Student Spotlight: Scholars Out and About!

Samantha Lee Attends The iGEM Competition

The International Genetically Engineered Machines (iGEM) competition is a worldwide Synthetic Biology competition with the goal to create standard, interchangeable biological parts. Team Nevada entered the competition for the second time in 2010, presenting Nevada iSense, which earned them a silver medal. The goal of the project was to introduce plants as remote sensors by fusing stress inducible promoters with fluorescent reporter genes (please visit http://2010.igem.org/Team:Nevada for more on the project). Each team received a kit of biological parts at the beginning of summer to start their project, which ultimately culminated in presenting their project at the Massachusetts Institute of Technology (MIT) in November. There were 130 teams from Europe, Asia, and the Americas that participated last year, which gave everyone the chance to make new friends and network with other students in the same field that, under normal circumstances, they otherwise wouldn’t have a chance to meet. Although iGEM was a lot of work, it wasn’t all work and no play. The night before the awards ceremony, iGEM hosted a social with dancing, bowling, pool, food, and drinks at a local club. The experience of iGEM is one that I will never forget; with it I made numerous life long friends, gained independent laboratory experience, and accumulated a plethora of knowledge in the growing field of Synthetic Biology.

Megan Tillman Visits Rochester and MIT

During the fall of 2010, I was fortunate to be accepted to two graduate school visitation programs. In September I visited the University of Rochester, and in November I visited Massachusetts Institute of Technology (MIT). For both of the visits I was able to meet with several faculty members, current graduate students, and people on the admissions committee. The people at both schools were very welcoming and willing to answer any questions you had about their particular program, including funding and their specific research interests. They also gave a tour of the schools and the city. Everyone should take advantage of applying to graduate school visitation programs, even if it is a school you have not considered. The programs pay for all of your travel, lodging, and food costs. Also, because I participated in the MIT program, I received a fee waiver for my application, which is normally $75.00. I learned about these graduate visitation opportunities through the emails sent by the McNair Scholars program. In addition, you can find out if a school offers a visitation program by looking at the websites of the graduate schools you are interested in.
Friday, January 28th 2011, marked the 25th anniversary of the Space Shuttle Challenger explosion. It is hard to believe that 25 years have passed since our country lost the seven brave crew members aboard Challenger, including Dr. Ronald E. McNair. Despite growing up in poverty in the segregated south of the 1950s, McNair excelled. He was valedictorian of his high school class and went on to graduate magna cum laude with a Bachelor of Science degree in Physics from North Carolina Agricultural and Technical State University in Greensboro. In 1976, (at age 26) McNair earned his Ph.D. in physics from MIT. Two years later, McNair became one of 35 astronauts chosen for NASA’s space program. He was the 2nd African American astronaut to fly in space, and he would fly several missions before the Challenger explosion in 1986. In 1989, three years after Dr. McNair’s death, the Ronald E. McNair Post Baccalaureate Achievement Program was established. Since that time, the program has been helping 1st generation, financially qualified, or underrepresented students to obtain their dream of entering graduate school and pursuing a Ph.D.

On these pages, students and alumni from the University of Nevada, Reno McNair Scholars Program pay tribute to McNair by telling us what the McNair program means to them.

Mark Lemos (2008 cohort): The story of Ronald E. McNair is a true American inspiration. He was born into a family with humble beginnings and confronted by a society that was segregated by race. Constant adversity undoubtedly helped create the confidence and spirit that allowed him to rise above any of the disadvantages he had no control over.

Initially, I debated whether I should apply to the McNair Scholars Program, so I began researching the program and Dr. McNair. I was impressed with Dr. McNair. In his short life, Dr. McNair became an accomplished student, musician, and astronaut. As I continued reading, I discovered that Dr. McNair was one of seven astronauts on the Challenger space shuttle that exploded on January 28, 1986. I had to stop reading to gather myself. That was the exact day, month, and year I was born. Each year, I am reminded with the anniversary and memorial of Dr. McNair what it means to be a McNair scholar.

