



6/19/2017

Message from the Editor:

This August will mark the completion of my tenth year at McMurry University. Sometimes it feels as though it has been much longer than that and other times it feels like I just started teaching here yesterday. I would guess that your relationship to McMurry University and the Department of Chemistry & Biochemistry is somewhat similar. It might seem like forever since you graduated, but if you come back to campus, you will likely still feel at home. Facilities and technology may have changed, but current faculty members continue the tradition of cultivating long lasting relationships with students (past and present). I have had the pleasure of establishing connections to quite a few chemistry alumni through my work with the Science and Math Advisory Board, at homecoming, or during other alumni visits to the department. Of course, I also know the 22 new chemistry alumni that have graduated in the last ten years. I hope that this 10th edition of the renewed Chemistry Alumni newsletter contributes a small part to your ongoing relationship to McMurry and the Department of Chemistry & Biochemistry.

Sincerely,

Dr. Edward Donnay

donnay.edward@mcm.edu

Alumni News:

Dr. W. L. Magnuson ('59) returned to McMurry to be inducted into the Science and Math Wall of Honor. Details are below in the "School News" section.

Dr. Girvin Harkins ('60) and Dr. Richard Quy ('70) were on campus multiple times as McMurry University Trustees. Dr. Donnay served as a faculty representative to the same Board of Trustees committee and appreciated the chance to work with and get to know both of them.

Dr. Joe Loter ('65) attended homecoming on the 50th anniversary of his graduation from McMurry. Dr. Loter informed us that he taught for 40 years at Texas A&M-Corpus Christi. Current McMurry University President, Dr. Sandra Harper served as provost there during that time. Dr. Loter retired from teaching in 2010 and still makes his home in Corpus Christi.

Dr. Earl Beaver ('66) also was at homecoming and spoke with Dr. Shin's organic chemistry students on the following Monday. He also met with faculty and administration over lunch about sustainability issues which has been the focus of his work with government and non-governmental organizations after a long and successful career with Monsanto.

Mr. Bill Caffey ('73) visited campus on September 30, 2015 and met with chemistry and business faculty over coffee. Mr. Caffey is the current Owner/Director of Double B River Ranch (2008-present). Before that he was Executive VP of Operations at Koch Industries for 33 years (1973-2006) until it acquired Georgia-Pacific. He left to become Executive Vice President of Operations Excellence and Compliance at Georgia Pacific where he retired in 2006. He has served on numerous charitable boards in the past and he was invited and agreed to serve on McMurry University's Board of Trustees beginning this summer.

It was also nice to visit with Dr. Ralph Turner ('74) at homecoming.

Dr. John Manning ('79), Dr. Richard (Max) Wynn ('80), Mr. John Pemberton ('94), and Mr. Kevin Flusche ('95) have maintained a relationship with the department by serving on the

Science/Math Advisory Board (SMAB). It is always a pleasure to catch up with them at SMAB meetings twice a year.

You may have noticed that Ms. Aletha Williams ('04) was featured in a recent issue of the Messenger (McMurry University's Alumni Magazine). She is the Director of Science in Career Technical Education at the Houston magnet school, Jane Long Academy. She got into teaching with some encouragement from her mother and after a short stint in the oil and gas industry. Williams is currently pursuing her doctorate degree from Texas Tech University.

From Facebook, we noted that Mr. Derek David ('09) and his wife are expecting their first child, a girl, this year. Derek is busy renovating a room for the new arrival after purchasing their dream home.

Mrs. Katie (Neal) Pierce ('10) passed a license exam to become a Laboratory Technician II as part of her job with the City of Abilene Environmental Laboratory. Dr. Veltkamp gets to visit frequently with Katie and Brandon Copeland ('14) when she takes analytical chemistry students for a tour of the local laboratory.

Mr. Brandon Randell ('10) attended the fall workshop at McMurry for local high school chemistry teachers. He was nominated and a finalist for the 2016 Science Teacher Limelight Award, an award he won in 2015.

