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By: Dr. Kristy Kounovsky-Shafer

2019

Letter from the Department

In this past year, we have had two faculty members tenured (Drs. Allen Thomas and Kristy Kounovsky-Shafer), one faculty member was promoted to full professor (Dr. Hector Palencia), and we hired a new staff member (Karen Batchelder) to take over Jeramie Ellis's responsibility in the stockroom. (More information about Ms. Batchelder is on the 3rd page). Jeramie Ellis was moved to Instrument technician from Stockroom technician, so she could have more time to spend with upkeep of the instruments. In the 2018-2019 school year, our faculty and students were busy presenting at the regional American Chemical Society meeting in Ames, IA, Nebraska Academy of Sciences in Lincoln, NE, NIH IDeA Central Regional conference in Oklahoma City, OK, and National Conferences on Undergraduate Research (NCUR) in Atlanta, GA. Congratulations to the students and faculty that were accepted to present at these conferences! Additionally, our Chemistry Club received a Green Chemistry Award and commendable mention for annual activity from the American Chemical Society.

Don Fox Lecturers, Fall 2018

Dr. Kathleen McDonald, MD and Dr. Susan (McDonald) Fanta, MD



Dr. Kathleen McDonald (top left) received her B.S. degree in 1987 with a major in Chemistry and minor in Biology from Kearney State College. She went on to receive her Doctorate in Medicine at the University of Nebraska Medical Center in Omaha in 1991. She has been a practicing physician for 22 years in the Houston Area. Her current practice is in one of the largest ENT groups in the Houston area and she was the first Female ENT to join this prestigious group. Dr. Susan (McDonald) Fanta (bottom right) received her B.S. degree with majors in Biology and Chemistry from Kearney State College in 1989. She graduated from the University of Nebraska Medical Center in 1993 earning her medical degree with High Distinction. Since completing residency, she has practiced in the field of internal medicine in Yankton, South Dakota. She is actively involved in the teaching of medical students and



serves as a clinical assistant professor for the University of South Dakota Sanford School of Medicine. Drs. Fanta and McDonald engaged the audience and brought Chemistry to life with their passion about being medical doctors, while telling compelling stories about what they have seen while being in the medical profession. Thank you for coming back to UNK!

SAVE THE DATE: Tim Slocum (Dir. of Operations for Rieke Metals) will be our Don Fox speaker this year. Banquet: October 3, 2019 at 5:30 pm (by invite only, request ~\$20 meal tickets from dept.) Lecture: October 4, 2019 at 2:30 pm, COPH 131, open to the public, no charge.

Dr. Palencia was awarded \$142,356 for a Collaborative Initiative Grant entitled "Overcoming Antibiotic Resistance with Teixobactin Analogs." Congratulations!!!



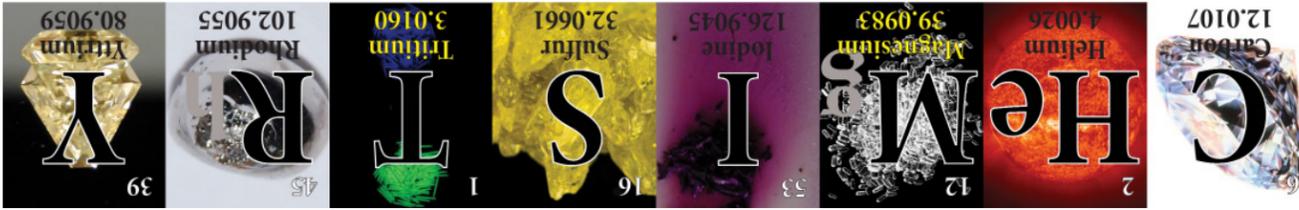
Dr. Palencia receives Collaborative Initiative Grant

Recognition of Our Graduates

Students listed have a Chemistry major or minor. Students that graduate with a Chemistry major have an asterisk (*).

Spring 2019

Ting Ding China	Andrew Fields Ord, NE	Kati Frankenberg* Grand Island, NE	Joshua Hart* Kearney, NE	Edgar, NE Clay Center, NE	Rachel Shackelford* Clay Center, NE
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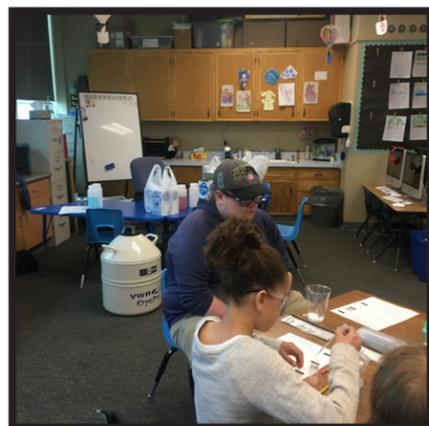
DEPARTMENT OF CHEMISTRY

University of Nebraska Kearney





Analytical Chemistry students interacting with local grade school children



Our Analytical Chemistry students helped students at Central Elementary perform science experiments. In Kindergarten, they used a cabbage indicator that changed colors with lemon juice and baking soda. In 1st grade, they wrote in their lab notebook and drew pictures about what happened when they would mix oil, water and soap. In 2nd grade, they made kinetic sand and learned about polymers and intermolecular interactions. The students also got to participate in another science experiment (or eat)...liquid nitrogen ice cream. Not sure which experiment was their favorite.

Meet a Graduating Senior Joshua Hart

Where are you from? I was born and raised in Kearney, Nebraska, in the same way that my father was.

What are you going to do after UNK? After UNK, I plan on attending medical school to specialize in cardiology, radiology, or rheumatology.

What is one of your favorite moments at UNK? One of my most memorable moments was when I worked with Dr. Palencia in his research lab for the first time. It was almost an epiphany; where I realized what it meant to be a true scientist.



Meet our newest Staff Member

Karen Batchelder

Where are you from? I was born in Austin, TX and my family has moved around a lot. (There was one school year that I went to three different schools.) Nebraska is one of 8 states that I have lived in and I have not moved outside of the continental US.

What are your favorite things to do when you are not in the lab? I like to ride my bike when it's not freezing outside. I am really into baking (even though I have a very tiny oven in my apartment, that is the only complaint I have against the place). I have started solving crossword puzzles as well. I also like to play with my cat, Felix.

What do you like about being a stockroom technician? Being able to help improve the teaching labs.

What is your favorite part about Chemistry? How involved it is in everyday life.



Seniors integrate inorganic, physical and instrumental into one lab - Advanced Chemistry lab

Students utilize active learning in our new Advanced Lab I that was introduced in Fall 2017. Advanced lab II followed in Spring 2018. These labs replaced Physical Chemistry lab I and II, Inorganic lab, and Instrumental lab. Students use and understand how each instrument works in an Instrumental boot camp, which is the first multi-week lab for each semester. For each subsequent lab, they use the same instrumentation that they used the boot camp. Some labs they only use a few instruments and other labs they use almost all of the instruments. This new lab allows students to incorporate fundamental methods and reasoning used in previous courses and it merges these concepts into our Advanced lab course.

This class was developed by Drs. Exstrom, Darveau, Kounovsky-Shafer, Moser, and Kegley-Owen. Drs. Darveau and Exstrom are the two instructors for Advanced Chemistry I and II labs. Every year they make small modifications to make the labs work a little more efficiently each year.