I am grateful for the opportunities that the McNair scholars program has afforded me: funding to pursue my own independent summer research, the opportunity to present my research at the University of California Berkeley, mentorship, navigating the graduate school application process, and a sense of community. After being accepted into the program, I discovered a group of peers who are among some of the hardest working, genuine, humble, and inspiring people that I have ever met. I believe Dr. McNair would be proud to know that 25 years after his death, a program in his honor continues to embody the character, perseverance, and commitment to education demonstrated by Dr. McNair.

Kevin McPherson (2011 cohort): To me, being a McNair Scholar means breaking down any barriers that used to exist that prevented me from achieving my scholastic and personal potential. It also aligns with my philosophy of letting all avenues of my life present persistent and never ending growth. It is way more than a scholarship or a chance to do research: it is an opportunity to learn from other McNair scholars which I believe is the most valuable form of education.
Honoring Ronald E. McNair

**Eric Shoemaker (2005 cohort):** The McNair Scholar comes from all walks of life and perhaps under circumstances that are not always ideal or the most advantageous. He or she would never give up on a dream, no matter how long it takes, for a dream is meant to be pursued. If that were not so, the dream would cease be there in front of you. But instead, it lingers, always there waiting for you to press forward.

I liken it to Genesis 1:2 where it says, “Now the Earth proved to be formless and waste and there was darkness upon the surface of the watery deep, and God’s active force (the Holy Spirit) was moving to and fro over the surface of the waters” (The Bible/New World Translation). The Holy Spirit was waiting for a command - from God. In a very similar way, we as individuals are, at some point, formless and waste, with darkness upon us. That is until the day we give ourselves our own command, to decide upon the pursuit of a goal or dream. Sometimes it’s not so easy, for we might lack direction or inspiration. That’s when it helps to have a model that one can follow. Someone who pursued their goals and dreams relentlessly, until finally they were achieved. I don’t believe that Ronald E. McNair would ever give up on anything or any endeavor that he set his mind to. Therefore, the McNair Scholars Program is a constant reminder to me, to continue on, to press forward, no matter how bad the inclement weather.

I well know that the state of the economy may have slowed some of us down, and doubt may have reared its ugly head, not only upon the one, but upon the many that are or were once McNair Scholars. But if anyone has doubts, then let them take up the Staff of Eternal Waiting, for the McNair Scholar does not throw in the towel, already knowing that doubts are mere shadows, without substance, and not to be believed.

**Benjamin Del Rosario (2011 cohort):** As a brand new McNair Scholar, the McNair Scholars program has been a welcome and exciting edition to my academic career and my life in general. I feel like I have been granted a very special opportunity to really achieve what I want both academically and beyond. This program has already given me a lot of opportunities that I otherwise would never have been made aware of. I feel like McNair will really push me to be the best and will really give me a reason to strive to earn the highest levels of education and distinction I can achieve.

**Miranda Smith (2010 cohort):** For me, the McNair program has meant a unique structure of support and friends to help me on my road to graduate school. Is has not only provided the information I have needed to succeed through various programs and preparatory courses but has also provided the opportunity to make friends with the same goals and struggles that I am having. Without McNair, I wouldn’t have been able to apply to as many schools as I did, and I am grateful that I was able to find and qualify for this program because my journey to graduate school would not have been the same without it.

**Mikhail Alfonso Serafico-Agcaoili (2011 cohort):** What characterizes Dr. McNair’s life most is a constant overcoming of various adversities. Perhaps, this is the greatest lesson he imparts upon us scholars. He exemplifies what it means to be both passionate and devoted to one’s dreams, regardless of whatever circumstances hinders one from doing so.
Meet the New McNair Cohort!

Benjamin Del Rosario  
Major: Mechanical Engineering  
Mentor: Dr. Kam Leang  
Research Topic: Utilizing piezoelectric actuators for high speed nanopositioning in electron probe microscopy

Jourdan Douglas  
Major: Secondary Education and Social Studies  
Mentor: Dr. George Hill  
Research Topic: The Effect of Late Practicum Experiences on the Motivation of Pre-service Teachers and Student Teachers Expectations of the Classroom and Their Motivation to Stay in the Teaching Profession (Teacher Retention)

Jennifer Halen  
Major: Political Science  
Mentor: Dr. Stacy Gordon  
Research Topic: The Formation and Approaches of Women’s Advocacy Groups in Russia and the Effect They Have on Representation.

