

# Scholars' Scope

## DEVELOPING SCHOLARS PROGRAM

Volume 14

Number 1

### Reflections on the Journey toward 2025

by Anita Cortez



Scholar **Raquel Ortega** studying in the Office of Undergraduate Research



Scholars studying biochemistry

My father was a railroader. Through him, I learned to love trains. A favorite storybook of mine was the Little Engine That Could by Watty Piper. I loved that little engine underdog as it came up against the bluster of the bigger engines. "I think I can, I think I can, I know I can," a refrain learned as a child, became the mantra I tried many years later to instill in the Developing Scholars Program (DSP). DSP students were encouraged to think they could become doctors and lawyers, teachers and engineers, scientists and artists. Our students learned to take their dreams seriously. As a result, many DSP graduates have become medical doctors, teachers, optometrists, engineers, architects, chiropractors, wildlife ecologists, lawyers, dentists, accountants, and more. They have been Fulbright Scholars, Goldwater Scholars, National Institutes of Health Scholars, and Gilman winners. They have traveled the world.

Now fifteen years later, this train has left the track and sprouted wings! Our little program of students with big aspirations has been asked to dream even bigger! Early last fall, we were asked to expand into the Office of Undergraduate Research at K-State, or as we like to say, *OUR, K-State!* What does this mean to Developing Scholars, and what does it mean to the University?

The fall semester was given to the preparation of our new offices in Wildcat Landing. We moved into OUR,

K-State! offices in January where we have a beautiful new Commons area for students to study, use computers, prepare and give presentations, or hold meetings and discussions. Through the Office of Undergraduate Research we will promote research opportunities across campus, hoping to provide a more in-depth intellectual journey to many more industrious undergraduates.

The mission of the Office of Undergraduate Research is to serve as a conduit for undergraduate research and creative endeavors at K-State and to promote collaborations and awareness across campus and beyond in order to advance the university's visionary plan 2025 and to attain the status of a top 50 public research institution.

How do we define "research"? Research includes creative endeavors and is defined as scholarly, collaborative, authentic, original work or an assessment from a new point of view conducted by a student or group of students within a mentored environment for the purpose of publicly disseminating the information through a university seminar, poster/oral conference presentation, performance, exhibition, and/or publication. The projects shall involve inquiry, design, investigation, research, scholarship, discovery, application, writing and/or performance to a greater or lesser degree depending on the discipline.

**Reflections continued on page 8**



Students gather for workshop



**Larry Rodriguez, Jenny Barriga, and friend** studying

#### K-State Research Forum Winners:

- 1st place presentation: Jeffrey Murray
- 2nd place poster: Obdulia Covarrubias
- 3rd place poster: Jazmin Zeledon



Garmon Social Justice Scholarship Winner-  
**Yubisela Toledo**

#### Office of Undergraduate Research

Wildcat Landing, Suite 001  
1800 Claflin Road  
Manhattan, KS 66502  
(785)532-5864

## Research in the Arts: Actors and Identity

**Daijah Porchia**, freshman Scholar in theatre, is conducting research with **Professor Sally Bailey** who specializes in drama therapy. They are studying the concept of "de-roling." De-roling is the opposite of getting into character—it is the process of getting out of character. This can be especially necessary when a role is particularly taxing. Porchia used Heath Ledger's role as The Joker in *The Dark Knight* as an example. Many believe that his total immersion into the role of Joker led him to so identify with the role that he was unable to separate the character from himself. Together, Porchia and Bailey are examining the benefits of de-roling. Porchia interviewed members of the cast of *Columbinus* (a play about the tragic events at Columbine High School) about their experiences with such challenging roles.

Dr. Bailey commented that most college students don't have the opportunity to conduct research before college, especially in the theatre department. Porchia and Bailey aim to create awareness of the lasting effects of roles in plays with heavy messages. "What can we do?" Bailey asks. They want to let people know how to go

about exiting a character's role. Bailey points out that part of the problem is the glamorization of actors "living the role," a twist of the definition and utility of method acting. "People believe that to be a good actor, they have to be in the role during the whole run of the play, which is unhealthy," Bailey says.

