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## LETTER FROM THE CHAIR

Greetings to alumni and friends of the SFA Department of Chemistry and Biochemistry. I would like to update you on some of the changes and successes of the department. We recently hired Dr. Matibur Zamadar, an organic chemist, who is an eager researcher. We anticipate he will become a vital part of our organic chemistry program in the years to come. Recently, several of our students received awards: Jasmine Moreland was selected an ACS Scholar for the American Chemical Society; Antonio Trevino was selected for the 2014 Undergraduate Award in Analytical Chemistry from the American Chemical Society; and Marianne Burnett and Saad Chaudhry won a third-place undergraduate research poster award at the Undergraduate Research Symposium organized by

University of Texas Health Science Center in San Antonio. We also have faculty members who have received awards: Dr. Kefa Onchoke was awarded the 2014 SFASU Foundation Faculty Achievement Award in Research and Dr. Darrell Fry was selected the 2014-15 Wisely Fellow for the School of Honors. We are extremely proud our faculty and student's accomplishments.

With the support of our alumni, friends, faculty members and staff, we continue to graduate successful chemists from our programs. The Department of Chemistry and Biochemistry at SFA has a straightforward and important mission – to educate, train and prepare students for what ultimately will become their life's work. The department not only educates students about chemistry in the class-

room, but also uses research as a teaching tool to inspire students in the field of science.

The department wishes to thank those alumni who have made donations to the department that have helped us to acquire the impressive instrumentation we have available to our students. Without their support, it would be difficult to continuously improve our programs. Alumni support is essential in helping the department achieve its mission of academic excellence for all students.

Please don't hesitate to let us know your thoughts on our present programs and share your ideas concerning new ways to improve. News from former students and friends is always welcome, and we hope you will visit the department whenever you are in the area.

Best regards,  
Dr. Michael Janusa  
janusama@sfasu.edu



Dr. Darrell Fry

## WISELY FELLOW

Dr. Darrell Fry was awarded the 2014-15 Wisely Fellowship. The Wisely Fellow is responsible for engaging the honors community during the academic year. Fry's plan included offering Honors Chemistry 133, which was team taught with Dr. John Moore. The honors

course was "flipped"—that is, the majority of the content was presented outside of class. Inside class, students worked in a collaborative effort to solve problems. Fry and Moore circulated through the classroom identifying misconceptions and challenging students to work

more difficult problems. In an additional enrichment period, students engaged in real-world topics such as global warming and the contents of fireworks.





**Dr. Matibur Zamadar**

## DR. MATIBUR ZAMADAR

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Dr. Zamadar was born and raised in India. He received his Bachelor of Science in chemistry in 2003 from the University of Calcutta in Kolkata, India. He received two master's degrees: one in inorganic chemistry in 2005 from the Indian Institute of Technology in Bombay, India, and a second in organic chemistry from The City University of New York, New York, in 2010. He earned his doctorate in organic chemistry from The

City University of New York, New York, in 2011. Zamadar was employed as a postdoctoral research associate at Brookhaven National Laboratory, Upton, New York, in 2011-13. Zamadar joined the department in fall 2014 after completing his second postdoctoral research work at the University of Colorado, Boulder in 2013-14. Zamadar's current research interests are (a) the discovery of metal-based drugs against cancer, (b) the

development of metal-porphyrin complexes for the polymerization of alkenes, and (c) the discovery of porphyrin-based sensors for heavy-metal detection. Students learn many techniques in Zamadar's lab that may include: organic synthesis, polymer synthesis and spectroscopic methods such as,  $^1\text{H}/^{13}\text{C}/^{31}\text{P}$  NMR, UV-visible, fluorescence, GPC, DSC, TGA, MS and IR.

## UNDERGRADUATE RESEARCH

*The department not only educates students about chemistry in the classroom, but also uses research as a teaching tool to inspire students in the field of science.*

In the past few years, the department has endeavored to increase undergraduate research, and it has become a leader on campus in the area of undergraduate research. We now require all of our majors to complete two semesters of research and present their research for senior seminar at the annual awards dinner and

undergraduate research symposium. In order to promote the seminars, we started a research symposium held in conjunction with our annual awards dinner. In an effort to promote undergraduate research regionally, we also implemented a summer research experience specifically for junior college students, funded through a

Welch Foundation Departmental Grant. During the past two summers, four students have come to campus to participate in research. Our hope is to be able to obtain more funding and expand the program.



**Dr. James Garrett, keynote speaker at the departmental research symposium.**

## THANK YOU

The department is fortunate to receive much support from alumni. Some alumni contribute financially, and other alumni support the department with their investment of time. The financial contributions are used in a variety of ways to fund equipment, speakers, departmental events and student travel to conferences. Last

year, several alumni invested in the department by serving as outside evaluators for our first-ever Department of Chemistry and Biochemistry Research Symposium and Awards Dinner. The department is so grateful for all the support.