Ryan Halen  
Major: Political Science  
Mentor: Dr. Stacy Gordon  
Research Topic: The Effect of Income Redistribution Institutions on Voter Turnout in Advanced Democracies

Beau Hixon  
Major: Economics  
Mentor: Dr. Mark Pingle  
Research Topic: Technological Advancements Effect on the Ability for Prices to be More Adaptive to Change in the United States Economy

Joshua Hughes  
Major: Chemistry  
Mentor: Kevin Burls & Dr. Guy Hoelzer  
Research Topic: TBA

Ronald E. McNair Post-Baccalaureate Achievement Program
Kety Luna
Major: Secondary Education and Spanish
Mentor: Dr. Dr. Patricia Miltenberger
Research Topic: Discovering Reasons Why First and Second Generation Latino Students Decide to Go to College

Rogina Mojumder
Major: Biochemistry, Molecular Biology, and Neuroscience
Mentor: Dr. Ronald Pardina
Research Topic: TBA

Iris Petty
Major: English Literature and History
Mentor: Dr. Edward Schoolman
Research Topic: Religious Feminism and Scriptural Reinterpretation Through the Lens of Fifth Century Female Monasticism and Saint Augustine of Hippo

Enrique Valdivia
Major: Anthropology
Mentor: Dr. Marybeth Nevins
Research Topic: Language Revitalization: The Washoe Experience

Kevin McPherson
Major: Biochemistry and Molecular Biology/Community Health Sciences
Mentor: Dr. Jeff Angermann
Research Topic: Effects of Arsenic and Arsenic Metabolites on L-Type Calcium Channel and Large Conductance Potassium Channel Activity in Vascular Smooth Muscle

Alexandra Pearce
Major: Mathematics and Professional Chemistry
Mentor: Dr. Thomas Bell
Research Topic: Synthesis of Macroyclic Polyamines and Their Metal Complexes Targeting HIV-1

Mikhail Serafico-Agcaoili
Major: Psychology
Mentor: Dr. Mark Alavosius
Research Topic: TBA
Faramarz Gordaninejad is a welcoming, warm, enthusiastic professor in UNR’s mechanical engineering department. If those traits weren’t enough to recommend him as a professor, one might also look to his prestigious background which includes receiving the Outstanding Researcher of the Year award in 2006 as well as The Rudolf W. Gunnerman Silver State Award for Scientific Excellence in 2003. While his research focus is on “theoretical and experimental methods in materials, mechanics, structures, heat transfer, and structural control” his real passion seems to lie in working with students, especially undergraduates.

Dr. Gordaninejad has worked with 42 undergraduate researchers in his 26 years at UNR. He normally works with one or two each semester and says the experience is thoroughly enjoyable. He puts his undergraduates to work helping the graduate students in his lab and there they learn some basics not taught in the classroom. One might think an undergraduate in a graduate lab would spend his hours completing menial tasks or being micromanaged by the more experienced staff, but that’s not the case with Dr. Gordaninejad. He feels the most important lesson a researcher can learn is to become an independent thinker. He likes to give his undergraduates “challenging problems, even impossible problems” and he says “you’ll be amazed by what they come up with.” They may not solve the impossible problem, but they astound you with their inventiveness. Dr. Gordaninejad has guided undergraduates toward publishing papers and even patenting their own original products. And while guiding his students in their research, he also guides them toward graduate school.

Engineering is a field that often entices students into industry right after obtaining their bachelor’s degree. However, Dr. Gordaninejad feels that while it doesn’t matter so much where students go to graduate school, students should go. “Where else can you find the dynamic, transient environment of the college campus that allows you the freedom to really explore not only your field of study but also yourself.”

Dr. Gordaninejad came to the University of Nevada, Reno in 1984 and first began working as an assistant professor before moving into the position of full professor in 1995. He says one of the things that drew him to UNR was the possibility of working in a program from the ground up – building a department into a respected and prominent position in the national and international community. That’s exactly what’s occurred at UNR. The Mechanical Engineering department is nationally ranked and recognized and Dr. Gordaninejad says it feels good to see the fruits of his efforts. He feels the same way about undergraduates and all student researchers. He likes the challenge of building “from level zero” and says he feels fired up to teach undergraduate classes where there is a “young energy,” and he can experience the joy of trying to shape young minds.