Porchia adds, "There is this false assumption that they will just get out of it—curtain falls, role over," though this is often not the case, she says. Bailey shared one technique for de-roling: The actor engages in a ritual of removing a garment that is representative of them and then putting on an item of the character. Afterwards the routine is done in reverse so the actors take off the character's persona and put their own back on. The ritual includes making a verbal statement which indicates, "This is not me; it belongs to the character."

Porchia says that her involvement in Developing Scholars this year has simplified things for her. Through her project, she has learned how to do research in the arts, gained skills to look for information, and thus, improve scholarship.

## Scholar Finds Yellow Brick Bridge to Success



Jenny Barriga in her lab

For the past two summers **Jenny Barriga**, senior in Chemistry (Dodge City, KS.), has worked at the National Institutes of Health (NIH) Cancer Institute in Bethesda, MD. through a Cancer Research Careers internship. Barriga learned of this opportunity while in the NIH Bridges to the Future program.

The Bridges program brings transfer students from southwest Kansas community colleges to K-State to study in STEM disciplines and the behavioral sciences. Barriga's contact with an NIH representative at a conference which opened doors to the NIH Undergraduate Scholarship (\$20,000 per year), a ten-week summer internship, and employment at NIH for a year upon graduation.

Last summer Barriga worked with *Bacillus Subtilis*. This bacterium is considered a model organism to study bacterial chromosome replication. Her work involved examining the sporulation pathways and making attempts to regulate sporulation. Barriga said one application of her research could be for preparedness against bioterrorism agents such as anthrax. For Barriga, the most exciting part about any research is getting real, usable results that can then be applied elsewhere. Barriga was also a recipient of the *Goldwater Scholarship*. Her K-State research mentor is **Dr. Stefan Bossmann**, chemistry. Barriga will be entering the Biophysics program at **Stanford University** in Fall of 2015.



Professor Sally Bailey with Daijah Porchia

### Special Thanks!

**Dr. Tanya Gonzalez:** DSP seminar instructor.

**Dean John Buckwalter:** Bridges Primary Investigator.

**Dr. Charlotte Olsen:** Bridges Coordinator.

### Cancer Research Awards 2013-2014:

**Jenny Barriga**

Mentor: Stefan Bossmann

**Nallely Barron-Garcia**

Mentor: T.A. Nguyen

**Jonathan Bernard**

Mentor: John Tomich

**Thuy Cao**

Mentor: Michael Kanost

**German Cuevas**

Mentor: Lorena Passarelli

**Jamilah Watkins**

Mentor: Michael Kanost

### Graduating Seniors' Next Steps:

Pamela Maynez: Waiting to hear about acceptance to Pharmacy School.

Nallely Barron-Garcia: Accepted to School of Medicine at University of Kansas.

Natira Staats: Accepted to Master's in Marriage and Family Therapy at Kansas State.

Jenny Barriga: Accepted to Stanford University Biophysics Ph.D. Program.

Stephanie Skinner: Accepted to Veterinary School at Kansas State.

Brooke Williams: Accepted to University of Houston, Clinical Psychology, Ph.D. Program.

Phillip Gomez: Pursuing his dream in the National Intercollegiate Soccer Officials Association.

Emma Brace: Accepted at Purdue, Virginia Tech, Texas A&M, and Alabama.

Irma Ailon: Travel to Guatemala.

Jazmin Zeledon: Waiting to hear about acceptance to PREP Programs.

Alexia Sampson-Bellot: Waiting to hear about acceptance to Veterinary School.

Scholars interested in the NIH can apply at:  
[www.training.nih.gov/programs/ugsp](http://www.training.nih.gov/programs/ugsp)

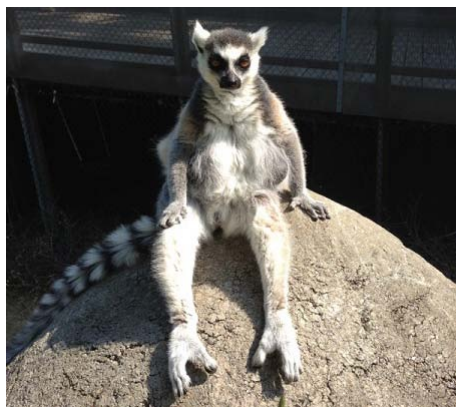


## Zoetis Scholar Micke Ramirez Turns Vocation into Vacation

**Micke Ramirez**, sophomore in Animal Science/ Pre-Veterinary Medicine from Shawnee, KS, is interested in becoming a zoo veterinarian. To become a zoo veterinarian is highly competitive. Ramirez, therefore, worked as an unpaid intern at the Oakland Zoo Animal Care facility in Oakland, California this past summer.

