Jacey Pridgen | BSA Biology Honors

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Professional profile

I have gained valuable experience as an undergraduate research assistant in the Dalby Lab and have gained a particular wealth of experience and skills in biochemical and cellular biology laboratory techniques. I will graduate in May 2020 from the University of Texas at Austin with a BSA degree in Honors Biology with Evidence and Inquiry and Pre-Health Professions for Science Majors certificates.

My important achievements have been presenting scientific posters for the Dalby Lab at various conferences; proposing, designing, and implementing an individual research project which culminated in a poster presentation during a summer research program; and recruiting and training my replacement for when I graduate the Dalby Lab.

Education

- **University of Texas at Austin –** from August 2017-May 2020
  - **GPA: 3.91**
  - **2020 MCAT: 517 (96th percentile)**
  - **Honors Biology –** Bachelor of Science and Arts
    - *Evidence and Inquiry Certificate*
      - 22-hour certificate in which I designed my own field of study, "Health Practitioner and Patient Communication." During my third year, I will write an Honors Senior Thesis relating to the portrayal of clinical trials in popular media and how that portrayal impacts patient perception
    - *Pre-Health Professions for Science Majors Certificate*
      - 18-hour certificate intended for students interested in the health professions. This certificate helps to ensure I would be fully prepared for a future in medicine

Placements and projects

November 2017—June 2020 **Undergraduate Research Assistant in the Dalby Lab**

Outline
I assisted in several projects working under the most senior member in the lab using biochemical and cellular biology techniques

Key responsibilities
- Making SDS-PAGE gels, preparing protein samples, and loading and running SDS-PAGE gels
- Blotting western blots as well as analyzing blot results
- Culturing, treating, and lysing mammalian cells
- Maintaining a sterile environment while completing cultured cell experiments
- Recruits and trains replacement as well as assists in the training of graduate students

Key achievements

- Publications

  Kaoud, T., Johnson, W., Ebelt, N., Piserchio, A., Zamora-Olivares, D., Ravenstein, S., **Jacey Pridgen**, Edupuganti, R, Sammons, R., Cano, M., Warthaka, M., Harger, M., Tavares, C., Park, J., Radwan, M., Ren, P., Anslyn, E., Tsai, K., Ghose, R., Dalby, K. "Modulating multi-functional ERK complexes by covalent targeting of a recruitment site in vivo." *Nature Communications* [In press]. 2019

  Zamora-Olivares, D., Kaoud, T. S., Zeng, L., **Pridgen, J. R.,** Zhung, D.L., Ekpo, Y. E., Nye, J. R., Telles, M., Anslyn, E. V., Dalby, K. N. "Quantification of ERK kinase activity in biological samples using differential sensing" *ACS Chemical Biology* [In press]. 2019

- Poster Presentations

  Tamer S. Kaoud, William H. Johnson, Nancy D Ebelt, Andrea Piserchio, **Jacey R. Pridgen**, Diana Zamora-Olivares, Sabrina Van Ravenstein, Ramakrishna Edupuganti, Rachel Sammons, Micael Cano, Mangalika Warthaka, Pengyu Ren, Eric V. Anslyn, Kenneth Y Tsai, Ranajeet Ghose and Kevin N. Dalby, Targeting multi-functional ERK-protein complexes in vivo, **LiveStrong Cancer Institute Basic and Translational Research Retreat**, November 27th, 2018, LiveStrong Cancer Institute, Dell Medical School, University of Texas at Austin

  Tamer S. Kaoud, **Jacey Pridgen**, Nancy D Ebelt, Jaeeun Go, Andrew Chen, Sabrina Van Ravenstein, Carla Van Den Berg, Austen F. Riggs, and Kevin N. Dalby, Regulation Of Jnk2 Activation By Self-Assocuiation, **University of Texas Longhorn Undergraduate Research Symposium**, April 17th, 2019, The University of Texas at Austin, Austin, Texas

  Tamer S. Kaoud, **Jacey Pridgen**, Sabrina Van Ravenstein and Kevin N. Dalby, Investigating Proximity-Mediated Catalysis by a Protein Kinase: How Docking Affects MAPK Specificity and Processivity, **The 15th Annual "Louis C. Littlefield Celebrating Pharmacy Research Excellence" event**, April 17th, 2019, College of Pharmacy, The University of Texas at Austin, Austin, Texas