Dr. Gordaninejad received his bachelor’s degree from the University of Tehran, in Iran in 1977. It was a university he said was “very hard to get into and very hard to get out of.” It was quite tough, and he had to earn 155 credits before fulfilling his potential and earning his degree. But Dr. Gordaninejad credits his parents as being the “driving force” behind his education. They wanted him to not only obtain an education but “the best” education. His parents must have done a wonderful job as all Dr. Gordaninejad’s brothers went to school to become engineers and his sister became a lawyer. Dr. Gordaninejad explained that in Iranian culture, engineers are highly regarded as the designers of our society. And they should be well regarded, as they design everything from medical equipment to cars. After graduation, Dr. Gordaninejad searched for a university where the faculty interests matched his own. He landed at the University of Oklahoma where his decision to work with the faculty in composite materials and heat transfer proved a good one. “The heart of a program is its faculty” and students going into graduate school must take into consideration the people who will become their colleagues when deciding where to study. Dr. Gordaninejad earned his Masters and Ph.D. from the University of Oklahoma in 1980 and 1983 respectively. His intention was always to become a professor as he had a great respect for his teachers from primary school all the way through college. Now, as an engineer, he says it feels “good to contribute to society” figuratively building not only products but people as well. As a professor, you “get to influence life in a positive way.”

Finally, Dr. Gordaninejad had these parting words for students – Education doesn’t just come from a text book; education is a process. Most students come to college in order to get a job. This thinking may be practical, but it limits a person’s vision. You should go to college to learn about yourself and to improve upon what you know. In this way you are positioned to provide a positive influence on society.

To learn more about Dr. Gordaninejad, visit the Mechanical Engineering website at http://www.unr.edu/me/faculty/gordaninejad.html

Faculty Spotlight: Faramarz Gordaninejad
Naz Mojumder: Who’s Who Ceremony and ABRCMS Conference

Who’s Who Among American Colleges and Universities:

As a senior (2010-2011) I was nominated for the Who’s Who Among American Colleges and Universities at the University of Nevada, Reno. I believe my nomination was mainly due to extracurricular activities both on and off campus. Students are selected because they are well-rounded, rather than just having a full undergraduate focus on the academic curriculum. Currently, my application is being reviewed by the national office for the hope of being nominated to Who’s Who Among Colleges and Universities at the national level.

(Pictures - Top: Naz with Bill Cathey, Vice Provost for Instruction and Undergraduate Programs, and Shannon Ellis, Vice President of Student Services.
Middle: Naz with his family (including McNair Scholar Rogina Mojumder and TRiO Scholar Aminul Mojumder).
Bottom: Naz with Assistant Director Marsha Dupree and Writing Coordinator Heather Penrod.

ABRCMS Conference:

Attending The Annual Biomedical Research Conference for Minority Students (ABRCMS) at Charlotte, NC was an incredible experience. The research conference lasted four days and was composed of over 1400 students from all over the country. Being the only student from the state of NV, I was fortunate to receive full funding including all program fees, housing, and transportation to attend this research program. ABRCMS gave me the opportunity to present my research that I have been doing as a McNair Scholar. The greatest benefit of this conference was attending various sessions regarding scientific research, graduate and medical school preparation, summer research opportunities, fellowships and the professional and graduate fair. In addition, the interaction with students, faculty, and grad school admission committee members enabled me to expand my knowledge of scientific and professional organizations through innovative sessions and networking.