His job was not glamorous. He cared for lemurs, goats, sheep, pigs and rabbits. One of his favorite activities was assisting with "target training" of the animals. Target training means that they trained animals to do "tricks" that would be helpful to the trainers.

For example, lemurs were taught to sit on command, to lift their arms in the air, and generally taught to assist the veterinarian who might need to conduct a physical on the animal. In this way the animal is less stressed by examination. Another important aspect of teaching animals "tricks" involved the consideration of whether the animal was domesticated or not. It was acceptable to teach goats, for instance, to navigate an obstacle course, but it would be inappropriate to train a wild animal to do this. The zoo's philosophy is to let wild animals remain wild.



A lemur shows off its femur

Because zoo animals are confined no matter how nice the zoo, enrichment activities are essential to the animals' good health. Ramirez came up with the idea of tire swings for the lemurs. Workers hung the swings and placed treats wrapped in newspaper inside the swings. The lemurs greatly enjoyed this challenge.

When asked a fun fact that the public would not know about the animals, Ramirez responded that pigs are easy to care for because they are focal defecators. In other words, they only "go" in one spot making them easy to clean up after. About the cleaning up, Ramirez said he did not even mind



**Micke Ramirez** and a porcine pal

that; it was an opportunity to let his mind wander as he worked.

What did Ramirez learn from this summer adventure? He realized that his unpaid experience was a down payment on his future. Ramirez knows beyond doubt that he wants to become a zoo veterinarian. He hopes to be accepted to veterinary school and then find a residency at a zoo after he receives his DVM. He learned that when you find your passion, your vocation can feel more like a vacation. **Dr. Raymond Rowland**, Diagnostic Medicine and Pathobiology, is his research mentor.

Congratulations,  
First-Year Zoetis Scholars  
**Alaina Littlejohn** and  
**Izabella Carmona**,  
on Early Admission to the  
College of Veterinary Medicine!



From Left: **Alaina Littlejohn**, **Izabella Carmona**, **Dr. Rocky Bigbie**, Zoetis, and **Alexia Sampson-Bellot**, Zoetis Scholar, waiting on acceptance to Vet School.

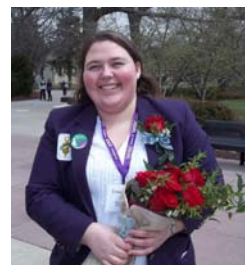
## First-Year Scholar Wins Accounting Trip



**Cipriana Sapien** with **Dr. Myra Gordon**

**Cipriana Sapien** is a first-year Scholar and Edgerley-Franklin Leader who has her eye on the prize. Her long-term career goal is to become a Chief Financial Officer of a Big 4 accounting firm, and she is taking steps to make this goal a reality. Sapien applied for, and was awarded a spot at the Future Diversity Leaders Conference hosted by KPMG, one of the Big 4 Accounting firms. She will have the opportunity to travel to Hollywood, California for three days this summer, all expenses paid. At the conference she will be able to network with business leaders, attend workshops, and learn from guest speakers. The opportunities do not stop there. Through this experience, Sapien could potentially be looking at a \$1,000 scholarship, an internship after her sophomore year, and even a possible full time job after graduation. Sapien's go-getter mentality has allowed her to get her foot in the door and take the first step in achieving her career goals. **Dr. Ansley Chua**, Finance, is her research mentor.

## Emma Brace Named Saint



DSP Alumna and Edgerley-Franklin Leader **Emma Brace** was crowned St. Patricia for 2013-2014. This honor is given to the most outstanding female senior in the College of Engineering.

# With Your Own Eyes...

**Eduardo Acosta**, senior in Biology (Dodge City, KS.), spent two weeks last summer in Panama on a dental mission trip through International Service Learning (ISL). ISL enlists medical and educational volunteer teams, mostly students, to provide services to underserved populations in Central and South America, Mexico, the Caribbean, and Africa.

