

RACHEL DEAN

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EDUCATION | THE UNIVERSITY OF TEXAS AT AUSTIN, AUSTIN, TX

AUGUST 2017 – MAY 2021

BSA HONORS BIOLOGY DEGREE

College of Natural Science Honors: Health Science Scholars

Current GPA: 3.872

Certificate: Pre-Health Professions Certificate

Minor: Business

Capstone Project

Faculty Advisor: Dr. Arlen Johnson

TEXAS ACADEMY OF MATH AND SCIENCE, DENTON, TX

AUGUST 2015 – JUNE 2017

HONORS DIPLOMA

National Merit Commended Scholar

National Honors Society

GPA: 3.943

SAT 2260 (M: 800 CR: 720 W: 740)

PSAT 1470 (M: 760 R&W: 710)

ACT 35 (ENG: 35 M: 35 READ: 34 SCIE: 34 W: 8/12 STEM: 35 ELA: 31)

SAT II (World History: 720 Math II: 780 Chemistry: 760)

EXPERIENCE | PAID UGTA UNIVERSITY OF TEXAS AT AUSTIN

JANUARY 2019 – PRESENT

For the Spring and Fall 2019 semesters, I worked as a UGTA for Dr. Ann Thijs's BIO 311D course (Introduction to Biology II). I attended lecture 3x a week, lead 2 discussion sections a week, held office hours, and proctored exams. I was able to mentor incoming freshmen throughout each semester continually and

EMT-INTERMEDIATE NATIONAL CERTIFICATION AND TEXAS STATE LICENSE

AUGUST 2018

I took an EMT-I course, which taught me to how to assess, evaluate, diagnose, and treatment patients with a wide variety of illnesses and injuries in a medical emergency. I completed 5 clinical rotations, in which I shadowed and helped EMTs, nurses, and Primary Care Technicians in 2 12-hour EMS rotations, 2 8-hour ED rotations, and 1 12-hour AMR (American Medical Response). To complete the course, I underwent vigorous assessments of life-saving skills that are key to emergency medicine. Upon the completion of this course, I received my National Certification and am registered/licensed to practice in the state of Texas. I am currently using my license and certification to volunteer through Longhorn EMS (see Volunteer section)

PAID GRADER UNIVERSITY OF TEXAS AT AUSTIN

SEPTEMBER 2018 – PRESENT

For the Fall 2018 semester, I worked as a Grader in conjunction with working as a UGTA (see Leadership section) for Dr. Jen Moon's BIO 315H (Honors Genetics) class. For the Spring 2019 semester, I worked as a Grader in conjunction with working as a UGTA for Dr. Ann Thijs's BIO 311C (Introduction to Biology I) and BIO 311D (Introduction to Biology II).

SHORT-TERM MEDICAL INTERVENTION TRIP TO PANAMA GMT (GLOBAL MEDICAL TRAINING)

MARCH 10, 2018 – MARCH 17, 2018

For a week, I worked in clinics in rural Panama and saw many patients who could not afford to travel to urban Panama or could not afford to see a primary care doctor. I worked side-by-side with board-certified doctors to help diagnosis patients and offer affordable treatments and solutions. Before traveling to Panama, I attended a 2-month long weekly training program to learn about the

different illnesses – and corresponding treatments – and problems that people in Panama frequently face.

AMERICAN HEART ASSOCIATION BLS CPR CERTIFICATE

MAY 2018

Through an online and in-person course, I received my AHA BLS CPR Certificate. Through this course, I learned how to assess patients to determine whether they need CPR. I also learned how to perform CPR, rescue breaths, and Heimlich maneuver depending on the situation, like the age of the patient (adult, child, infant), the number of people in the CPR team (1-person vs 2-person teams), etc.

PAID RESEARCH ASSISTANT UNIVERSITY OF NORTH TEXAS

JUNE 2016 – AUGUST 2016

For the summer, I worked in a Plant Biology research lab under Dr. Ron Mittler, 30 hours a week.

LEADERSHIP | PANELIST

DECEMBER 2019

I was on a panel of 5 current UGTAs and Specialists, giving advice to incoming UGTAs in Dr. Moon's BI 372C class. I answered questions about the experience of working as a TA at UT with my multiple semesters of experience.