Dr. Jennifer (Revell) Ramey ('10) graduated as a Post-Doctoral Resident in an ocular disease program from Northeastern State University in Tahlequah, OK. She completed a one-year residency at a VA hospital in Arkansas. She also co-authored a paper published in the March 15, 2016 edition of *Review of Optometry* titled "Scoring an A+ on a B-Scan". She has accepted a new job with Pacific Cataract and Laser Institute out of Lewiston, Idaho.

Ms. Malaney (Lopez) O'Connell ('10) obtained her doctorate degree in cell biology from the University of Texas Medical Branch in Galveston. Congratulations to Dr. O'Connell! In an interesting turn of events, she has agreed to return to McMurry University as a member of the Biology Department where she will teach classes this coming academic year and explore the possibility of adding a biotech program. We are glad to welcome her back as a faculty colleague!

Dr. Erica (Rawls) Wilson ('11) finished her PGY1 residency and next year will be a clinical pharmacy specialist in internal medicine at Medical Center Health System in Odessa, TX.

We note that Ms. Tara Williams ('12) and Ms. Danni McMahan ('12) both recently received their Doctor of Pharmacy degrees from Texas Tech University. Danni was the Banner Bearer for the graduation ceremony with the highest GPA in the class and Tara was in the top 20%. Congratulations to Dr. Williams and Dr. McMahan! Danni will do a residency at the VA North Texas Healthcare System in Dallas while Tara has accepted a position in Community Pharmacy in Stanton.

Also we noted that Ms. Amanda Genzling ('13) married Mr. Cameron Sikes. Best wishes to Mr. and Mrs. Sikes!

Dr. Donnay recently had lunch with Mr. Josh Brooks ('14) who has returned to Abilene and works at Hendrick Hospital. Josh is currently applying to Physician Assistant programs.

We were recently informed that Mr. Brad Rowland ('14) was accepted into the University of Houston School of Medicine. Congratulations Brad!

The McMurry SMAB sponsored the fourth annual golf tournament on March 5th in conjunction with an alumni weekend event in San Antonio. A great time was had by golfers and non-golfers alike. The golf tournament funds SMAB priorities such as the Charles and Lisa Bloomer Research Stipend, supporting student academic travel, and helping meet expenses associated with field research. If you would like to know more about this annual event or SMAB, you can find a link to their website on our webpage, www.mcm.edu/chemistry or contact the chair Elaine Harmon at elaine.d.harmon@gmail.com.

McMurry University Establishes the Dr. W. Norton Jones Endowed Professorship

McMurry University is pleased to announce it has exceeded its goal of \$250,000 needed to establish the Dr. W. Norton Jones Endowed Chair in Chemistry, the first fully funded endowed professorship in the sciences. “We are happy to be able to honor the legacy of teaching, mentoring, and groundbreaking research conducted by Dr. Jones, his colleagues, and the many McMurry alumni who make a difference in their professions and the communities in which they live,” said McMurry University President Dr. Sandra Harper. “Dr. Jones dedicated his life to involving students in his research, training successive generations of scientists who are making their own marks in organic and inorganic chemistry, biochemistry and biosynthesis. His students have also gone on to careers as educators and research scientists with a number of nationally recognized companies.”

From 1948 to 1976 Dr. Norton Jones was acknowledged as the decisive factor on a student getting into medical school. Earning his endorsement, students knew that the coveted letter written by Dr. Jones would get them into some of the most prestigious schools in United States. Faculty members awarded the Dr. W. Norton Jones Endowed Professorship will bring ongoing prestige to the University through research, mentoring, and published works.

The faculty members of the Department of Chemistry and Biochemistry want to sincerely thank all alumni who contributed to this campaign. We are humbled by your generosity and will continue to strive to maintain the reputation Dr. Jones and his colleagues established at McMurry. If you still wish to contribute to this professorship or to the Dr. W. Norton Jones scholarship that is awarded to the Outstanding Junior chemistry major, please contact Debra Hulse, Vice-President for Advancement, at 325-793-4761 or hulse.debra@mcm.edu.

