



MCM Solutions



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Message from the Editor:

Everyone knows that a U.S. presidential term is for four years and that a president can serve no longer than two terms. It is also a fact that Queen Elizabeth II of England has reigned as monarch for 66+ years. The length of service of a department chair is undefined, but is closer to the former than the latter. After several years at the helm, Dr. Paul Pyenta has turned over the duties of department chair to me. I am honored to accept the position and grateful for the confidence my colleagues have expressed in my abilities to do the job adequately. I will need to hit the ground running, as there are multitudes of things going on in the department and the school, some of which are described in this newsletter. Therefore, I will cut this message short and end by wishing you a safe and happy upcoming year.

Sincerely,

Dr. Edward Donnay (new department chair)

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Alumni News:

Dr. Joe Hudman ('71) stopped by the department during homecoming while visiting his nephew. His nephew graduated this spring with a degree in Biomedical Science.

(While I know I spoke with other chemistry alumni during homecoming last fall, my notes about who they were have been misplaced. I apologize to those alumni and ask they send me an update for next year's newsletter. Of course, all alumni are welcome to stop by the department during the upcoming homecoming celebration.)

Dr. M. Jane (Matthews) Wray ('67) got her MA in pathology in 1979, her M.D. at UTMB in 1974, in addition to a Ph.D. in neuroanatomy at the University of Arizona Health Science Center. She practiced pediatric endocrinology for 25 years in Austin and she now works in the community health center field. She related the following funny story:

When I started physical chemistry with Dr. Harris, a number of students from what is now ACU across town signed up. One of them told me that he was majoring in physics. He felt that since the first semester of PChem is thermodynamics and chemistry is a snap compared to physics, he planned to take it here and transfer it back to his college as physics. I said, "Are you saying that you signed up for PChem with Lyndol Harris because you thought it would be a snap?" He was like well yes. You think that's bad. I said, "Well, I'd certainly fasten my seat belt." He made an F.

We are sad to report the death of alumnus Dr. Dwight L. Needels ('77). Dwight earned a Ph.D. in Biochemistry and Neuroscience at Michigan State University and did postdoctoral work at UC-Irvine before settling in Meriden, Connecticut where he lived for 28 years. Dwight worked at Roche Pharmaceuticals as a Documentation Manager. His passion for the outdoors led him to map the local hiking trails that were published by the Meriden Land Trust. The city acknowledged his service with a citation when he left in 2015. He moved to the San Francisco Bay area where he spent many hours in the hills at Black Diamond Mine Regional Park.

Dr. Donna Jean (Anderson) Fredeen ('81) wrote us that after graduating from McMurry College she earned her Ph.D. at Texas A&M where she met her husband, Ken. They moved to Connecticut where she was briefly an Assistant Professor at the University of Bridgeport. She ended

up at Southern Connecticut State University in New Haven where she spent 26 years moving through the faculty ranks and was eventually named Dean of the School of Arts & Sciences. In 2013, she accepted the position of Provost/Vice President of Academic Affairs at Rider University in New Jersey. In the spring of 2017, she was inducted into the Texas A&M College of Science Academy of Distinguished Former Students in recognition of her contributions to science education.

Gabrielle “Gabby” (Famble) Mallet (’05) was recognized in the 10th annual “20 under 40” list of up and coming leaders in November by the Abilene Reporter News and the Abilene Young Professionals, a program of the Abilene Chamber of Commerce. Local residents and businesses submitted over 100 nominations and a panel of prominent community leaders determined the winners. A quote from the article states, “Through her hard work and dedication as a TSTC mathematics instructor, Gabby guides our students toward successful futures while advocating for both faculty and students across Texas.” She revealed in the article that she is currently pursuing a Ph.D. in higher education from Azusa Pacific University and would love to move into an administrative role in higher education one day.

Sean Smith (’06) has taken an appointment at Asbury United Methodist Church in Odessa. Sean has been the pastor at UMC in Claude, TX for the last four years.

Dr. Jennifer Coddington-Bui (’06) gave a presentation on campus to the chemistry club and spoke to some classes about her career path after leaving McMurry University. She obtained a Ph.D. from the University of Delaware and had postdocs at Columbia and Stanford Universities. She now works as a Field Applications Scientist for the Northern California and Pacific Northwest region at Pall FortéBio LLC. McMurry University honored her as the outstanding alumnus in math and science at the first Night of Distinction event this April.