In preparation for his trip, Acosta worked as a dental assistant and collected donations of dental hygiene products from local dentists to distribute on his trip. The first week, the group worked in an elementary school in the rural community of Santa Fe, Panama and the second week in more urban Curundu. At both sites Acosta's group



**Eduardo Acosta** (left) with other volunteers and community members

## “Arriving in a foreign land, meeting a new culture, and finding myself as I served others-- this was all part of my experience.”

provided services to children who represent the greatest need. The group focused on prevention and public health, but also diagnosed and treated those who needed immediate attention. “It does no good to treat patients if we don’t show them how to maintain their health; it defeats the purpose of our visit,” Acosta said.

Because of his experience as a dental assistant, Acosta was able to assist the dentist with fillings and extractions. He also had the benefit of being bilingual which allowed him to communicate with patients and further develop his patient interaction skills. Acosta said that seeing a different side of dentistry helped to solidify his career goals. He also gained humility and compassion

by providing much needed services to those in great need. Acosta hopes to serve abroad again as he continues towards his dental degree.

“Arriving in a foreign land, meeting a new culture, and finding myself as I served others—this was all part of my experience,” Acosta said. “One day while working at the elementary school in Santa Fe, Panama, a 5-year-old girl approached us and asked if we could take a look at her tooth. She said that her mom was working out of town, and her dad didn’t want to bring her to the clinic when she told him she was in pain. The dentist ended up extracting the tooth that was bothering her. It was just so amazing to realize that some of us who have easy access to medical treat-

ment will whine about not wanting to go to the dentist or not wanting to go see a doctor, and here was this little girl who came up to us on her own and asked for help. Sometimes all we need is to experience what it’s like to be in need and realize that we have nothing to complain about.”

“On a personal note I gained humility and compassion. I was able to experience first-hand the need that is present in this world. We might see it on TV or read about it in a newspaper, but until you see it with your own eyes, you don’t realize the amount of poverty and need that exists on our planet.” His research mentor is **Dr. Frank White**, plant pathology.

## Giving Back to an International Community

We encourage all our Scholars to be well-rounded members of society. **Kelsey Castinado**, junior in Architecture, is a great example of this. Over winter break Kelsey traveled with family to Tigua, Haiti to participate in a service project. Her group built a goat barn in four days, working from 6:30 a.m. to 5 p.m. every day.

“It was very valuable because I got to see how an actual building goes up, in smaller form, and use some of the things that I have learned from architecture class and actually apply it,” Castinado explained.

The living conditions were far less comfortable than those she was accustomed to, but Castinado said, “Many things were very different and it was hard to see, but it was a very good trip to take.”

**Professor Susanne Siepl-Coates**, Architecture, is her research mentor.



**Kelsey Castinado** (second from left) with team and completed barn



## Freshman Student Becomes Genius in Geneious



Halle Sparks entering data

**Halle Sparks**, freshman in biology (St. Louis, MO), spent much of her first year at K-State studying the evolution of green algae plants called Volvocales. Specifically examining three different but related species within the Volvocales plant group, Sparks set out to find the gene causing evolution in these plants. Volvocales serve as the model system for studying evolution.

"These plants have already shown up in my first biology class, and because of my research experience, I had a jumpstart on the material," she says. She explains that they also have unique characteristics of multicellularity that make them ideal for studying

evolution. She spent a large amount of time during her first semester learning a computer database program called Geneious which is used to create family trees of plant species. Once the family trees are created, the program can determine relationships between genes. It was Sparks' responsibility to study these relationships and conclude which genes would be most capable of promoting evolution. Sparks studied approximately forty family trees and ultimately chose five genes that she believes are candidate-worthy of causing multicellular evolution. Her next step will be to start the experimental stage of her research on the genes she selected.

**Dr. Bradley Olson**, Assistant Professor in Biology, served as Sparks' research mentor, challenging and supporting her through her research experiences. "Dr. Olson was my backbone and greatest supporter throughout my first semester of college," Sparks claimed. Olson is a big supporter of the Developing Scholars Program. He sees the value in working with freshmen students, both for the student's and the department's benefit. "It takes around three years for a student to become

completely knowledgeable in a lab's work, so getting them into the research during their first year is helpful," he says.