Departmental News:

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 third year in a row that students from Jim Ned were hosted by our chemistry club. What began as a simple chemistry show for the classmates of Dr. Pyenta’s children has 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 second year. The students participated in several science activities around visits to teepee village.

The chemistry club also hosted a seminar in October where Dr. Junha Jeon Jun-ha from the University of Texas Arlington talked about his research entitled “Catalytic bond Functionalization for organic synthesis”. He also spoke with students about the chemistry graduate program.

The local section of the American Chemical Society sponsored a talk at McMurry University by Dr. Diana Mason, Professor Emeritus in Chemical Education at the University of North Texas, titled “What Started in Texas Has Changed the World” about the chemical history of Texas. She was also gracious enough to conduct a workshop for Abilene ISD high school chemistry teachers including Brandon Randell (’10).

The department redefined the capstone experience required for our majors. Previously graduating seniors took a single credit Literature Seminar course that included literature and database searching, career information, a written review paper, and an oral presentation. However we had come to find that not enough time was available in the course to cover these topics adequately. Furthermore honors students would find that the paper and presentation seemed to require duplicate efforts to composing their thesis. The department decided to have a single credit seminar course focus only on information search strategies and career information and then require a separate capstone experience which can be an honors thesis, an internship, other laboratory research experience, or a new Senior Project course. All of these capstone options require demonstrations of written and oral communication skills.

Dr. Veltkamp was on sabbatical during the fall 2015 semester, doing research in chemical education. Specifically, she examined whether there was any correlation between a student's test score on the first exam in General Chemistry I and that student's final grade in the course. After examining grades from more than 500 students over 10 years, she found that there is a strong correlation, such that after the first exam, students can be advised about their prospects for success in the course. A "probability of success" table was obtained from the data, which can be used to assist the professor in discussing with the student as to whether he/she should stay in the course or withdraw. It is hoped that this information will help both the student and the professor in making the decision as to whether to continue. Ultimately, such discussions should help raise the passing rate in the course and help with retention into the second course in the General Chemistry sequence. The correlation between first test scores and final grades was also examined for the first course in the General, Organic, and Biochemistry (GOB) sequence, which is taken mainly by pre-nursing students. While the correlation was not as strong as in General Chemistry I, there is a correlation which can also be used for advising purposes.

Dr. Veltkamp also attempted to examine whether there was any correlation between the resources used by a student (e.g. using the professor's office hours, using a tutor in the AEC, etc.) or the types of study skills employed (e.g. making note cards, making study guides) and the student's success in the course. It turned out that there were design flaws in the survey instrument used during the fall semester, so the results were inconclusive. The survey instrument was redesigned and used again in the spring, but as of this writing, the data have not yet been analyzed. That study will be ongoing, in order to gain enough data points to make the results statistically significant.

Dr. Pyenta was on sabbatical in the spring 2016 term. His sabbatical time was spent initiating new research projects and transforming S219 to a functional laboratory for biotech research. One main goal is to collaborate with other McMurry faculty on projects needing biochemistry elements. In particular, Dr. Pyenta will be collaborating with Dr. Shin to research potential anticancer drugs; Dr. Shin is performing the organic synthesis of new HDAC inhibitors, and Dr. Pyenta will be conducting viability assays with them on cancer cell lines. Much of his sabbatical was spent setting up facilities for mammalian tissue culture and subsequent testing. Theoretical modeling of inhibitor docking to the target protein will also be done, and in preparation for this, a high-end computer was purchased and is being configured with the proper software.

