WELCOME

New Online Masters Students for Fall 2019:
Karizma Acosta, MA; Christopher Alred, NE; Kelsey Arrington, TX; Carly Baanders-Wingate, MO; Pamela Baker, VA; Andy Batista, PA; Alyssa Berry, MO; Janelle Blake, OR; Elizabeth Brier, IN; Devin Brown, CA; Malcolm Campbell, NC; Calla Canaday, WY; Colleen Chipman, MA; Robert Cooper, TX; Chelsea Deuel, SC; Katherine Dickerson, WA; Alexander Dietrick, NV; Destini Faulk, GA; Chelsea Marie Garin, LA; Kilee Goff, CA; Alanna Gray, TX; Katherine Hamilton, UT; Hannah Hannah, VA; Shannon Harding, PA; Skyler Hensley, OK; Chantal Hernandez, IL; Sarah Holifield, TX; Kyndal Holmes, NE; Roy Holmes, IA; Kesha Hudson, OK; Cierra Johnson, CO; Andrea King, TN; Allan Klutz, FL; Jamiel Kong, Jamaica; Megan Little, KY; Nichole Lowery, IL; Brian Maronde, NE; Michael McPartlin, IL; Delaney Miller, IN; Thomas Murray, OK; Tess Peterman, NM; Daniel Podjenski, NE; Angela Priestley, IL; Elizabeth Quinn, IL; Alyssa Scarpulla, NJ; Rodriguez Sharpe, AL; Aneshia Tolliver, CA; Stephanie Tran, TX; Meghan Twohig, CO; Morgan Weitzel, NE

NEWSFEED

A Biology Professor's research was highlighted by the University of Nebraska Kearney news this summer. Below is an excerpt from the article on Dr. Joe Dolence, Assistant Professor in the Department of Biology, entitled “UNK researcher Joe Dolence looking for better ways to treat peanut allergy”. For the full article click on the link: http://unknews.unk.edu/2019/05/30/unk-researcher-dolence-looking-for-better-ways-to-treat-peanut-allergy/
Joe Dolence, an assistant professor of biology at UNK, is studying peanut allergy with hopes of developing a better treatment strategy for the health issue. (Photo by Corbey R. Dorsey, UNK Communications)

By TYLER ELLYSON
UNK Communications

KEARNEY – Food allergies affect more than 4 million U.S. children, according to the Centers for Disease Control and Prevention, with peanuts ranking high on the list of culprits.

There is no cure for this growing public health concern, which can have life-threatening consequences.

“I hear too many stories of kids who accidentally ingest a certain food, and they die from it,” said Joe Dolence, an assistant professor of biology at the University of Nebraska at Kearney. “We need to develop better ways to treat this.”

According to the CDC, the prevalence of food allergies among children increased by more than 50% from 1997 to 2017 – impacting 6% of Americans younger than 18 – with foods representing the most common cause of anaphylaxis in children and adolescents.

Dolence, a Minnesota native who spent a decade as a doctoral student and researcher at the Mayo Clinic before joining UNK in 2018, knows what it’s like to be the parent who must constantly scrutinize what his child, and others around him, are eating. His 10-year-old son Charlie remains allergic to peanuts and tree nuts, and previously had positive reactions to soy, wheat and dairy.

“I’ve experienced firsthand having to deal with this landmine of allergens,” Dolence said.
A food allergy occurs when the body's immune system mistakenly attacks typically harmless proteins and creates antibodies to the food. When these antibodies bind the food allergen, the resulting reaction can be severe, especially with peanut allergy, which causes anaphylaxis more frequently than other foods. Once anaphylaxis begins, the only effective treatment is epinephrine, the medication found in an EpiPen.

“We know a lot about what happens at the end of an allergic reaction,” Dolence said. “But we don’t know a lot about the immunological mechanisms that start a peanut allergy.”

Dolence is working to solve this mystery at his lab inside UNK’s Bruner Hall of Science.

His research focuses on the body’s response immediately after peanut particles are introduced through inhalation, which can cause an allergic reaction along with ingestion and skin and eye contact.

“When we get exposed to pathogens, whether that’s a virus, bacteria or allergen, there’s a group of cells in the immune system called antigen-presenting cells that capture the pathogen and present it to T cells in the lymph node,” Dolence said. “We don’t have a great understanding of the population of antigen-presenting cells that get activated in peanut allergy.”

Using mice, Dolence is studying the immune cells that respond to peanut particles and eventually trigger an allergic reaction. The study builds upon research published last year in the Journal of Allergy and Clinical Immunology that shows mice can develop a peanut allergy when exposed to particles through inhalation, and identified the specific T cells and pathway involved in this reaction. Dolence completed that study with researchers from the Mayo Clinic and Indiana University School of Medicine.