Sparks' research experience had a profound impact on her first year of college as well as her future career plans. Through research, she had the opportunity to collaborate with other students in her lab. She worked with students from a variety of educational levels from Ph.D. students to fellow undergraduates. As a freshman, it was inspiring for Sparks to work with older students. "I look up to them and am able to picture myself in their shoes one day," she remarked. After her first semester of research, Sparks' future plans of doing research in graduate school have been solidified. More than that, her research experience has encouraged her to "dream big." In the future, Sparks hopes to complete an M.D./Ph.D. program and become a medical doctor and a researcher. She aspires to get her Ph.D. in biomedical engineering and study stem cell research. Her ultimate dream is to use stem cells to create artificial limbs for amputee patients.

## Preparing for the Global Marketplace

**Jenae Tate**, junior in Chemical Engineering with a minor in German from Junction City, KS, chose to spend last year in Giessen, Germany at the Justus Liebig University. "College is the perfect time to go abroad, since it may be a lot harder to travel for leisure once you have a career," Tate said. Justus Liebig is an exchange partner university to K-State. Under this partnership, K-State students pay K-State tuition for 15 credit hours. Tate said the most expensive component was the airfare. Justus Liebig University has some distinct differences from K-State. She said there are no sports or extra-curricular groups affiliated with the university. Students are not required to meet with an advisor to enroll in courses. Course structure is also different. Tate had only one exam per course held at the end of the term.

All of Tate's classes were taught in German. This did not pose a problem since much of the technical language in the courses was nearly the same in English. Many students feel that their academic progress will be stalled by choosing to study abroad, but this was certainly not the case for Tate. She was able to take most of her second

year courses abroad, including engineering physics, organic chemistry, and chemical analysis along with her German language courses. She said that having to take one extra semester to complete her degree was well worth the experience abroad. Currently she is on a semester-long internship with Cargill in Blair, NE. Her research mentor at K-State is **Dr. Vikas Berry**, chemical engineering.



Jenae Tate (left) with friends in Cologne, Germany

### Academic Perfection: 4.0

#### Spring 2013:

Eduardo Acosta  
Jenny Barriga  
Nallely Barron-Garcia  
Marcus Dominguez  
William Duren  
Pamela Maynez  
Breyana Ramsey  
Rebecca Renteria  
Sofia Sabates  
Stephanie Skinner

#### Fall 2013:

Jenny Barriga  
Nallely Barron-Garcia  
Jonathan Bernard  
Thuy Cao  
Izabella Carmona  
Jennifer Delzeit  
Marcus Dominguez  
William Duren  
Alaina Littlejohn  
Armando Marquez  
Pamela Maynez  
Raquel Ortega  
Sergio Ortiz  
Navanté Peacock  
Daijah Porchia  
Larry Rodriguez  
Cipriana Sapien  
Geordy Williams

## Sommelier of Fine Colas



Breyana Ramsey and Dr. Koushik Adhikari

Second year Developing Scholar, **Breyana Ramsey**, (Topeka, KS) often contemplated the difference in taste between name brand, generic brand, and diet soda. Instead of leaving this question lingering in her mind, she decided to do something about her curiosity. She took action by designing her own research study with the help of her mentor, **Dr. Koushik Adhikari**, professor of human nutrition, to find out for herself if there is, scientific-

cally, a difference in flavor between name brand, generic, and diet sodas. Thus, she spent a large amount of her second year at college in the lab researching and comparing the flavor compounds in colas.

The tools Ramsey used to carry out her project included a solid-phase microextraction (SPME) and a gas chromatograph mass spectrometer (GCMS). "The SPME uses a small fiber contained within a needle that absorbs and extracts flavor compounds from a small sample of soda," Dr. Adhikari explained. "The GCMS then separates and identifies the flavor compounds in each soda by translating the information into a chromatogram (graph) in a software program. According to Dr. Adhikari, the software program contains a library of flavor compounds. Compounds extracted from a soda sample are compared against the compounds in the library so that they can be identified.

Ramsey and her mentor are interested in analyzing their results

through a lens of consumer behavior. Is there really a difference in flavor between name and generic brands or is it just in people's heads, they are wondering.

Through her Developing Scholars experience, Ramsey has learned the importance of not procrastinating, she has improved her work ethic and established a greater sense of independence. "I can't always rely on other people," she said. "My mentor pushes me to go into further detail and open my mind," she explained. "I am getting exposure to this other world that I wouldn't have without DSP."