Mr. Brandon Randell (’10) was honored by Abilene ISD as a finalist for two Teachers in the Limelight Celebration (TLC) awards: Science and Secondary Education. Brandon also earned a Masters of Education degree in Administration from Lamar University. Congratulations Brandon!

Mrs. Katie (Neal) Pierce (’10) and her husband recently left Abilene as Katie found a new job working for the City of Houston. The move brought her closer to family and more opportunities for her husband’s career.

Mr. Daniel Kent (’17) and Ms. Ashley Rangel were engaged in May of 2017. Congratulations to the happy couple! He is attending the Texas Tech Health Science Center School of Pharmacy in Abilene.

Mr. Mukundwa K. Gael (ex’17) wrote that he had a great opportunity to intern at Roswell Park Cancer Institute, RPCI. He shared his research poster that he presented at different conferences in Buffalo, NY. He is attending pharmacy school at the University of Tennessee.

The McMurry SMAB sponsored the sixth annual golf tournament in conjunction with an alumni event in Grapevine on April 27th-28th. An “after hours” private tour of the Texas Civil War Museum guided by McMurry University history professor Dr. Don Frazier was one of the weekend activities. Proceeds from the golf tournament fund SMAB priorities such as the Charles and Lisa Bloomer Research Stipend, supports student academic travel, and helps meet expenses associated with field research. If you would like to know more about this annual event or SMAB, you can visit their website, <http://academics.mcm.edu/smab/> or contact the SMAB chair Elaine Harmon at elaine.d.harmon@gmail.com.

Departmental News:

The department is happy to introduce a new graduate this spring, Ker Yang! Ker transferred to McMurry University in the fall of 2016. To complete all the degree requirements she took a very challenging course load this past year that included multiple chemistry courses each term. She conducted computational chemistry research with Dr. Pyenta during the spring term. She applied to

and was accepted by the University of Wisconsin and the Texas Tech University Health Science Center schools of pharmacy. She chose to attend Texas Tech and therefore stay in Abilene. She achieved this while being a mother and a wife whose husband is stationed at Dyess Air Force base. Congratulations to Ker Yang!

The department was able to acquire a new Nicolet iS5 infrared spectrometer (IR) with an ATR attachment from ThermoScientific and a refurbished gas chromatograph with a mass spectrometer detector (GC/MS) from GenTech Scientific, Inc. The pieces of equipment were purchased through the McMurry University capital budget and by trading in two non-functional gas chromatographs and integrators. The IR was set up in time for use by general chemistry students in the fall to analyze the aspirin they made. The GC/MS instrument was installed in the spring term and was immediately used by students in organic chemistry and instrumental methods. Students and faculty will use both instruments for research projects, too.

The Department of Physics has benefited substantially from an endowment established by Mr. Roger Ward to honor Dr. Virgil Bottom. During the past year, a significant donation to the endowment by Mr. Ward was accompanied by a revision to the terms of the endowment allowing the Departments of Chemistry and Biology to benefit from the endowment while maintaining the strong focus of support for Physics. We are grateful to Mr. Ward for his generous gift to McMurry University. A decision of how best to utilize the revenue from the endowment has not yet been made.

The Texas Tech University School of Pharmacy has agreed to waive the Pharmacy College Admission Test (PCAT) requirement for all McMurry students with a 3.7 GPA or better applying for admission to pharmacy school and majoring in Biochemistry or Biomedical Science. Dr. Paul Pyenta says, "This is a wonderful affirmation, from an external source, of the quality of our science student graduates, and in particular, our biochemistry students (most pre-pharmacy students are biochemistry majors). McMurry has gained a solid reputation of producing highly skilled pre-pharmacy graduates in which Texas Tech University has great confidence." This policy is an extension of the early admission agreement that McMurry University has with the Texas Tech School of Pharmacy.

Recently Patty Hanks Shelton School of Nursing made the decision to change their prerequisite for admission from two semesters of chemistry coursework to only one. The department is scrambling to make the necessary curricular changes to the single course so that students are prepared to pass the entrance exam required for nursing schools in half the instructional time. The former two-semester sequence provided some flexibility in how much time could be spent on topics students struggled with and now that flexibility seems to be gone.