Dr. James Garrett, principal engineer in bioprocess devel-

opment for British Petroleum, was the keynote speaker. The title of his presentation was *Chemistry is the Solution*. In addition, he met with our senior seminar class to discuss career-related issues. Garrett received his bachelor's degree in chemistry from SFA in 1990, and he is the son of Dr. and Mrs. James Garrett, both retired SFA faculty members.

## NEW STUDENT AFFILIATE CLUBS

Drs. Darrell Fry and Kefa Onchoke have organized a Student American Chemical Society Affiliate at SFA. The affiliate has the following mission: We want to have FUN by learning how to safely conduct chemical demonstrations and bring this excitement to high school students. Fry and the students have already performed their demonstrations at area high schools, as well as for incoming freshmen. In addition, they submitted an abstract for the spring National ACS meeting and

applied for recognition as a student organization at SFA. If you are interested in helping the student ACS affiliate members travel to the national meeting or in having the group perform at your school, please contact Fry at frydr@sfasu.edu.

In September 2014, the department, under the leadership of Dr. Tayo Odunuga, was officially recognized as a chapter of the American Society for Biochemistry and Molecular Biology Undergraduate Affiliate Net-



**Left:** Nick Webster, Abena Afowaa, Danielle Eddings, Dr. Fry, Marc Griffin (Hemphill HS principal), and Jasmine Moreland.

**Below:** Afowaa and Eddings discharging the methanol cannon.

work. The ASBMB UAN is devoted to building a national network of undergraduate students and faculty members for the advancement of research, education and science outreach. Please contact Odunuga, the faculty adviser, at odunugao@sfasu.edu, for more information.



**Two of our recent graduates, Antonio Trevino and Marianne Burnett, proudly wearing their departmental stoles.**

The department has nine graduate students; six are

## RECENT GRADUATES AND STUDENT ACCOMPLISHMENTS

expected to graduate in May or August 2015. From spring 2014 through spring 2015 (anticipated), the department will have a total of 11 undergraduate students who earned their bachelor's degrees in chemistry or biochemistry. Some of the students have been accepted into medical school, phar-

macy school and graduate school, while others have secured employment in industry. Two students plan on becoming high school chemistry teachers. These students have all participated in research. In the past year, the department had a total of 20 students involved in research, two students co-authored publications, and

many presented posters at local, regional, and national meetings. In addition, undergraduate students were awarded prizes for their presentations and were selected to present their work at the undergraduate research conference at the capitol in Austin and at the national council on undergraduate research conference.

## DR. ODUNUGA VISITS THE NORTHERNMOST UNIVERSITY IN THE WORLD

Dr. Tayo Odunuga was awarded a travel grant by the Research Council of Norway for a three-month visit to The University of Tromso, Norway, as a guest researcher to the Department of Medical Biology and The Norwegian Structural Biology Centre (NorStruct). Odunuga was invited to participate in col-

laborative research on recombinant production and small-molecule inhibitor screening of a protein from the bacterium, *Pseudomonas*. Odunuga and his family were sponsored by the Leiv Eiriksson mobility grant from the Research Council of Norway.



**Dr. Odutayo Odunuga**

## STAFF CHANGES

Doreen Stockwell retired in May 2013 after serving as stockroom supervisor for many years. Stockwell is enjoying her retirement by spending time with her grandchildren. The department hired Jennifer Edwards as the new stockroom supervisor. Edwards is a graduate of SFA.



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## AXE 'em, Jacks!

You're invited! The annual awards dinner and undergraduate research symposium is Saturday, April 25, 2015. Contact Dr. Michele Harris ([mharris@sfasu.edu](mailto:mharris@sfasu.edu)) for information or to RSVP.

## SFASU FOUNDATION FACULTY ACHIEVEMENT IN RESEARCH: DR. KEFA ONCHOKE



Dr. Kefa Onchoke, associate professor of chemistry, received the SFASU Foundation Achievement Award in Research in December 2014. Onchoke is an integral part of the department and teaches analytical, instrumental, environmental and freshman chemistry courses. His research emphases includes plant bioremediation studies, metal speciation in composted wastewater sludges, computational chemistry of various molecules of biological interest, carcinogenicity of particulates, and electronic structure calculations. Onchoke in-

volves students in every aspect of his research. He currently is directing an undergraduate student and three master's students. In the past five years, three undergraduates and one graduate student have been co-authors on papers he published. Onchoke, a member of the American Chemical Society, has made significant contributions to the field of computational and spectroscopic analysis of polycyclic aromatic hydrocarbons and their effect on the environment. His publications have been cited by other researchers around the world.

According to Dr. Michael Janusa, chair of the Department of Chemistry and Biochemistry, "Not only is Dr. Onchoke conducting quality research, but he also is instilling in his students a passion for lifelong learning and discovery," he said. "Usually, professors are dedicated to either teaching or research, but Dr. Onchoke finds a way to do both effectively."