Ramsey is Adhikari's second mentee, and he has enjoyed watching his mentees grow into confident and successful student professionals. "I enjoy helping students understand concepts of being a good person with good work ethics," he remarked. Adhikari's main goals are to open students' eyes and help them develop self-confidence, both of which he has done for Ramsey.

## The Perfect Complement

**Jeffrey Murray**, senior in Physics (Manhattan, KS), is a master of strategy and time management. He is both a Developing Scholar and a McNair Scholar. This semester he also received a \$1000 scholarship (matched by the Physics Department) for research from the College of Arts and Sciences. This has allowed him to complete 200 additional hours of funded research. Murray is first author of "Visual Cueing and Feedback Influencing Undergraduate Students' Reasoning Resources on Conceptual Physics Problems" which was accepted for the National Association for Research in Science Teaching (NARST) national conference. He attributes his successes to the opportunities provided by being involved in undergraduate research. When discussing the two research-based programs, he describes McNair as "the perfect complement to DSP." Where DSP's research commitment occurs during the traditional academic year, the McNair program allows him to expand upon his research over the summer months. This has also allowed him to develop an even stronger relationship with his research mentor, **Dr. N. Sanjay Rebello**, professor of physics.

Now the duo are examining ways to

better facilitate the learning of physics. Murray is very passionate about physics. He says, "Physics is like the mother of all sciences. It touches all branches of science and describes the physical world." Before returning to college, Murray worked as a high school teacher and observed that most of his students hated science and math. He wants to change that by making physics more accessible. Dr. Rebello says, "Jeff brings a different perspective to our research as a non-traditional student. Jeff has reflected on how he learns and has useful insights on how we can better facilitate learning."

Murray has a lot of life experiences to clarify his goals. He said, "When I was

thinking of coming back to school, I knew I wanted to get involved with research." Between DSP, McNair, and a summer REU (Research Experience for Undergraduates) through the National Science Foundation, he has definitely met that goal. Other DSP/McNair Scholars include **Obdulia Covarrubias**, **Monica Farfan**, **Simone Holliday**, and **Stephanie Skinner**.



Jeffrey Murray and Dr. N. Sanjay Rebello

### Thank You, Faculty Mentors!

Our Scholars owe much of their success to our K-State faculty who believe in "passing on the torch" of knowledge and illumination through early training in research and creative endeavors.

Over fourteen years, we have seen the distinct advantage K-State students have upon graduation as a result of faculty generosity in mentoring.



# Edgerley-Franklin Urban Leaders Set the Bar High on their Quest to Become Change Agents



From Left: **Yubisela Toledo** (Biology), **Sergio Ortiz** (Electrical Engineering), **Cipriana Sapien** (Accounting), **Navanté Peacock** (Psychology/Anthropology), and **Geordy Williams** (Computer Science). Also pictured: Willie Wildcat

Michelangelo once said, "The greater danger for most of us lies not in setting our aim too high and falling short; but in setting our aim too low, and achieving our mark." The freshman group of Edgerley-Franklin Urban Leaders recognizes the danger to which Michelangelo refers. Since the first day they stepped foot on campus, they have been giving their all in every aspect of their lives from academics, to research, to involvement, to leadership. They have all earned high grades while conducting research and community service, and have set the bar high for themselves and others. A few examples of their service contributions include the Martin Luther King Jr. Day of Service, a mobile food distribution drive, a weekend service trip to Kansas City, as well as a week-long Alternative Break trip to Kansas City. Their willingness to challenge themselves has impressed many and gone unnoticed by few. Due to their engagement, work ethic, and unwavering commitment and dedication to promoting change, we took a closer look into the minds of these leaders to gain insight on their experiences thus far.

**Q: How did the Edgerley-Franklin program impact your transition to college life?**

**Yubisela:** I immediately felt a bond with the group, which made the transition easier.

**Cipriana:** The older members helped by extending their hands and making me feel welcome.

**Navanté:** It helped a lot! I liked being in contact with the same group of people; it helped me establish a sense of belonging.

**Q: What does being an Edgerley-Franklin Urban Leader mean to you?**

**Yubisela:** It means being that person who others wouldn't expect to be here.

**Navanté:** It means that I have a purpose.

**Geordy:** It means that we have a vision for the future. We all have a vision to leave the world a little better than we found it.