The McMurry University Student Affiliates Chapter of the American Chemical Society (ACS) hosted 4th grade students from Jim Ned elementary during homecoming. This was the fifth year in a row that our chemistry club hosted students from Jim Ned. What began as a simple chemistry show for the classmates of Dr. Pyenta's children has now grown into an annual tradition. Last year's 4th graders (i.e. this year's 5th graders) were hosted by the biology club for the fourth year. The students participated in several science activities besides attending Tipi Village.

The local section of the ACS sponsored Mr. Stephen Twaddle, a chemist who works at McDonnell-Douglas and past-chair of the local section, to present a talk titled "What Do Chemists Do in the Aerospace Industry?" in November. He spent time visiting with students and touring McMurry University in the morning. The talk was in the early afternoon at ACU, but a good number of McMurry students were present. After the presentation, McMurry students were able to ask questions about what it is like to work in industry as a scientist.

McMurry is continuing to implement a nationally recognized program known as Supplemental Instruction (SI) to help students in general chemistry (among other subjects). Dr. Cindy Martin, a professor in the Department of Mathematics, is serving as the campus coordinator for SI. In part, that means she organizes the program and trains the students who will serve as SI

leaders. The implementation of SI last year was haphazard and student attendance was voluntary. This coming fall the organization and execution is much improved. Students registered for general chemistry will also sign up for SI sessions as a zero-credit class that will be graded pass/fail based on attendance. We hope this will improve the success rate of students in their first chemistry course.

The effort to improve success in general chemistry will also get a boost from participation in the “Gateways to Completion” program sponsored by the Gardner Institute. McMurry University just completed the “Foundations of Excellence” program from the Gardner Institute intending to increase retention. The program radically affected the freshman experience at McMurry University. The goal of the Gateways to Completion program is to transform teaching, learning, and reduce failure rates in lower division and/or developmental education “gateway” courses through working directly with faculty and staff.

In April the department was notified by The Welch Foundation that the annual amount of the departmental grant was increased from \$25,000/year to \$28,000/year for the next three-year cycle starting this June. This grant is essential for supporting students and faculty doing research. The department has received this funding from the Welch Foundation continuously since the summer of 1999. Therefore, this marks the 20th year of summer research funded by the grant. Current work being done under the grant is described below.

At the spring commencement ceremony, McMurry University honored Dr. Pam Veltkamp with the prestigious Gordon R. and Lola J. Bennett Award presented to a full-time faculty member for conspicuous accomplishments in furthering the aims of McMurry University. The four criteria for the award are: involvement in a teaching field (research for publication or teaching), excellence in teaching, contribution made to the governance of the University and leadership shown on committees, and contribution outside of class to the establishment and support of better community relationships. Congratulations, Pam!

Departmental Research:

A team of faculty and students attended the 73rd annual American Chemical Society Southwest Regional Meeting (ACS-SWRM) in Lubbock, Texas on October 28 – November 01, 2017. Faculty attending were Drs. Pyenta and Donnay along with six students. Regional meetings are an excellent opportunity for both students and faculty to establish networking connections, plug in to the regional chemical/biochemical community, and gain exposure to current scientific projects at both large and small universities. McMurry students presented three posters detailing their recent research efforts as guided by faculty members. Megan Butler presented a poster titled “Synthesis of DPPZ ligand analogues and their Cr(III) polypyridyl complexes” about her summer work with Dr. Donnay. Haley Shepard and Alisa Rasley worked with Dr. Pyenta and gave their poster titled “Cytotoxic response of MDA-MB-231 and MCF-7 breast cancer cells to mono- and bi-hydroxamic acid derivatives as histone deacetylase inhibitors.” Finally, Bethany Everett’s poster was titled “Comparison of microwave-assisted and conventional synthesis of histone deacetylase inhibitors as potential anti-cancer agents” concerning work done with both Dr. Shin and Dr. Pyenta.

Dr. Veltkamp and Dr. Shin attended the 255th National ACS meeting in New Orleans from March 18 – 22. Three McMurry University students also attended. Despite a rental car with a flat tire, the students and faculty enjoyed the exposition and attended interesting chemistry presentations. The students also took advantage of career opportunities such as a resume review and networking events.

This summer the department has three undergraduate students conducting research on the Welch Foundation Departmental Grant. Mark Izbrand, Yejide Oyewole, and Yuwei Bao will be working with Drs. Shin and Pyenta on a collaborative project to evaluate histone deacetylase inhibitors as anticancer agents against two different cancer cell lines, MDA-MB-231 and MCF-7.

