



April, 2020

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Rolston St. Hilaire
Department Head

Introduction

Earlier this year, a number of our horticulture students received awards from the American Society for Horticultural Sciences. One of our faculty chaperoned a group of eight women from NMSU to Cairo, Egypt on an Aggies Go Global trip. Dr. April Ulerly travelled to Washington where she met delegates of New Mexico's representatives to Congress.

You will notice a report on the outcomes of the Partnership for the Advancement of Cancer Research, a federally-funded collaboration between NMSU and the Fred Hutchinson Cancer Research Center; this partnership was stewarded by a former faculty member. The data revealed that the program has positively influenced our students and trained many students who have transitioned to biomedical careers.

Considering influences, the times we are experiencing has shaped how we deliver our teaching programs, conduct our research, and serve our students, faculty, and staff. I thank our staff, students, and faculty for quickly pivoting to new ways of doing the department's work. Our graduating students are truly grateful for the dedication of our departmental personnel.

In speaking of transitions, our graduating students will be moving into a world that will be very different from when they started at NMSU. Our group of graduating students is talented and resilient, and I am sure they will do well. For a photo tribute to our graduating class, please see page 4 of this newsletter.

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Professor's Congressional Visit



Professor April Ulery participated in Congressional Visit Days in Washington DC to advocate for increased funding for agricultural research as a representative of the Soil Science Society of America. She visited Congresswoman Xochitl Torres Small's office as well as the offices of Senators Udall and Heinrich.



Dr. Ulery and her team visiting with Jake Jackson, a staffer in Torres Small's House of Representative office

Rajan Ghimire Interview: Cover crops can benefit hot, dry soils

"The Southern High Plains of the United States have low annual rainfall. When it does rain, though, intense storms can cause severe soil erosion. Strong winds also strip away valuable topsoil.

Enter cover crops.

Usually grown during seasons when primary crops aren't cultivated, cover crops can include legumes such as pea and hairy vetch, or grassy crops like oats and barley.

Cover crops do more than just cover fields between growing seasons. They help soils retain rainwater and reduce erosion from wind and water.

In a new study, researchers from New Mexico State University and the United States Department of Agriculture show that cover crops can increase soil health in a semi-arid region of New Mexico.

For complete story, go to:

<https://www.agronomy.org/news/cover-crops-can-benefit-hot-dry-soils>



Rajan Ghimire (Right) demonstrating in-field CO₂, soil moisture, temperature monitoring system to a graduate student, Vesh Thapa (left). Credit: Sangu Angadi



ACES / Aggies Go Global trip to Egypt

A group of 8 women from NMSU traveled to Cairo, Egypt on a Aggies Go Global trip. The group included 3 undergraduates (Cheyenne Stice, Kiara Holloway and Melissa Grijalva Hernandez), 2 graduate students (Ana Garcia Vasquez and Ana Garcia Escalante) and 1 PhD candidate (Alisha Murphy) as well as two chaperons from ACES, Yesenia Palma-Dominguez and Rachel Gioannini.

On our first day, we were toured around the Desert Research Center by former PhD student, Dr. Ashraf El Sadek. The DRC faculty and students gave us a presentation about their many research projects and we talked with them about research and programs at the College of ACES. We were then shown around their labs and learned about the research they're doing into desalinization plants.

The next two days were filled attending the Women Economic Forum (WEF) which including over 800 attendees from 75 countries. All of the NMSU delegation gave talks and were presented with awards from the organization. We were also so happy to record a short video with the founder of the WEF, Dr. Harbeen Arora. We met delegates from many different countries and heard many inspiring speeches. The last day of the conference we attended a Gala Dinner at the Mena House, a very famous, historic hotel in Giza. The location was absolutely amazing, with the pyramids looming over the hotel in the night sky. The pyramids were lit up for part of the evening and it was absolutely magical.

Friday and Saturday, we toured various sites around Cairo. On Friday, we visited the Mosque of Muhammad Ali, also known as the Alabaster Mosque, which was completed in 1848. We then spent some time in the famous Khan el-Khalili street bazaar, bartering with local vendors and eating koshari, a delicious dish of lentils, pasta, garbanzos and tasty tomato sauce. After that, we toured the Mosque of Ibn Tulun, which was completed in the year 879! Saturday was even more amazing with time spent at the Great Pyramids of Giza, including a short camel ride! We were allowed inside on pyramid and also saw the Sphinx. In the afternoon, we went to the Pyramid of Djoser, also known as the step pyramid. This one was constructed in the 3rd Dynasty, 2670-2650 BC. Our day ended with a visit the Egyptian Museum where we saw mummies and sarcophagus and many amazing relics.

It was a truly memorable trip that all of us will remember forever. Thank you to Aggies Go Global, Dean Flores, Dr. Manoj Shukla, the College of ACES and Abby Nayra for the support!

Aggies Go Global website: <https://aces.nmsu.edu/aggiesgoglobal/>

Graduating Class of Spring 2020! Congratulations Aggies!



Congratulations to the graduating class of Spring 2020! These fantastic students have excelled and prevailed through the troubling times of COVID-19, and have proven themselves capable to accomplish anything. Good luck on all of your future endeavors. Go Aggies!

Pictured:

Top Row (Left to Right): Kiri Alexandria Baca, Francisco Tenorio Chacon III, Rawan Ahmed Elaksher, Taylor Nicole Hartshorne, Alexandra Heller.

