



RIED QUARTERLY:

A digital newsletter from the Division of Research, Innovation and Economic Development

September 2022

Dear Colleagues,

It's hard to believe that we're almost a month into a new semester. It's even more difficult to realize that the Division of Research, Innovation and Economic Development is in its second year!

Thanks to your commitment to life-changing discovery, we began the year with the elevated designation of *Doctoral Universities: High Research Activity* by the Carnegie Classification of Institutions of Higher Education. That and our recent acceptance into the prestigious Association of Public and Land-grant Universities reflect our rise as a first-choice university destination.

Over the past 19 months the division has initiated new approaches to strengthen our research enterprise and reduce the administrative burden associated with proposal submission. In fiscal year 22, RIED administered 41 projects and supported 100 students and 67 faculty through PERS (President's Excellence in Research Scholars), setting a record for internal funding (\$948,447).

We consolidated pre- and post- award services to speed proposal submission, conducted training workshops in grant writing, and funded writing retreats and individual faculty proposal development. A dozen faculty members have secured \$3.4 million in research funding since April.

RIED contributed more than \$150,000.00 to match the cost of research equipment purchased by academic colleges, stimulating interdisciplinary discovery. The funding supports collaborative faculty research in the College of Agriculture and Natural Resources, College of Business, College of Liberal and Fine Arts, College of Health Sciences, College of Science and Mathematics and the Mayfield College of Engineering.

RIED collaborated with the College of Science and Mathematics to create a new research-based academic degree in biotechnology. It will provide opportunities for nationally acclaimed



undergraduate research, enhance student success in STEM education, fortify our talent pipeline and foster industry partnerships.

We continue to partner with industry and area chambers of commerce and development councils to support knowledge-based economic development. A new MOU with Tech FW will help our students gain real world experience and help foster an entrepreneurial mindset. Link to the press release.

<https://web.tarleton.edu/news/tarleton-division-of-research-signs-mou-with-tech-fort-worth/>

A new website helps tell our story and offers resources to faculty. Funding opportunities are emailed every other week, and a new Research Council (with all Tarleton colleges represented) ensures a platform to take Tarleton research to the next level.

RIED has been busy. You've been busy. It's a good busy, and the results speak for themselves.

My best wishes for a successful semester.

Dr. Rupa Iyer

Vice President for Division of Research, Innovation and Economic Development



Highlights in this Issue

- Summer 2022 President's Excellence in Research Scholars
- Faculty Spotlight
- Workshops Overview
- New Funding Update
- Grant Proposal Data
- Upcoming Training (Maestro, NSF, etc.)

2022 President's Excellence in Research Scholars (PERS)

The summer 2022 PERS funding cycle began in June. Approximately \$948,448 in funding for 41 student-led research projects supporting 100 students and 68 faculty.

| College | # of proposals | Amount awarded |
|---------|----------------|----------------|
| COANR | 9 | \$ 238,264.03 |
| COB | 2 | \$ 25,971.63 |
| COE | 3 | \$ 73,452.24 |
| COST | 16 | \$ 407,340.12 |
| CHSHS | 7 | \$ 123,011.83 |
| COLFA | 4 | \$ 80,407.72 |

Faculty Spotlight: *Shining a Light on Research Interests of Our Faculty*



Name: Dr. Adam Mitchell

College/Department: College of Agricultural and Natural Resources, Department of Wildlife and Natural Resources

What is your role at Tarleton State University and how long have you worked here? I am an Assistant Professor of Entomology and have worked in the WNRS Department since January 2019.



What is your research interest and how did it come about? I explore how anthropogenic (human-induced) disturbances like biological invasions, climate change, change in land use and urbanization impact arthropods (insects, spiders and related invertebrates) and the services they provide, as well as methods to restore those lost services. I had very little interest in arthropods until I took an undergraduate course in entomology with an enthusiastic professor (Dr. Dewey Caron, University of Delaware) who helped me understand the importance of insects in the ecosystem, something I hope to emulate in my classes at Tarleton.

Did you receive any research-related advice from a mentor that really resonated with you? What was that advice? My MS Chair (Dr. Andrea Litt, Montana State) best prepared me for adversity in research when my first field session was impacted by a severe drought and our original thesis project had to be scrapped. Nothing ever goes according to plan in a field experiment. We cannot control the weather or the land, just ourselves. “We observe, we learn, we advance.” With that mentality, we were able to refocus our study on how drought and plant invasion simultaneously impact native arthropod and plant communities.