Dr. Donnay applied for and was granted a sabbatical for the spring of 2017. Dr. Donnay has worked with many students over the years to generate a substantial amount of preliminary data concerning research on chromium metal complexes. However McMurry does not have some of the sophisticated equipment that is necessary to obtain final definitive results that could be published in a peer-reviewed article. During the sabbatical he will be working on obtaining the necessary data through collaborations with faculty members at regional universities. Dr. Donnay was also promoted to the rank of full professor beginning the fall of 2016.

Departmental Research:

Based on extracts of West Texas plants done in her group, Dr. Shin gave a talk at the 250th National Meeting of the ACS in Boston from August 16-20, 2015 entitled "Feasible Screening Method for Antimicrobial Activity of Natural Products for the Interdisciplinary Research Project at a Small Liberal-Arts College". The research project was conducted by a student, Kara Black, with assistance from Biology faculty Dr. Anna Saghatelian and Dr. Gary Wilson.

Besides extracting medicinal compounds from natural products, another main goal of Dr. Shin's research is to discover potential anticancer drugs via organic synthesis. She designs and synthesizes the inhibitors of a histone deacetylase (HDAC) class, followed by evaluation of biological activities *in vitro* via assays with different cancer cells. Dr. Shin received a Sam Taylor

Award (\$2000) to partially fund this project entitled “Microwave-assisted Synthesis of Histone Deacetylase Inhibitors as Potential Anticancer Drugs.” Daniel Kent, one of her research students supported by the Welch Foundation, presented his project entitled “Synthesis of Histone Deacetylases’ inhibitors” at the McMurry Academic Conference on April 16, 2016. A poster at the Pacificchem 2015 conference in Honolulu, Hawaii on December 15-20, 2015 entitled “Microwave-assist synthesis of hydroxamic acid derivatives as histone deacetylase inhibitors” also described this project.

This summer the department has five undergraduate students conducting research on the Welch Foundation Departmental Grant: Shantel Thomas, George Gutierrez, Ananda Lewis, Mukundwa Gael, and Genna Hart. Drs. Shin and Pyenta are working jointly with all 5 students. Genna Hart and Ananda Lewis have been working on discovery of new bioactive compounds from extracts of West Texas Plants. Biology professors Anna Saghatelyan and Gary Wilson have provided herbs and have assisted conducting microbial inhibition tests, respectively. Mukundwa Gael, George Gutierrez and Shantel Thomas have been synthesizing new compounds, followed by evaluating breast cancer cell viability with synthesized compounds with MCF-7 and MDA for potential anticancer agents.

School and Miscellaneous News:

On a sad note, McMurry University witnessed the death of longtime Mathematics professor, Dr. Bill Dulin, on June 26, 2015 at the age of 80. Dr. Dulin was recruited to McMurry in 1971 to head the Mathematics Department. He later served as Chair of the Science Division and the Chair of the Computer Science Department. He worked at McMurry for 29 years and positively impacted countless students. He was inducted into the Science and Math Wall of Honor in November 2006.

As part of a recruiting idea from McMurry’s new Vice President for Enrollment Management, faculty members from the Division of Natural and Computational Sciences participated in a “Science Saturday” event for prospective high school students in January. Rising juniors and seniors who are interested in the sciences were invited to campus for a day of gaining hands-on exposure in a variety of science projects, as well as receiving information about attending McMurry. The students picked three project areas that they were interested in and were divided into groups to progress from one project workshop to another throughout the day. The Department of Chemistry and Biochemistry helped the students conduct thin layer chromatography (TLC) separation and infrared spectroscopic analysis of over-the-counter pain relievers. The Department of Physics had activities where students got to fire a trebuchet, use the 3D printer, and launch paper rockets. The Department of Biology activities included extracting DNA and fingerprinting, conducting a biodiversity simulation, and studying microorganism disease transmission. While the turnout was small for the first go around, the Admissions Department hopes that it becomes an annual tradition to recruit quality students interested in science majors. If you know of any high school students who would be interested in joining us for this type of fun on a Saturday, put them in touch with McMurry!