The ultimate goal, Dolence said, is to translate his findings to human benefits by developing a treatment strategy that can better address peanut allergy, which is typically a lifelong affliction.

Currently, treatments such as oral immunotherapy – exposure to peanuts in small doses with hopes of developing a tolerance – are being studied in clinical trials, but nothing has been approved for general use.

“To develop new treatments and new therapies, we need this information because it gives us new targets to go after when thinking about ways to minimize the burden of peanut allergy,” said Dolence, who will add two undergraduate students to his research project this fall.
CONGRATULATIONS

July 2019 Graduates:

Sara Adair, Kristoff Berzins, Lynda Carlson, April Crous, Julie Frazier, Alexandria Hogye, Narinedat Madramootoo, Sarah Morrison, Brandon Novatko, Zane Peters, Jourdan Ringenberg (Thesis), Matthew Schomaker, Jamie Score, Anthony Selting

One graduate was able to make the journey to Kearney for the UNK Summer Commencement ceremony on July 26th held in the Health and Sports Center. Lynda Carlson and her husband, along with Biology faculty and staff, attended the Department breakfast held before the ceremony.

(pictured left, from left to right: Dr. Paul Twigg, Professor and Graduate Program Chair; Lynda Carlson; and Dr. Julie Shaffer, Professor and Biology Department Chair)

(pictured right: Lynda Carlson receives her diploma from Dr. Mark Ellis, Dean of Graduate Studies and Research, onstage at summer commencement ceremony)

Photo by Corbey R. Dorsey, UNK Communications
Publications, Meetings, Grants

Grants


Meetings


Publications


Continue to send us updates on any meetings, publications, grants, or awards that you have been involved with. Please email details to msbiology@unk.edu.

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**Director’s Desk from Dr. Letty Reichart & Dr. Austin Nuxoll**

Greetings from the Director’s Desk, I hope you all had a great summer and were able to incorporate some summer adventures in your schedule! Excitement and anticipation for the new school year is in full swing. Our biology faculty are looking forward to working with both new and returning students in our master’s program and I’m sure many of you are eager to get started. In addition to the excitement of a new school year, we are excited to announce a new director of the online program, Dr. Austin Nuxoll, who will take over this fall. Many of you have likely had Dr. Nuxoll for one or multiple classes in our online program and will agree he is an excellent fit as our new director!

In addition to our new director this semester, I would also like to introduce the newest faculty member in our department, Dr. Gregory Pec. Dr. Pec will begin his first semester this fall and you can be sure to see some great new graduate courses from him in the near future.

Finally, we recently welcomed the inaugural Dean of the new College of Arts and Science, Dr. Ryan Teten. Dean Teten appointed Dr. Paul Twigg, Dept. of Biology, as the new Associate Dean for the College of Arts and Sciences and we are proud to have Dr. Twigg serve in this role. There will likely continue to be new roles and collaborations as faculty navigate our new college.

We look forward to an exciting fall semester and to some new online course offerings in Spring 2020. As
always, for any of our course offerings each semester, I encourage you to visit the following webpage, where you can view course syllabi for all of our online course offerings, it’s just a click away, www.unk.edu/academics/msbio/Course_Descriptions.php

As always, Brian and Robyn are here to help you in any way they can, so don’t be afraid to contact them. Sending you all good wishes for a successful semester! ---Dr. Letty Reichart

Hello everyone! My name is Dr. Austin Nuxoll and I am serving as the Director of the MS Biology Online Program as of this fall semester. I wanted to take the opportunity to briefly introduce myself. I grew up in a small town located in central Nebraska and attended UNK for my undergraduate degree. I completed my PhD at the University of Nebraska Medical Center in pathology and microbiology. I continued my training in microbiology at the Antimicrobial Discovery Center at Northeastern University in Boston, MA. I am entering my fourth year at UNK and my research focus is antibiotic tolerance in *Staphylococcus aureus*. We also investigate how a subpopulation of bacteria are better able to tolerate the immune system in addition to antibiotics. I have taught in our online program since I began at UNK in 2016. My online courses include Infectious Diseases, Current Issues in Biology, Virology, and Issues in Bioethics. Outside of teaching and research I enjoy spending time with my three children, Liam (6 years old), Cora (2 years old), and Parker (9 months). I am excited to serve as the new online director and do not hesitate to contact me if you have any questions or concerns. You can reach me by email at nuxollas@unk.edu or call me at 308-865-8602. As we are getting classes underway, I hope everyone has a great semester!

