Chemical Rubber Company. The Award to the Outstanding Student in Sophomore Chemistry American Chemical Society. went to **Zahria Patrick**. The ACS Award for Organic Chemistry went to Chloe Wilke and Patrick Gleason and the ACS Award for Ana- The 23rd Annual Robert W. Murray Leclytical Chemistry went to Michael MacDon-ture was finally presented by Dr. Omar M. ald. The ACS Award in Inorganic Chemistry Yaghi, James and Neeltje Tretter Professor of went to Eric Markham and in Physical Chem- Chemistry and Co-Director of the Kavli Eneristry went to **Patrick Gleason**. Aid to Education Awards went to David Auston, Campion California- Berkeley, on Monday September Smith, Cody Amann, Delaynie Bray, Douglas 26, 2022, The title of his lecture was Paxton, and Taejun Yoo. The ACS-St. Louis "Harvesting Water from Desert Air". It had Section's Outstanding Junior Award went to been delayed for two years due to Covid-19. I David Auston and Michael MacDonald recei- was able to watch it via zoom and it was exved the Alan F. Berndt Outstanding Senior Award. The Awards for Outstanding Service day evening by a banquet at Glen Echo Counto the Departement went to *Patrick Gleason*.

Graduate

The Graduate Student Research Accomplishment Award went to Deva Talasila and the Ceil deGutis Award for Research Excellence went to **Shuaibing Yao**, the Jack L. Coombs Outstanding Graduate Teaching Assistant Award went to Michael McKeever, and Shelby Jarret. The Outstanding Masters Student Award went to **Shanheng Yin** and the M. Thomas Jones Memorial Fellowship for the outstanding seminar presented by a Doctoral Student was shared between Shelby Jarret (F2021) and Melanie Chadwick (S2022).

DISTINGUISHED ALUMNI LECTURE

The 35th Annual Distinguished Alumni Lecture was given by **Dr. Sean D. Dingman** BS 1994, on Monday May 2, at 4:00 pm via zoom. His title was "La Vita Alchemica" and Sean described his life, beginning humbly in a trailer park near Fort Leonard Wood, MO, going to UM-Rolla and getting summer jobs at Monsanto in St. Louis. Eventually he came to UMSL, thence Washington University for grad school all of which led to a great career.

This year the lecturer will be Justyce Jedlicka BS 2009, MBA 2018 who is Food and Beverage Regulatory Liaison at MilliporeSigma in St. Louis. She has been active in the St. Louis Chapter of the Society of Cosmetic Chemists since 2005 and served in many roles including Chapter Chair twice. She currently serves as the Chair and Executive Board Member of the food science section of American Council of The award for the Outstanding Student in In- Independent Labs, a board member of the Intion, International Society of Beverage Technologists, AOAC International and of the

THE ROBERT W. MURRAY LECTURE

gy Nanoscience's Institute at the University of cellent. The lecture was preceded on the Suntry Club where 38 faculty, alumni and other guests enjoyed a great evening. The Lecture continues to be very successful and must be one of the most significant events on campus and in St. Louis. This is a fitting tribute to



Justyce Jedlicka BS 2009, the 2023 Distinguished Alumni lecturer



our former colleague and campus leader Curahave eroded slowly at first and very rapidly tors' Professor Robert W. Murray.

recently, such that in 2012 we had 18, in 2018

EDITOR'S COLUMN

This has been another difficult year as we recover from the consequences of the pandemic. The department is shrinking, as I mention below, and resources are also shrinking. You our alumni are doing well and enhancing the reputation of the department and the campus. Many of your successes are mentioned in this volume but there has been some sad news in the past year.

When I joined the department there were six existing regular faculty members and Dave Garin and I grew the department to eight. Of course we were recruited by Charles Armbruster and when we arrived the main office had the department head and two staff members. They were Charlie, of course, Betty Eshbaugh the senior secretary, and Ruth (Gosney) Streit. We lost all three last year! Also among those early colleagues were Al Berndt who died in 1984, Stuart W. Weidman who died in 2010 and Jane A. Miller who died in March 2021 and for whom a celebration of life took place recently in February 2023.