McNair Alums Receive NSF Graduate Research Fellowships

McNair alumni Mark Lemos (2008 cohort, currently attending the University of California, Davis) and Lina Castano-Duque (2009 cohort, currently attending Penn State University) were both awarded National Science Foundation (NSF) fellowships this spring! Mark said, “The NSF Create IGERT (1-2 years of funding) training grant and NSF Graduate Research Fellowship (3 years of funding) pretty close to covers all of the necessary funding for my PhD.” At 30,000 dollars of funding per year, Lina’s Fellowship will certainly aid with her work as well! She said, “The NSF has awarded me the Graduate Research Fellowship Program (GRFP) Fellowship. I wanted to thank you for letting me be part of the McNair Scholar Program in Nevada. I feel that all the wonderful accomplishments that I have today have been the result of the advice and orientation of many people, and the McNair Program is one of them. I really hope that the program can give as much help as possible to all the undergraduate students that, like me, have great dreams for the future.” As undergraduates, both students were mentored by Dr. John Cushman who teaches in the Biochemistry and Molecular Biology departments.

The McNair Family Grows

The McNair Scholars family got a little bigger recently. Olga Mesina, a McNair alumni (cohort 2005) and former McNair student worker, had a baby girl on February 16th, 2011. Little Isadora Rose was born at 1:48am weighing 6lbs 15oz and measuring 19 inches long. Additionally, Heather Penrod, our McNair Scholars Writing Coordinator, delivered a baby girl last fall. Addeline Alana arrived nearly three weeks early on September 24th, 2010, at 7:02pm. She weighed 7lbs 14oz and was 21inches long. We all want to wish Olga and Heather congratulations and extend Isadora and Addeline a warm welcome into the McNair family.
**WHAT IS THE McNAIR SCHOLARS PROGRAM?**

The Ronald E. McNair Post Baccalaureate Achievement Program is designed to provide research opportunities and other related academic experiences that promote the acquisition of the Doctoral Degree (Ph.D.) for first generation, low-income, and underrepresented college juniors and seniors. The McNair program is federally funded at $231,000 per year. The program was created by Congress in an effort to increase the number of underrepresented persons pursuing teaching, research, and administrative careers in higher education.

**Summer 2011 Important Dates To Remember**

- June 6th       Colloquium Begins
- June 6th & 7th  Don Asher Workshop
- June 8th       Virginia City Trip
- June 13th      GRE Class Begins
- July 4th       Holiday
- July 22nd      Closing Ceremony / Luncheon
- August 4th - 8th Berkeley Conference

**Birthdays During the Summer …**

If you see these scholars around, please wish them a fabulous birthday!

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<tr>
<th>Scholarship Name</th>
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<tr>
<td>Arlette Munoz</td>
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<td>Joseph Connelly</td>
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<td>Megan Tillman</td>
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<td>Samantha Lee</td>
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<td>Kety Luna</td>
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<td>Lisa Maletsky</td>
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<td>Ryan Halen</td>
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<td>Umar Ijaz</td>
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<td>Maria Jimenez-Ortiz</td>
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<td>Miranda Smith</td>
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**Scholar and Alumni News**

- Jourdan Douglas (2011 cohort) was accepted into The Ohio State University’s Summer Research Opportunities Program (OSU SROP).
- Nick Hockensmith (2010 cohort) was accepted to University of Oregon (Economics Ph.D. Program) for fall 2011.
- Kevin McPherson (2011 cohort) was awarded funding for the NorCal SETAC research scholarship. His proposal was ranked #1 for undergraduate applicants and number 2 overall (against graduate students).
- Olga Mesina (2005 cohort) received a master’s degree in Rehabilitation Counseling from Texas Tech University in the fall of 2010. She is a certified rehabilitation counselor.
- Grace Morris (2008 cohort) was accepted to University of Nevada, Reno (Economics Master’s Program) for spring 2011.
- Jose Arauz (2009 cohort) was accepted into the PhD Clinical Psychology program at Suffolk University in Boston.
- Zane Ricks (2010 cohort) was accepted to Vanderbilt University (Biomedical Engineering Ph.D. Program) for fall 2011.
- Mark Rincon (2007 cohort) was accepted into the Master’s of Science Graduate Program at USC Department of Geography. He received a Graduate Certificate in Geographic Information Science and Technology from USC in Dec 2010.
- Letty Rodriguez (cohort 2006) transferred to the University of Texas at Austin to work in their pharmaceutics program which is among the top four pharmacy programs in the country.

**Applicants for the McNair Scholars Program are accepted year round via the McNair Scholars Website**

www.unr.edu/mcnair