**Q: People talk about college as a time to create your legacy. How do you plan to leave your mark?**

**Navanté:** I want to be the guy who initiates ideas and makes them happen.

**Yubisela:** I will be the person who comes back and keeps giving to this program.

**Cipriana:** I want to be the game changer; someone who takes an average idea and collaborates with others in order to make it something great.

**Sergio:** I want to be that Edgerley-Franklin leader who gives confidence to others and helps them feel included.

**Geordy:** I want to be known as the "student who dreamed big." Even if I didn't accomplish it, I still went for it.

**Q: How has this program changed the way you perceive the world?**

**Sergio:** Before this program I saw things in one shade. The new perspectives I have gained change the way I see everything.

**Cipriana:** The world is my experiment. No matter where I go I can figure out what to add and take away in order to make a difference.

**Geordy:** I now believe it is possible to change the world. I believe in my passion and my ability to change communities.

**Q: What do you want the donors to know?**

**Sergio:** The biggest changes can come from the most unexpected places.

**Navanté:** Thank you for believing in us. It gives us hope, ambition, and a purpose.

**Yubisela:** Thank you for picking this cohesive group. We fit together like a puzzle.

**Geordy:** You will be able to see your investment soon.

**Cipriana:** This program changes lives. I wouldn't be doing what I'm doing now if it weren't for this program.

The mission of the Edgerley-Franklin Urban Leadership program is "to shape the next generation of urban leaders. Urban Leadership Scholars will influence and inspire future generations to value education, hard work, and achieve academic and career success." There is no doubt that these five leaders are on their way to fulfilling the mission of this program. As Geordy Williams put it, "This is just the beginning of our impacts," so be on the lookout for the next great American urban leader. It is likely to be one of these five Scholars. If you get the opportunity to talk with them, be sure to inquire about how they are working toward becoming successful change agents. It is likely their engagement with change is stemming from their courage to "set their aim too high."

## Davis Scholarship for Scholars in Biochemistry and Molecular Biophysics

**Dr. Larry Davis** knows what it's like to take a chance. As a biochemist he does that with every experiment. He also knows what it's like to get a chance. That's what happened when he received a scholarship to go to a college where every science major was required to do an undergraduate research project with a faculty mentor. From that chance grew his first two scientific publications, plus a photo in *Chemical and Engineering News*. It also led to an opportunity to go to graduate school to get one of the first PhDs in Molecular Biology.

Now he's trying to make a chance for more first generation college students at K-State to have the opportunity of doing research with a faculty mentor. This kind of opportunity can be a life-changing experience, especially for members of groups under-represented in sciences, who may have met very few professors or researchers during their high school years.

Not surprisingly, Larry Davis' parents, George and Olive Davis, did not have college degrees. The economic realities of the Great Depression of the 1930s in the U.S. made that impossible for him, and the turbulence of WW II in England made that impossible for her. But they valued higher education and made great efforts so that both of their children would get to college. In recognition of their dedication to education, the new scholarship is named in honor of George H. and Olive E. Davis, and is called the Davis Scholarship for Developing Scholars in Biochemistry and Molecular Biophysics.

This year's recipient is Developing Scholar **Mauri Zumalt**. Zumalt is a junior in Biochemistry from Nickerson, KS.



**Dr. Larry Davis** with **Mauri Zumalt** and research team.

Photo and excerpts reprinted from K-State Biochemistry/Molecular Biophysics News Site, permission granted by Dr. Davis.

# Breaking the Glass Ceiling in STEM Fields



**Pamela Maynez**  
Biochemistry  
Dodge City, KS



**Nallely Barron-Garcia**  
Microbiology  
Dodge City, KS



**Jenny Barriga**  
Chemistry  
Dodge City, KS



**Emma Brace**  
BioSystems Engineering  
Topeka, KS

Four Scholars recently interviewed for highly competitive post-baccalaureate programs. **Pamela Maynez**, **Nallely Barron-Garcia**, **Jenny Barriga**, and **Emma Brace** share their experiences and tips for successful interviews.