UNDERGRADUATE TEACHING ASSISTANT (UGTA)

SEPTEMBER 2018 – DECEMBER 2018

As a UGTA to Dr. Jen Moon's BIO 315H (Honors Genetics) class and Dr. Ann Thijs's BIO 311D (Introduction to Biology II) class, I attended every class to assist students in understand the lecture information and answer questions. I lead weekly discussion sessions in order to assist students as they work through questions. I hosted weekly office hours to answer additional questions and assist students with homework questions, proctored exams, and worked as a Grader. Through this experience, I learned how to communicate with students, TAs, the professor, and other UGTAs, how to command the respect of the students I helped and my peers, and how to work alongside others to achieve a common goal.

HSS (HEALTH SCIENCE SCHOLARS) AMBASSADOR

JUNE 2018 – CURRENT

As an HSS ambassador, I helped guide other people in HSS through their college experience through advice, either one-on-one or through panels. I mainly guided incoming freshmen in the organization through the unfamiliar experience of entering college. I helped them deal with time management, grade maintenance, four-year planning, grade improvement, home-sickness, healthy eating, etc.

RESEARCH | UNIVERSITY OF TEXAS AT AUSTIN, DR. ARLEN JOHNSON

NOVEMBER 2017 - PRESENT

RESEARCH PROJECT #1

Researched under

- Dr. Arlen Johnson – UT Professor
- Joshua Black – graduate student and mentor

Using laboratory procedures, created truncated plasmids (15 nucleotides, 30 nucleotides, and 45 nucleotides from the 3' end) to observe their effects on growth in unfavorably cold environments. By comparing the effects of these truncated plasmids to the effects of a known mutation, this allows us to determine what causes these effects.

UNIVERSITY OF NORTH TEXAS, DR. RON MITTLER

JANUARY 2016 – FEBRUARY 2018

RESEARCH PROJECT #1

Researched under

- Dr. Ron Mittler – UNT Professor
- Dr. Luhua Song – lab manager

Used reserve genetics to see how paraquat (a pesticide), which is known to cause oxidative stress, affects the phenotype of 3 transgenic species and 1 non-transgenic species. Determined how the mutation affects how sensitive or resistant the plant is to oxidative stress, which we already know the specific gene mutations

RESEARCH PROJECT #2

Researched under

- Dr. Ron Mittler – UNT Professor
- Amith Reddy – Graduate student

Tested to see how abscisic acid (ABA), reactive oxygen species (ROS), and stomatal responses monitor an organism's ability to respond to abiotic stress and stimulation. Determined the connection among ABA, ROS, and stomatal response through cross-talk to understand how to make agricultural crops resistance to extreme, external stimulation

SHADOWING EXPERIENCE

ST. DAVID'S MEDICAL CENTER DR. TOM FRIEDLAND (EMERGENCY PHYSICIAN)

DECEMBER 22, 2017

I shadowed Dr. Tom Friedland for the entirety of his 10-hour night shift in the emergency office. I was able to witness diagnoses, intubations of several critical patients, and the interaction between the health care system and the homeless, mentally ill, and frequent patients.

EMT-INTERMEDIATE EMS (EMERGENCY MEDICAL SERVICES) CLINICAL ROTATIONS

DECEMBER 22, 2017

On 2 separate occasions, I rode along with EMTs and Paramedics in EMS services to emergency situations, transports, and stand-bys for 12-hour shifts. In particular, I participated in a stand-by at a "cath lab", which performs cardiac catheterizations. I observed the Paramedics and learned about how to interact with patients and their families, and how to provide effective and efficient medical assistance.

EMT-INTERMEDIATE ED (EMERGENCY DEPARTMENT) CLINICAL ROTATIONS

DECEMBER 22, 2017

On 2 separate occasions, I shadowed Patient Care Technicians, registered nurses (RN), and doctors (MD) in the Emergency Department for 8-hour shifts. I was able to assess and evaluate patients and assisted them in multiple general procedures. I witnessed strokes, different types of seizures, aftermath of violent, physical attacks, abdominal ailments, etc. I also learned how to perform and read EKGs, how to assess vitals, and how to set up a specialized heart monitor on patients showing signs of a heart attack.

