

# ARAMS In Education Internship Program

## Featuring

### FALL 2014 Interns



**Marissa Valencia**

#### **About Me:**

My name is Marissa Valencia I am in my Junior Year at New Mexico Highlands University. I play on the Softball team and I am a Biology Major. This is my first year at NMHU as a Junior College transfer student.

#### **My **ARAMS** Internship Experience:**

In the fall of 2014 New Mexico Highlands presented me with an opportunity to be apart of one of the many internships available to any student who qualifies. I was lucky to have been chosen to participate in Dr. Linder's Mice Lab Internship. As an aspiring Biology major I plan on continuing my educational career in the medical field, and Dr. Linder's Lab happened to be the perfect fit. Dr. Linder does research on male infertility using mice to do so. Over the course of the semester I learned how to do PCR Genotyping in the lab along with DNA Isolation and Gel Electrophoresis. I also had the privilege of caring for the mice used for Dr. Linder's research, this included cleaning and feeding the mice, tipping and weaning, and sometimes discarding of unnecessary mice litters. Unfortunately I was not able to continue my learning experience in this Spring semester of 2015, but I plan on taking advantage of the numerous internships ARMAS has to offer during the summer.

#### **Inside this issue:**

---

*Devin Bruce* 2

*Marc Estrada* 3

*Christopher* 4  
*Martinez*

*Ryann Mann* 5

*Aylissa Ramirez* 6

*Elizabeth* 7  
*Estrada*



**Devin Bruce**

**About me:**

My name is Devin Bruce and I am a senior in the department of Chemistry at New Mexico Highlands University. I am planning to graduate in May of 2015 with my B.S. in Chemistry and a minor in mathematics. I plan on also obtaining my Masters here at NMHU.

**My ARMAS Internship Experience:**

This last fall I received an internship through ARMAS in Education working under Dr. Maki in the chemistry department in organic synthesis. There was a pyrrole glutamine derivative recently found and is also the first report of this type of glutamine derivative naturally. It was found in a Daylily plant found in China that is used as a sleeping aid and has other neurological affects. My main objective is to synthesis this pyyrole derivative in the lab and from there makes a library of other chemical reactions of this product with others and maybe one will have biological effects. I am still continuing this research this spring of 2015 trying to synthesis my pyyrole group in order to complete the main objective of the pyrrole glutamine derivative. I will also be presenting this research here in March at the ACS conference in Denver, CO.



**Marc Estrada**

**About me:**

My name is Marc Estrada and I am currently in my last semesters of my bachelor's degree in forestry. I have worked as an ARMAS intern for the past two semesters and in doing so have had the opportunities for many great experiences.

**My ARMAS Internship Experience:**

As a GAINS intern I had the opportunity to further my knowledge and gain valuable experience in the Geographic Information Systems (GIS) realm. I worked alongside an excellent GIS professional where I learned many new skills and applications related to GIS. I was also given the opportunity to create maps for both the Las Vegas National Wildlife Refuge as well as the Maxwell National Wildlife Refuge. While creating maps for the refuge I coordinated with them directly and designed the maps for their specific needs. Through work as a GIS intern I have become more proficient in many of the processes and operations for GIS and have been able to share these accumulated skills with others. This all would not have been possible if not for the ARMAS program and its coordinating staff.



## **Christopher B. Martinez**

### **About Me:**

My name is Christopher B. Martinez. My major is in Forestry. I plan on working as a conservation officer in the future to protect our lands and wildlife.

### **My **ARMAS** Internship Experience:**

I have worked in the lab for Dr. Martinez through ARMAS for the past three semesters as a Lab Assistant. My job has been sorting invertebrates that have been collected in the Rio Mora and San Antonio rivers. These invertebrates' samples can tell us the health of the streams and the effects caused by fire and other natural disturbances. I am always learning the names of the different invertebrates. Last semester I had the privilege of accompanying Dr. Martinez to a conference in Florida. There I learned about all the different research that is being done by students from many different universities. I enjoy working with everyone at New Mexico Highlands University. ARMAS is a great place to find internships.



Achieving in Research, Math, And Science



**Ryan Mann**

### **About me:**

My name is Ryan Mann and I am undergraduate student in the Natural Resources Department; majoring in Geology at New Mexico Highlands University. In the fall of 2014 I participated in the ARMAS Internship program where I had the opportunity to work with Dr. Kate Zeigler owner of Zeigler Geological Consultants based in Albuquerque, New Mexico.

### **My ARMAS Internship Experience:**

My internship position allowed me to work directly with Dr. Zeigler on a long term hydrology project for Mora County and the Mora County Soil and Water Conservation District. This project although in its infancy, will be an 8 to 10 year project to assess Mora County's long term water potential. This project works directly with the community as land owners have granted Zeigler Geological Consultants access to surface and ground water sources for measurement and analysis. We measured the depths of wells throughout the county and took samples for chemical analysis and carbon age dating. Chemical analysis from these water sources will tell us much about the subsurface geology and if there is any risk to drinking water due to manmade or natural contaminates, whereas the carbon age dating of the water will help us determine the rate of water recharge for the County. Well depth and water analysis will occur twice a year and continue through the length of the project and will serve as an aid to the residents of Mora County for future planning regarding their water resources. I also had the opportunity to work on several GIS projects for Zeigler Geological Consultants during my intern experience. I geo-referenced aerial quadrangle photos of Union County where Zeigler Geological Consultants is wrapping up a project similar to the project I worked on in Mora County. The GIS aspect of my internship allowed me to use the skills I had acquired in my GIS classes towards real world applications. My internship experience allowed me the opportunity to gain real world work experience as well as make contacts with individuals in New Mexico that are in my chosen career field.