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**Student News**

Tammy Blobaum (July 2011 graduate) was selected in 2013 as a Nebraska Space Ambassador and has served the past 6 years. The Nebraska Space Ambassadors program is funded by Nebraska Space Grant in order to bring NASA education materials and training to Nebraska educators. They receive aerospace education training from NASA Education centers from across the country. The ambassador team is comprised of 15 classroom teachers from across Nebraska. She recently presented at the Space Port Area Conference for Educators (SPACE) at Kennedy Space Center in Florida. She also was selected as Science Department Head at Nebraska City Public Schools where she will begin her 14th year of teaching this fall. (pictured above, second from the left in back row)

Lindsey Bowen (August 2014 graduate) recently accepted a position as the Plant Quality Assurance Manager for Niagara Bottling at their Mooresville, North Carolina plant. It is one of the largest plants in the company with 4 water bottling lines and 1 carbonated beverage line.
Jacqueline Clifford (December 2017 graduate) recently accepted a full time Biology Instructor position at Metropolitan Community College in Omaha. She will be teaching General Biology and Microbiology this fall quarter.

Jason Genise-Gdula (current distance student) received a Teacher Recognition Award back in May at York Catholic High School in York, Pennsylvania. The award is sponsored by the Lesher family. (pictured left)

John Higley (May 2016 graduate) founded a company EQO, as a follow on to the research project he did while getting his Master's through the distance program. The company is working with aquatic invasive species in Texas. PBS recently did a piece on his work and company: [https://video.klru.tv/video/screening-austins-water-supply-kimugm/](https://video.klru.tv/video/screening-austins-water-supply-kimugm/).

Leslie Kuiper (May 2018 graduate) will be starting a PhD program at Western Michigan University in the fall.

Melissa Paquin (May 2016 graduate) is enrolled in the Healthcare Genetics program at Clemson University. She recently completed her comprehensive exams and received a Doctoral Dissertation Completion Grant for the spring semester.

Please let us know what is going on in your lives; email us your news at msbiology@unk.edu.

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**Faculty News**

Dr. Surabhi Chandra and her husband, Dr. Mahesh Pattabiraman, Associate Professor Department of Chemistry; welcomed their daughter on June 29. Rhiya Gayatri Mahesh weighed 6lbs 14oz and was 20 inches long. Big brother, Ritvik, adores her and is so excited to have a new baby sister. (pictured right)
During a personal trip to Pennsylvania this July, Dr. Letty Reichart, met up with her online research student Jacalyn Speicher. Jackie is completing her research project this fall semester on the reproductive behavior in Gray Catbirds. (pictured left)

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Meet a Distance Graduate
Michael Myers

I am honored to be one of UNK’s first Master of Science in Biology graduates (December 2005). The degree helped me attain my goal for qualifying as an Embryology Laboratory Director. I direct the lab at the Fertility Wellness Institute in West Chester, Ohio. I have been an Embryologist for over 20 years helping couples achieve their goal of having a child. Amongst many of my research interests in the field of reproductive biology I became particularly interested in cryobiology. This interest spawned my fledgling business, Cryogenics Safety Solutions (CSS). We provide safety training and safety products for those scientists and other personnel using liquid nitrogen. We will soon have an online cryogen safety course in which a participant has the ability to attain a certificate of achievement after passing an online exam. I believe the University of Nebraska at Kearney’s Masters of Science Online program helped me continue and grow as a scientist.

Michael F Myers, MS ELD (ABB)
Cryogenics Safety Solutions
**Fall 2019 Deadlines:**
August 26th—Fall classes begin
August 30th—Last day to add/drop class on MyBlue with no penalty
September 2nd—Labor Day break, all classes dismissed and UNK offices closed
September 5th—E-bill notifications sent to Lopermail account
September 15th—Last day to apply for December graduation
September 26th—Tuition & Fees due in full
October 21st-22nd—Fall break, all classes dismissed
October 25th—Last day to drop a course on MyBlue (no refund at this time)
October 28th—Early Registration for Spring 2020 classes begins for all currently enrolled students
November 15th—Comprehensive Exams (for graduating students) are due to the Biology Dept
November 18th—General Registration for Spring 2020 classes begins for all admitted students
November 27th—29th—Thanksgiving break, all classes dismissed
December 1st—Spring 2020 graduation application opens on MyBlue
December 16th–19th—Finals Week
December 20th—Commencement ceremony at 10:00 am in the Health and Sports Center
December 24th—Deadline for faculty to submit final grades for fall classes
December 23rd–January 1st—University Offices closed for the holidays
January 2nd—UNK offices open
January 13th—Spring 2020 classes begin

**Students planning to graduate this December 2019 must apply for graduation on MyBlue.** Even if you do not plan to attend ceremony you must apply in order to receive your degree. The deadline to apply for December graduation is **September 15th**. There is a $25 application fee which can be paid online during the application process. Commencement ceremony will take place at 10:00 am on December 20th in the Health and Sports Center. Please consider making the trip to Kearney to walk in graduation and if you do, please let the Biology Department know so we can plan some special events for you.