EMT-INTERMEDIATE AMR (AMERICAN MEDICAL RESPONSE) CLINICAL ROTATION

DECEMBER 22, 2017

On 1 occasion, I shadowed Emergency Medical Technicians (EMTs) to assess and evaluate patients while transporting them for a 12-hour shift.

AWARDS & HONORS

MEMBER OF UT AUSTIN'S HEALTH SCIENCE SCHOLARS

AUGUST 2017 – PRESENT

Health Science Scholars is a prestigious honors program with CNS that only accepts about 50 students a year.

MEMBER OF UNT DEAN'S LIST

JANUARY 2016 – JUNE 2017

Earned a GPA above 3.5 as a full-time student for 3 semesters

RECIPIENT OF UNT UNDERGRADUATE RESEARCH FELLOWSHIP

MAY 2016

Provided by UNT to 122 undergraduate students to reward students who show prominent contributions to their fields of study in guided research projects. Competed with all undergraduates conducting research at UNT

RECIPIENT OF TAMS SUMMER RESEARCH SCHOLARSHIP

APRIL 2016

Provided by TAMS Academic office to 75 students to supplement funds required to conduct summer research. It's a competitive scholarship only awarded to those who show promise and dedication to their research projects. It required submitting a midsummer research report, an abstract, and a 10-12 page research report.

SERVICE | HOSPITAL VOLUNTEER, DELL CHILDREN'S MEDICAL CENTER

300 HOURS

JUNE 2019 - PRESENT

Dell Children's Medical Center is a hospital in downtown Austin that works in conjunction with Dell Medical School. As a volunteer, I worked in Wayfinding, where I helped individuals coming into the hospital find their way around, helped discharge patients, helped delivered packages to patients, etc. As a volunteer in the ER department, I helped admit incoming patients, prepare rooms for new patients, etc.

HOME COOKED FRIDAY'S, ALL SAINT'S CHURCH

152 HOURS

OCTOBER 2017 - PRESENT

Home Cooked Friday's is a soup kitchen in which one a week, volunteers help prepare and serve a meal to the homeless and impoverished. I cooked, cleaned, prepared the plates, and served the food. The most important aspect is interacting with the people who come in for a meal.

MICAH 6 FOOD PANTRY UNIVERSITY PRESBYTERIAN CHURCH

16 HOURS

DECEMBER 2017 – PRESENT

At Micah 6 Food Pantry, I assisted people who received a weekly government subsidized food allowance from the food bank by helping them carry their basket and they shopped and helping them bag their groceries.

CIRCLE OF FRIENDS, DENTON, TX

62 HOURS

SEPTEMBER 2015 – APRIL 2017

Through Circle of Friends, I volunteered as a helper in a kindergarten deaf education classroom, making their everyday life easier. I interacted with these children as their friend and playmate, their motivator, and their instructor.

SKILLS | LANGUAGES

MANDARIN

Fluency – advanced/fluent

FRENCH

Fluency – working proficiency

SPANISH

Fluency – working proficiency

AMERICAN SIGN LANGUAGE (ASL)

Fluency – basic

INSTRUMENTS

PIANO

Proficiency – advanced

Years of experience – 13 years

FLUTE/PICCOLO

Proficiency – advanced

Years of experience – 7 years

BLS (BASIC LIFE SUPPORT) CPR -CERTIFIED FROM AMERICAN HEART ASSOCIATION (AHA)

RECEIVED: MAY 2018

EXTRACURRICULARS

GLOBAL MEDICAL TRAINING (GMT)

OCTOBER 2017 – PRESENT

GMT is an organization that provides students with a view into the health care world. It connects its members to local volunteer and medical awareness events. It also provides opportunities for students to experience first-hand clinical medicine in rural areas of South and Central America.

LONGHORN EMS (LEMS)

SEPTEMBER 2018 – PRESENT

Longhorn EMS is a first response organization (FRO) at UT Austin, established in 2003. This organization is supported by multiple medical care-orientated organizations, like Dell Medical School, the National Collegiate Emergency Medical Foundation, the Medical Director of Austin Travis County EMS, etc. This organization provides medical support at numerous events throughout Austin, such as Austin City Limits (ACL), triathlons, marathons, and other large events. Through this organization, I received clinical experiment, refined life-saving skills, continued my education in the medical emergency services.