I am also fortunate to be one of the recipients of the ARMAS undergraduate STEM scholarships sponsored by the National Science Foundation. As a recipient of this scholarship I am provided with funding for my studies, classes and course materials.

The resources provided to me through the ARMAS Center have been invaluable to my success as a student at New Mexico Highlands University.



**Alyssa Ramirez**

**About me:**

My name is Alyssa Ramirez and I just graduated from New Mexico Highlands University in December 2014. I received a Bachelor's of Science in Biology with a minor in Chemistry.

**My **ARMAS** Internship Experience:**

In the fall I was lucky enough to receive the ARMAS internship, and get paid while I was gaining experience in a research laboratory setting. I worked with Dr. Linder in her mouse room as well as her lab. All of her research is done using mice to study male infertility and what are the causes. Since I was only working in her lab for the fall, most of my work consisted of maintaining the mouse room, running PCR, and genotyping the mice. I also worked on a separate side project that used mice germ cells as well as immunofluorescence staining to study meiosis and determine if there was a significant difference between the fertile mice and the infertile mice. This experience helped me to attain skills that I know will help me pursue my career. Having learned different laboratory techniques are great experience when applying to a professional school as well as wanting to continue to pursue research. The ARMAS internship let me go one step further with my education and gain experience that I would not have been able to get with just a Bachelor's degree. For this reason I would like to thank ARMAS greatly for giving me such a fantastic opportunity to further my learning.

## Elizabeth V. Estrada



### About Me:

My name is Elizabeth Estrada. I am Senior at New Mexico Highlands University. I am going to school for a Bachelor's of Science in Biology. I intend to later enroll in UNM School of Pharmacy. I hope to one day be a community pharmacist.

### My **ARMAS** Internship Experience:

During my fall semester of 2014, I was given the opportunity by ARMAS to intern at the New Mexico Behavioral Health Institute in Las Vegas. The department I interned in was the Standards and Compliance department. There I reviewed the policy of Medication Variances (Errors) and compared it with National Standards. I reviewed medication error data from previous years to show if a new medication dispensing system was lowering errors. I created a new filing system to ensure that accreditation surveys from previous years were easy to find. On my last day, I was given a tour of the pharmacy there on campus and able to talk to the Director of Pharmacy. He answered all of my questions on pharmacy from his experience.

This internship was truly rewarding. I would recommend it to anyone interested in the healthcare field but is unsure how to gain experience. My supervisor was passionate in making sure I made connections in pharmacy. She pushed me to ask as many questions as possible. I am very grateful for this experience.

**Monique Esquibel  
Internship Coordinator**

New Mexico Highlands University  
Box 9000  
Engineering Building  
Room 106

Phone: 505-426-2104

Fax: 505-426-2008

E-mail: [mesquibel@nmhu.edu](mailto:mesquibel@nmhu.edu)



Achieving in Research, Math, And Science

**ARMAS** (Achieving in Research, Math and Science) in Education has provided grant funded internship opportunities to upper level science, technology, engineering and math (STEM) students and research fellowships to incoming freshman STEM students since Fall of 2010. Internships enable students to earn money in their field of study while gaining experience and building community partnerships.

The semester and summer internships are related to students' future career choice there by allowing students to experience work in their field of study prior to making a career choice. These internships allow students to make informed decisions about their future. The undergraduate research fellowships are paid faculty-lead research and mentoring opportunities for STEM students early in their academic careers. Since 2010 a total of ninety eight student intern and fellowship combined have been placed with faculty and thirty three area partner-agencies.

ARMAS in Education community partner include but is not limited to the US Forest Service, Las Vegas Fish and Wildlife Refuge and Hermits Peak Watershed Alliance. Over many semesters, these partners have enriched the lives of the interns with specific professional skills and experiences.

The mission of our center is to provide comprehensive support to Science Technology Engineering and Math (STEM) students and faculty, recognizing our historical commitment as a Hispanic Serving Institution.

The goal of our center is to provide comprehensive support to STEM (Science, Technology, Engineering and Math) students as they work toward their academic and professional goals. Our staff strives to create a caring community for all our students and to empower them to realize their full potential through emphasis on critical thinking, teamwork, communication, effective study habits, and setting and achieving goals.

By being a part of the **ARMAS** (Achieving in Research, Math and Science) learning community students develop lifelong learning skills and the tools they need to excel in their chosen educational and career pathways. All students taking classes in STEM disciplines are welcome to participate in the services and programs offered by the center. Students do NOT have to be STEM majors to access Center services. Please explore our website to learn more or just drop by—we look forward to meeting you!

Location: New Mexico Highlands University  
Engineering Building Room 106  
Las Vegas NM 87701

**We are on the web**

[www.armasineducation.com](http://www.armasineducation.com)



Follow us on [Facebook](#)

[www.facebook.com/ARMASINEDUCATION](http://www.facebook.com/ARMASINEDUCATION)