News about two former students was similarly shocking to me. Last December, **Doug Nuelle** BS 1969, died suddenly. He was my first research student and a long-time friend! Recently I learned that Mark Owens BS 1976, MS 1982 is undergoing palliative care and will shortly be adding hospice care. Mark and I have been friends for years since he worked in my lab. He and I founded the group of alums and faculty who went out for a beer two or three times a year since the 1970s! This is so sad but there is much to celebrate too. In researching for news to include here I looked up three BS graduates who were off to graduate school in 2018. I wrote elsewhere about Joseph Frye who is completing his PhD at Florida State University this year. I was also in touch with Nick Glenn who is finishing his PhD at Michigan and Justin Weatherford-**Pratt** who will defend his dissertation in April at the University of Virginia. I hope to provide further information next year.

To highlight some of the problems in the department, here are some data. In 1971 we had 17 regular faculty members. That number was essentially constant through the 70s and 80s and rose to 19 in 1992. Since then, numbers

have eroded slowly at first and very rapidly recently, such that in 2012 we had 18, in 2018 16, and now in 2022 only 11. The data speak volumes!

Anyway, in my role there is not much I can do except present evidence of how well our current and former students have done. I do that through this publication and in my involvement with the Chemistry Alumni Council which has been a real success story. One particular example is the help we received last year from *Rajiv Banavali* PhD 1985. He funded the Banavali Green and Sustainable Chemistry initiative and now three faculty colleagues are directing research on green chemistry with undergraduate and graduate students supported by this initiative. Details of Rajiv's outstanding carer are given earlier.

We want to hear from you and we want to see you. There are more good reasons to visit the campus in the next few weeks. On Sunday April 23, we will honor the life of our founder Charlie Armbruster, on the following day *Justyce Jedlicka* BS 2008 will present the 36th Distinguished Alumni Lecture and on May 13 we will honor the 2023 and 1973 graduating classes. An alumni reception will be held on the afternoon of May 13, following Commencement.

As I mentioned last year, it is getting harder to keep up and in touch with you all so please contact me and let me know about your professional and personal lives. Nothing does more good to the department than to highlight the successes of our former students. That is becoming more important as budgets shrink and decisions are made about programs. It is good to feature chemistry alumni in the UMSL Daily, and of course in the UMSL CHEMIST, so if you have good news please let me know.

Best wishes to you all for success in your personal and professional lives. Please stay connected and let me know how you are doing.

THANK YOU VERY MUCH

We are so grateful for the financial support you provide for us. This makes us the best supported academic department on campus. We are unable to provide a listing of donors this year, but if we are able, this document will be updated in the online version. Your help means so much to our students and they certainly are most appreciative of the scholarship assistance they receive.

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

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



The Ferguson Brewhouse Group in 2021, 1—r, Bill McCarthy, BS 1975, PhD 1984, Mark Owens, BS 1976, MS 1982, the editor, Dr. Mike Nichols and Dr. Keith Stine. The photo was taken by Dr. Eike Bauer.

ACKNOWLEDGMENTS

Photographs were hard to obtain this past year but I wish to thank Eike Bauer, for help. I also acknowledge, *Patricia Barton* BA 1978, Keith Stine and David Garin for proofreading. Any errors, especially in content are mine.

UMSL Chemistry Alumni Fund Enclosed is my contribution of \$ _____ Yes I work for a matching gift corporation. I would like information about bequests to the University. **Designation for funds:** Chemistry Department Endowment _____ Robert W. Murray Lectureship __ Eugene and Joyce Corey Scholarship Fund E.G. Brunngraber Fellowship (undergraduate research) Charles W. Armbruster Scholarship Lawrence Barton Scholarship M. Thomas Jones Memorial Fund (graduate student support) Rudolph Ernst K. Winter Graduate Fellowship Fund Barbara Willis Brown Women in Chemistry Scholarship Outstanding GTA Award Dedicated to the Memory of Jack L. Coombs Other Contact me; I have ideas for a new scholarship/fellowship or other fund You may also contribute to any of the Scholarships and Fellowships listed on page 16 which were established by the person for whom the award is named, by indicating in "other". Please make check payable to UMSL. "Chemistry Alumni Fund" and return to: Keith J. Stine, Professor and Chair, 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). I have included the University in my estate plan _____. If you are considering including the University in your estate plan, please contact: Elizabeth Niven, eniven@umsl.edu (314-516-6788) **INFORMATION UPDATE SPRING 2023** 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. UMSL Degree _____ Year ___ Name ___ Current mailing address: Employer: Current Position: Recent Activities and Other News: News of other alumni:

UMSL CHEMIST
SPRING 2023

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