Middle Row (Left to Right): Stephen Loren Henderson, Christina M. Hower, Autumn Johns, Mohammed Faraj Nasor Omer, Kaavya Polisetti.

Bottom Row (Left to Right): Jackson Michael Powers, Sk. Musfiq-Us- Salehin, Jagdeep Singh, Cheyenne Faith Stice, Krystal A. Vargas.

Not Pictured: William K. Bosland, Jason Robert Fehner, Josue Gutierrez, Jose Eduardo Hackleen Parra, Triston N. Hooks, Calen M. McKenzie, Randall W. Montgomery, Emilio Daniel Palacios.

...and the award goes to:



American Society for Horticultural Sciences

Rachel Herrington was nominated by the PES Department and was later recognized by the American Society for Horticultural Sciences (ASHS) to receive the 2020 Outstanding Undergraduate Horticulture Student Award for 2020. Herrington was an ASHS Outstanding Undergraduate Horticulture Student in both 2019 and 2020.

For complete story, go to:

<https://ashs.org/general/custom.asp?page=OutstandingUndergradAwardWinners>.



2020 ASHS Collegiate Scholars: Students, Amelia L. Crossley, Leonel A. Fournier, Adam L. Hopper, Alba Octavia Sundance Lucker, Christina Perez, and Skyler D. Stinson were given this national recognition. This award honors the academic achievements of junior and senior undergraduates from departments of horticulture, or plant and crop science, who are majoring in horticulture. Students must be in the top 15% of their class, based on academic standing. For complete story, go to:

<https://ashs.org/general/custom.asp?page=CollegiateScholarsAwardWinners>.

ACES Competitive Award Program:



Dr. Christopher Cramer

2019-2020 Graduate Research Assistantships Awarded to Christopher Cramer for his [Identification of steroidal saponins as a potential biochemical marker for Fusarium basal rot resistance screening of onions](#), and Rajan Ghimire for his [Novel Approach to Quantify Nitrogen Mineralization and Nitrous Oxide Emissions in Semiarid Cropping Systems](#).

2019-2021 Two-year Proposals Awarded to Ivette Guzman for her [Characterizing Hemp Nutraceuticals During in vitro Human Gut Digestion](#), and Kenneth Carroll for his [Sampling & Analysis to Address Per- & Polyfluoroalkyl Contaminants at NM Dairies](#).



Dr. Rajan Ghimire



Dr. Ivette Guzman



Dr. Kenneth Carroll

BE BOLD. Shape the Future. New Mexico State University

NMSU, Fred Hutch Partnership Publishes Data on 15 Years of Student Tracking

Since 2002, the Partnership for the Advancement of Cancer Research (PACR), a federally-funded collaboration between New Mexico State University and the Fred Hutchinson Cancer Research Center, has made underrepresented student success one of its utmost priorities.

In a recent publication in PLOS ONE, the partnership (housed in Plant and Environmental Sciences) details how the training program helped advance the research careers of students at NMSU.

The partnership, formerly directed by PES Emeritus Regents Professor Mary O'Connell and now lead by Biology Regents Professor Graciela A. Unguez, is funded through the National Cancer Institute's Partnerships to Advance Cancer Health Equity (PACHE) program.

A primary objective of the PACHE program is to increase the diversity of scientists in cancer research.

To that end, PACR developed a long-term tracking system to document the achievements of undergraduate and graduate students participating in partnership-sponsored programming.

Over the course of 15 years, students taking part in PACR-supported internships, research projects, workshops and field experiences were sent annual surveys to report on their academic and career progression.

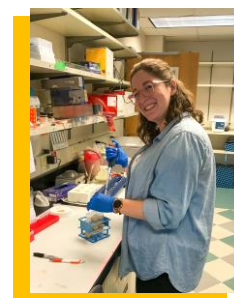
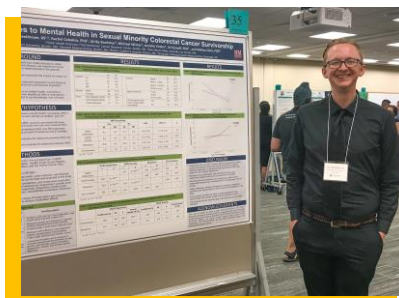
Some of the key takeaways from the data include:

Students participating in the program's summer internships or research projects have high degree completion rates for both undergraduate and graduate students.

As of Spring 2018, 47 former participants completed dissertations, with 96 percent earning doctoral degrees in biomedical disciplines; 170 past participants identified as employed; close to 80 percent were employed in careers in biomedical science or related fields, and 16 past participants are in faculty positions.

Additionally, the results from tracking students revealed that past trainees who are currently in independent roles have begun to mentor and train diverse students: speaking to the impact that PACR had on impressing the importance of including underrepresented individuals in the biomedical pipeline.

The full article can be read at <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0225894>. To learn more about the Partnership for the Advancement of Cancer Research, visit cancer.nmsu.edu.



- Nine New Mexico State University students were selected to take part in an immersive nine-week internship at the Fred Hutchinson Cancer Research Center in Seattle. The students include: (back row from left) Isabella Terrazas, Troy Weeldreyer, Katrina Keding, Juan Carlos Padilla, Rhiana Thomas, Claudia Rice, (front row from left) Izak Rubio, Nicole Mandall and Adriana Hernandez. (Courtesy photo)

The College of Agricultural, Consumer and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research, and Extension programs.