Collectively they visited Harvard University, Stanford University, Purdue University, University of California at Berkeley, University of Kentucky, University of North Carolina, University of Maryland, Virginia Tech, and our neighbor University of Kansas.

**Q: What are some things you did to prepare for your interview?**

**Pamela:** I simply tried to be myself during the interview and answered their questions with confidence and sincerity; I wasn't there to try to impress anyone. There were a few minor things that I did beforehand though. I talked to my family as well as my mentor a few days before the interview. They gave me words of encouragement, which helped build up my confidence. The weeks prior to my interview, I began reflecting on my strengths and characteristics that set me apart from the rest of the applicants, which also helped boost my confidence. On the day of, I was calm, collected, and just showed the interview committee who I was, my true persona.

**Nallely:** To prepare for my interview, I scheduled an interview with the career services office. I also had my friends interview me. I looked up interview questions. I got caught up in what they

wanted to hear from me, which I soon discovered was the most horrific mistake I could make. Top schools are looking for someone unique, and only you know what is unique about you, not the internet. Also, research the school. Many times you hear misconceptions for that particular school; therefore, you have to get your facts straight.

**Jenny:** I looked up the professors and their research and I looked for what I really want in a graduate program. I needed to be sure that the program fits my needs. The most important thing is knowing your research and your goals. And remember that you're interviewing them as much as they're interviewing you.

**Emma:** I sent out emails to potential advisors right after I applied that basically said something like, "Hi, I applied to this program at your University, I looked at your webpage and really like your research, could you tell me more?" and I got positive responses from several people. At schools where someone has to agree to be your advisor before the school will accept you, reaching out like this really helps you stand out from the crowd and have someone take interest in you.

**Q: If you could do it over, what (if anything) would you do differently?**

**Pamela:** If I could do it over, I would go into my first interview feeling more confident, less nervous, and I would share more of my personal experiences with the committee.

## Reflections *Continued from Page 1*

Where does the Developing Scholars Program fit into this new office? Developing Scholars will continue within the larger office. The successes of students in the Developing Scholars Program have forged the way to this expansion, thus making opportunities for more students than ever before. Developing Scholars have always believed that with great opportunity comes great responsibility to provide opportunity for those who come after them. They are proud to have made a difference for all undergraduates by way of their hard work and successes. Developing Scholars will continue to be remembered as the catalyst for something greater than themselves. Developing Scholars was the little program with big dreams who thought they could. And now they have.

**Nallely:** I would recommend the following tips for students going on an interview:

1. Buy your suit in advance. When you buy it, make sure it fits. What you think looks good might not be what looks good.
2. If you wear heels, put a comfy pair of shoes in your bag to take the tour.
3. Bring mints to freshen up your breath.
4. Contact a student and ask them if you can hang out with them.

**Jenny:** Plan my schoolwork better so that I can work ahead and not get behind while I am on visits and find the most comfortable pair of dress shoes!

**Emma:** I don't think I would do anything differently. I made sure they all knew that my research was SUPER important! I applied to direct PhD programs (skipping over Masters) and the amount of undergrad research I'd been involved in was really what qualified me to be accepted into direct PhD programs. It also allowed me to show that I had research experience, experience presenting, getting along with other students in the lab, etc. It showed that I have a basic skill set and am ready for graduate work.

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## Alumni Spotlight:

**Dr. Reynaldo Morales:** Residency in General Surgery at KU Med, Wichita, KS

**Dr. Hieu Doan:** Doctor of Internal Medicine in Kansas City, KS

**Dr. Samuel Ornelas:** Internship in Internal Medicine, Radiology Residency at KU, Wichita

**Dr. Alejandro Estrada:** Chiropractor in Liberal, KS

**Dr. Alicia Brunson:** PhD in Sociology from North Texas State, teaches at K-State

**Clemente Jaquez-Herrera:** Promoted to Associate with RTKL Associates

**Issac Falcon:** Accepted to PhD program in Family Studies at Kansas State

**Jesus Garcia:** Master's in Anatomy at St. Louis University, now attending KU Med

**Jorge Mendoza:** Master's in Wildlife Ecology, University of Wisconsin-Madison

**Kale Lothamer:** Peace Corps, Jamaica

**Danielle English:** Senior Account Executive, Weber Shandwick, San Francisco, CA

**Anthony Garcia:** Accepted to UMKC Dental School