  Diana Zamora-Olivares, **Jacey R. Pridgen**, Lingyu Zeng, Tamer S. Kaoud, Eric V. Anslyn, and Kevin N. Dalby, Quantification of ERK kinase activity in biological samples using differential sensing, **LiveStrong Cancer Institute Basic and Translational Research Retreat**, November 19th, 2019, LiveStrong Cancer Institute, Dell Medical School, University of Texas at Austin

  Tamer S. Kaoud, **Jacey R. Pridgen**, Nancy D. Ebelt, Sabrina Van Raverstein, Lili Du, Kenneth Y Tsai, and Kevin N. Dalby, Down Regulation of the MKK4/JNK2 Axis in NSCLC Suppresses Tumor Growth and Metastasis, **16th Annual "Louis C. Littlefield Celebrating Pharmacy Research Excellence" event,** April 15th, 2020 [Virtual], College of Pharmacy, The University of Texas at Austin, Austin, Texas

  Diana Zamora-Olivares, **Jacey R. Pridgen**, Lingyu Zeng, Tamer S. Kaoud, Eric V. Anslyn and Kevin N. Dalby, Use of differential sensing-based biosensors to quantify ERK kinase activity in complex biological samples, **AACR Annual Meeting 2020,** June 13th, 2020, [Virtually Rescheduled]

- Oral Presentation

2019 Fall Undergraduate Research Symposium presented by the Molecular Biosciences Student Associations, September 28th, 2019, Austin, TX
Title: Modulating multi-functional ERK complexes by covalent targeting of a recruitment site *in vivo*
Session: Cell and Molecular Session 1

- Awards
  2nd Place undergraduate abstract award**. 16th Annual "Louis C. Littlefield Celebrating Pharmacy Research Excellence" event,** April 15th, 2020 [Virtual]

May 2019—August 2019 Livestrong Cancer Institute Summer Undergraduate Research Fellowship

Outline
I proposed, designed, implemented, and presented an independent research project relating to the field of oncology in the Vasquez Lab

Key responsibilities
- Wrote a project proposal describing the aims of the project
- Cultured human cancer cells in liquid culture, maintaining a sterile, contamination free environment
- Completed mutagenesis assay in triplicate
- Sequenced and analysed sequencing results for mutants from mutagenesis assay
- Prepared and presented a poster in culmination of the project

Key achievements
- Winner of the Best Basic Science at the poster presentation session

Awards, scholarships, and recognition

- **University of Texas at Austin's College of Natural Science Scholarship** – August 2017 repeating annually
- **College of Natural Science Second Year Excellence Award from the University of Texas at Austin's College of Natural Science –** March 2019
- **College Scholar designation from the University of Texas at Austin's College of Natural Science –** May 2019
- **Best Basic Science from Livestrong Cancer Institute Summer Undergraduate Research Fellowship –** August 2019
- **Jennie and Carl Sundberg Scholarship –** August 2019
- **AACR Undergraduate Scholar—**Feb 2020
- **National Cancer Institute's Cancer Research Training Award** – July 2020

Work Experience

O'JOY Juice and Yogurt Bar **August, 2017 – January, 2018**
- Prepared fresh smoothies, juices and frozen yogurt
- Collected customer's payments and used a P.O.S. software

Dalby Laboratory **January, 2018 – June, 2020**

- Paid undergraduate research assistant

Pet Sitter

- Cares for dogs, cats, and other household pets
- Manages personal small business

Interests and Hobbies

Interests:

- We are Blood
    - I volunteer at We are Blood, a local blood distribution center that serves central Texas. I volunteer in the canteen, the area that blood donors come after they have donated. I rehydrate the donors and provide snacks, as well as monitor the donors for any symptoms of an adverse reaction to blood donation.
    - I also regularly give blood when I am able
- Samaritan Health Ministries Volunteer
    - I volunteer at Samaritan Health Ministries, a local clinic that serves uninsured patients within Williamson and Travis counties
    - I help to check in and schedule patients using AthenaHealth. I also interact with patients to assist getting their financial paperwork in order.

- Pre-MD/PhD
    - I plan to apply to an MD/PhD program in the summer of 2020

Hobbies:

- Baking and cooking
- Interacting with animals of any kind
- Performing in a local band