The inhibitors are synthesized in the Shin lab while the cancer cells are grown in the Pyenta lab. Other aspects worked on in the two groups include computational docking studies and isolation of possible anticancer compounds from West Texas plants.

School and Miscellaneous News:

People on the McMurry campus have been busy preparing for a once-every-ten-years reaccreditation process that begins this fall with the submission of a written report. Over the coming year both an off-site review and an on-site visit will take place before McMurry University receives notification of its reaccreditation status.

The reaccreditation process is coinciding with the kickoff of McMurry University's centennial era celebration. The celebration era will begin this fall and each academic year will have a different one-word theme leading up to the actual centennial year in 2022-2023. The theme this year is McMurry "Discovers".

After the successful drive to fund the Dr. W. Norton Jones Endowed Professorship, McMurry University has started two new giving opportunities that may be of interest to our alumni: the Dr. A.C. Sharp Endowed Scholarship and the Dr. Virgil E. Bottom Endowed Professorship. Please see the McMurry University website for more information.

McMurry University and Texas Tech University Health Sciences Center (TTUHSC) are excited to announce the signing of an articulation agreement to allow qualified McMurry students the opportunity to enter the TTUHSC's Master of Public Health program after three years at McMurry. "The early admission articulation agreement through McMurry University would allow qualified students to complete their prerequisites in three years and have early admission to the TTUHSC Master of Public Health Program," said Dr. Larry Sharp, associate professor of Biology at McMurry University, who negotiated the agreement with TTUHSC. "As the students finish their first year at TTUHSC, they would send McMurry the transcripts and we would award them a degree in biology, kinesiology, sociology, psychology or mathematics, essentially saving them a year's worth of undergraduate expense."

40 Years Ago in the Department

(Below are news items and excerpts from the department newsletter from April 1978. The entire newsletter can be seen under the "Department News" tab on our website, www.mcm.edu/chemistry)

"We have three seniors this year who will be graduating at different times during 1978. David Schkade will graduate next December with a double major in chemistry and geology ... Charles Ebarb will graduate this summer with a chemistry major and an ACS certified degree ... Eugene (Gene) Weitzel is planning to graduate next December with an ACS certified degree in chemistry."

"Mark McClure...will begin research this summer with Dr. Klassen. Bill King...will begin his second year of work on osmium and ruthenium complexes."

"Gamma Sigma Epsilon Honorary Chemical Society inducted ten members last fall. ... New members are Mark McClure, Mike Jones, Charles Bell, Steve Bell, Steve Smith, John Manning, Tim Oglesby, Tom Brunner, Mike Stowbridge, and Charles Ebarb. ... David Schkade was given the Xi Beta Chapter outstanding member award." McMurry chemistry students honored for their academic achievements were: freshman-Bob Reid, sophomores-Mike Jones and Mark McClure, juniors-Bill King and Tim Oglesby, senior-David Schkade.

“The department and the college did not employ a biochemist as we had hoped. We could not find a person who could teach some courses for biology and be a member of the chemistry department. The administration has shelved our request for a biochemist and we do not know if it will be taken up again.”

“The department staff of Dr. Harris, Dr. Klassen, and Dr. Sonntag teach all lectures and laboratories. Our teaching loads have increased now that we have a three-person department...We will continue to have ACS approval for one more year but our program may be reevaluated next year. When it is, I hope we have a fourth person so we can retain the ACS approval.” *The department regained a fourth faculty member (a biochemist) in 1996. A biochemistry major was added in 1997 and the department was renamed as the “Department of Chemistry and Biochemistry” soon thereafter.*

“Construction has begun on the Campus Center and it may be completed in 16 to 18 months. ... The department has purchased a TI-59 programmable calculator and printer. We will write elementary programs and store the programs on magnetic cards. ... Should this experiment prove successful in our work and instruction, we will consider the purchase of a microcomputer that will cost less than \$1000.”

Alumni Search:

For the following alumni we have no contact information. If you know the contact information for one of these alums, we welcome your sharing that information with us, or you might contact that person and ask him/her to contact us.

Gayle Hart Long ‘64

Susan Arth ‘75

Gregory Guy Alexander ‘79