The SMAB inducted three new members into the Science and Math Wall of Honor on October 24, 2015. Brief excerpts from their biographies follow. They join the previous ten inductees with a permanent plaque displayed in the science building.

Dr. Jerald D. Lee (’61) received a National Defense Education Act Fellowship to complete his Ph.D. in physics from Ohio University and then went to work for DuPont. He published several articles and obtained 18 patents. He “retired” in 1999 as a DuPont Fellow, the highest position in science within the organization, but continued his research. In 2002, Dr. Lee was awarded the Excellence in Engineering Award by DuPont. He died in August of 2013.

Mr. Larry F. Conlee ('71) was also a physics major who participated in the special program in "Piezoelectricity" taught by Dr. Virgil Bottom on weekends while at McMurry. This led to summer internships at Hewlett-Packard and a position at Motorola, Inc. after graduation. He improved the synthetic quartz used in pagers, 2-way radios, and the first cellular phones. He was promoted to Product Manager of the quartz crystal business in 1980 and then switched to cellular phones in 1983 where his group developed the first digital cellular phone in 1992. In 2001 he joined Research In Motion (BlackBerry) as Chief Operating Officer and was recognized as "Top COO" in Canada in 2009 just before his "transition to retirement" was announced.

Dr. W.L. Magnuson ('59) received his Ph.D. in inorganic chemistry from Kansas University in 1963 and then returned to McMurry as an Assistant Professor from 1963-69. In addition to teaching, he supervised undergraduate research through grants from the Research Corporation and the Robert A. Welch Foundation. After McMurry, he moved on to become the Chair of the Chemistry Department at Kentucky Wesleyan College. He has co-authored numerous grant proposals and was the Director of several NSF Science Training Programs in Chemistry for high school students across the nation. Thirty students that he has mentored have received the Ph.D. degree in chemistry and more than one hundred have received other advanced degrees. He has been recognized at Kentucky Wesleyan with the Outstanding Teacher of the Year Award, the Gus E. Paris Distinguished Service Award, and the Presidential Leadership Award.

40 Years Ago in the Department

(Below are news items and excerpts from the department newsletter from May 1976. The entire newsletter can be seen under the "Department News" tab on our website, www.mcm.edu/chemistry)

"On May 1 during the morning Dr. W. Norton Jones passed away after a brief and unexpected illness. Dr. Jones' sudden and untimely death will be felt by many students, faculty and friends. ...Before Dr. Jones' death, he wrote a brief note about the department and the article will bring back recollections and fond memories for all of us." The article by Dr. Jones can be read in its entirety at our website under the "Department History" tab.

"Gamma Sigma Epsilon sponsors the Conn Awards for undergraduates interested in research. ...This year Rod Fabian, a senior chemistry major, received the Conn Award for the paper he prepared. ...Mr. Fabian has been recognized this year as an outstanding chemistry major by the American Institute of Chemists." McMurry chemistry students honored for their academic achievements were: freshman-Mr. Bill King, sophomore- Ms. Alice Ann Bledsoe, junior- Mr. Greg Fabian, senior-Mr. Roderic Fabian.

"The fall meeting of Gamma Sigma Epsilon was held to initiate five new student members: Alice Ann Bledsoe, Carl Stubbs, Greg Fabian, James Thomas, and David Schkade. The dinner meeting was held locally and Dr. Robert Sledge spoke to the membership and guests on the history of science. We enjoyed Dr. Sledge's discussion and he is well qualified for the topic since he teaches an advanced course in the history of science."

"The chemistry program remains the same and has not substantially changed any since 1970. Our program has thrived because of the many good students we have had in the past and those that are currently enrolled. ...The physics staff has been reduced to one person. Dr. A.C. Sharp teaches all of the physics courses. ...Dean Cordts will be leaving the college in May of this year. ...Mr. Anderson Lumpkin of the Mathematics department will also be leaving the staff."

Alumni Search:

The following list contains the names of alumni for whom we have no address. If you know the contact information for any 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

Laurel Van Winkel '81