



Q&A with Jessica Ibarra, 2010 K-12 Minority Outreach Fellow

Who are you?

Jessica Ibarra, Ph.D.

Where were you born?

San Antonio, Texas

What childhood experiences led to your interest in science?

The memories that stand out the most were in Life Science class in middle school. The class fascinated me. I learned so much about the human body and how our body works. From that moment on, I knew that it was my goal in life to keep learning and studying anything science.

Why did you decide to study science?

I am naturally a problem solver, very curious, and enjoy hands-on learning. I decided to study science from my fascination with biology and as I got older, I realized that in science I could use my problem solving skills, curiosity, patience and love for getting hands-on learning, all at the same time.

Where did you attend school/university?

I attended a community college at Palo Alto College in San Antonio, TX for two years then I transferred to the University of Texas at San Antonio (UTSA) where I finished my bachelors' degree in biology. My graduate and dental training was done at the University of Texas Health Science Center at San Antonio.

How did you decide on the school?

I decided on the school based on location. I was not ready to move too far from home so I started three miles from my house at Palo Alto College and then I travelled across town to finish my degree at UTSA. Relocating was not an option for me since I was raising three kids during my graduate training, so I stayed in San Antonio at the University of Texas Health Science Center.

How did you become interested in physiology specifically?

This interest was primarily due to my love and appreciation for the human body and how it works. The more biology classes I took the more interested I became on how things work

(physiology). My undergrad and graduate laboratory experiences helped keep me interested, too. In graduate school, taking gross anatomy was so instrumental on staying in physiology.

What is your current position?

Currently I am a Postdoctoral Fellow at the University of Texas Health Science Center at San Antonio (UTHSCSA) and an adjunct instructor of biology at the University of the Incarnate Word in San Antonio, TX.

How did you decide on your current career path?

Early in my education I decided to become a dental hygienist, but I wasn't accepted. I pressed forward and decided to go to dental school. It was a long road towards dental school but I kept busy doing research the whole time and this helped me develop my passion for basic science research. I eventually entered a dual degree program for dentistry and doctoral graduate school. A few years in the program, I became overwhelmed and was not successful in dental school. From that point on, I turned my concentration to completing my studies in graduate school and there moved forward onto a career in research and academia.

How did you get there?

Getting there was very interesting. My parents were not educated beyond high school so the idea of going to college or understanding how it was done was foreign to them and me. When I started college, I thought maybe I wanted to be a dental hygienist. During one of my chemistry classes my professor asked me if I had considered doing research. Clueless, I replied, "What is research"? He tried to explain but it still wasn't clear. He was kind enough to help me enter a summer undergraduate research program and with his guidance I was introduced to basic laboratory science as a career. From that moment, I was determined to enter research as a career.

I also got there with the love and encouragement of my family and friends. I give lots of credit to my family for their support. Also, every step of the way I found that there were people (teachers and mentors) to guide me as long as I was willing to do the work and study hard.

What do you do within that position?

In my current position as postdoctoral fellow I have the grand opportunity to study the role of T cells in rheumatoid arthritis, an autoimmune disease that destroys the joints and is very debilitating for patients.

Describe your work in lay terms

My job is to study and understand the way your body's protective cells can become destructive to you. I work to further understand how your body recognizes your own cells as foreign such as in arthritis.

What are your outside interests?

I have many interests outside of work. I enjoy running, playing volleyball, music, and reading. I also am a mother of three awesome kids and I enjoy spending time with them and cheering them on in their activities.

What do you do for fun?

Running outdoors training for marathons in my fun time, swimming and weight training. I also like to go to the beach, rivers or lakes to go fishing.

Volunteer work?

My volunteer work includes community service project such as helping feed the city at the annual Jimenez Thanksgiving Dinner and the HEB Feast of Sharing during Christmas. This is an annual family affair for me for the last six years. I have taught Sunday school in our church for ten years. I have been a room mom, soccer mom, and basketball coach and volunteered in many areas for my children. I have also enjoyed mentoring middle school, high school and college students.

What advice would you give:

- **a pre-college (high school) student considering a career in physiology?**

If you are thinking about pursuing studies in physiology one day, my advice to you is to get involved as much as possible in science classes and activities. You must love what you do and the best way to really know if a career in physiology is right for you is to get involved. Look for volunteer opportunities in a lab, in a science club or at your local doctor's office. There are many ways to get involved and this experience will help prepare you understand what it takes and where it is something you develop a passion for.

- **an undergraduate student considering a career in physiology?**

If you are undergraduate student in a science or physiology major, my advice to you is that you to determine if you have a real passion for physiology. Do you enjoy learning about how the body works? Do you have a curious mind to explore physiology? Do you like the

challenge of solving problems? As an undergraduate student I would advice that you have a real desire to spend time developing that passion in your studies by working in a lab, talking with other students in the field and especially in developing an understanding of the types of jobs you can do after you earn your degree. If after your exploration you are more fascinated than before, then you are definitely on the road to becoming a physiologist.

- **a graduate student in physiology?**

To the graduate physiologist student: There is no turning back, you have invested a good amount of your time and life into this career and now is the time to make the most of it. Really, really love what you do. Your love and passion for learning and the discipline of physiology should excite you to do well in your studies and your research. My greatest advice is to READ, READ and READ. Read journal articles, book and any publication you can get your hands on to understand your current project and help you develop your own personal curiosities (for your future individual grant). You will be tired and exhausted most of the time but reading and the knowledge acquired are investments in yourself that you carry with you wherever you go in your career. Second, publish, publish and publish as much as possible. It pays off in the end to read and publish. Lastly, know what your next step is headed. Don't isolate yourself in your dissertation work to the point that you don't look beyond into your career opportunities. Network, ask questions, look at job opportunities and plan for applications/interviews at least a year before graduation. This gives you the time to enter into the postdoctoral position of your choice.

- **a postdoctoral fellow?**

To the postdoctoral student, this is the time to invest deeply in you. This is your transition to your desired position (academia, industry, teaching, etc...). You can't be a postdoctoral researcher for the rest of your life so get out there and make things happen. Get out of the lab and meet people, give back to your community by telling others about science, explore creative job opportunities and find the area you want to spend the next chapter of your life working on. Your time as a post doctorate will go by very quickly so invest your time wisely.

- **a new investigator?**

To the new investigator, don't forget to believe in the little people. You are at the top now but don't forget about taking on students under your wing. You are making an investment in them and them in you. The rewards are great for both of you.