What research are you currently engaged in? I am involved in several projects broadly investigating changes in land-use conservation and insects and their associated organisms, largely through my graduate and undergraduate student researchers. This includes investigations into water-efficient plants in urban landscapes; assessing macroinvertebrate community structure as a food resource in the Guadalupe River for Cagle’s map turtles (*Graptemys caglei*); performance of drought-tolerant landscape plants for pollinator use in urban environments; monitoring biodiversity of arthropods in agroecosystems at local scales; assessing grass pollen as a supplemental feed for native pollinators and honey bees; assessing roadside vegetation as habitat for native pollinators; and using environmental DNA to monitor presence and distribution of the American bumblebee (*Bombus pensylvanicus*) and monarch butterfly (*Danaus plexippus*). Outside of my student research, I work with citizen science data on insect, vegetation and bird surveys in public and private properties in Texas and New York.

Describe an externally funded project that you have led or participated in, if any, and what you learned or discovered from that experience. My first major project at Tarleton has been the development of Plant DRIPS (Drought Response and Insect Pollinator Studies), a collaboration with Texas A&M-Commerce to evaluate the potential of landscape plants that provide pollen and nectar to pollinators during periods of drought stress. The project has led to establishing several garden plots at the Tarleton Agriculture Center that will enable long-term research, education and outreach regarding pollinator ecology and insect-plant interactions. As an early-career professional, this project has been an eye-opener on how to effectively manage a faculty-led, student-driven project and promote opportunities to adapt to new challenges (a drought during a drought study! how convenient!) and on



how to develop practical skills (having a green thumb and familiarity with tractors is a plus) to complement an academic tool set. This project is ongoing, and we are finding more questions than answers. We hope our findings will provide guidance for developing pollinator-friendly and water-efficient resources for private landowners in North Central Texas.

What advice do you have for new researchers? I have had the honor to work alongside brilliant and innovative researchers in my department, and also with researchers across Tarleton, the A&M System, other institutions, state and federal agencies and NGOs. I cannot stress enough how important collaboration and networking are. Don't be afraid to approach a researcher outside your department, college or university who you believe might be a good fit for a grant or project. Get out of your comfort zone at a conference, send an introductory email to a new faculty member, meet with professionals outside the university. To quote Wayne Gretzky: "You miss 100% of the shots you don't take."

Overview of Workshops:

RIED has provided the following training workshops this year.

| HOST | Workshop Description | Attendees |
|-------------------------|--------------------------------|-----------|
| COSM/RIED | Grant Development | 30 |
| CEE/New Faculty Academy | Grant Writing Basics | 16 |
| Dr. Muir/RIED | SSARE Application for Students | 20 |
| Dr. Shao/COB | Grant Writing Basics | 15 |

Congratulations to the following PI's (from April 2022 to present):

| <i>Faculty</i> | <i>Amount</i> | <i>Agency</i> |
|-----------------|---------------|--------------------------|
| Jesse Meik | 2,000.00 | Brigham Young University |
| Hennen Cummings | 298,262.00 | USDA-NIFA |
| Stuart Weiss | 4,107.00 | Texas A&M AgriLife |
| Adam Mitchell | 749,923.00 | USDA-NIFA |



| | | |
|-------------------|--------------|---|
| Rajani Srinivasan | 28,860.00 | High Plains Water District |
| Trina Geye | 11,449.00 | Simon Foundation |
| Subi Gandhi | 158,400.00 | Texas A&M University Health Science Center |
| Jimmy Millican | 35,509.00 | Texas Commission on Environmental Quality |
| Amy James | 1,281,768.20 | Dept. of Family & Protective Services— Title IV-E |
| Jennifer Watts | 473,772.00 | Department of Education |
| Heather Mathewson | 329,961.00 | Palo Pinto County Municipal Water District |

Grant Proposal Submissions by College (from May 2021-current)

| College | # Submitted | # Awarded | Amount Awarded |
|----------------------|-------------|-----------|-----------------|
| COANR | 48 | 13 | \$ 1,844,723.70 |
| COBA | 1 | 0 | - |
| COE | 13 | 4 | \$ 309,792.50 |
| COST | 36 | 7 | \$ 323,285.00 |
| CHSHS | 15 | 4 | \$ 1,168,118.00 |
| COLFA | 18 | 4 | \$ 2,178,128.75 |
| TIAER | 15 | 12 | \$ 1,587,556.09 |
| Academic Affairs | 7 | 1 | \$ 50,000.00 |
| Division of Research | 4 | 1 | \$ 1,412,944.00 |
| TOTAL | 158 | 46 | \$ 8,874,548.04 |

RIED Contact Info:

The RIED staff is located on the first floor of Ferguson Hall.

Compliance: Alex Plucker – ext. 9927 Elaine Smith – ext. 5590
Pre-award: Chelsae Hay – ext. 5439
Post-award: Becky Wood – ext. 1927 Nelly DiCiccio – ext. 1923



Mark Your Calendar



Please note that every other Wednesday, RIED sends out an email, “Inside Research and Funding Opportunities,” to highlight upcoming possibilities as well as recognize faculty who have been awarded external funding. Let us know if we can help with any of the listed opportunities.



Learn how to use Maestro’s Researcher Portal for your grant proposals and awards. Go [here](#) for the next Zoom training dates.

