# Junior Researcher After growing up in a small town in South Dakota, Augustana junior

After growing up in a small town in South Dakota, Augustana junior Becka Bogue was ready for adventure. She found it last summer when she was chosen to conduct cutting-edge scientific research at the La Jolla Institute of Allergy and Immunology in San Diego.

#### Q. What made you choose Augustana?

**A.** Growing up on a small family farm in rural South Dakota, I wanted nothing else but to travel, to go and to "see the world."

During my senior year of high school, my mom urged me to apply to Augustana, a mere 30 minutes away. I was reluctant. After visiting though, I was captivated. Here was a private liberal arts college that allowed me to pursue both my passions: biology and music. It was a college where the people were genuine and students were not simply another number but individuals with goals and dreams.

After that initial visit I knew that this was where I wanted to spend my next four years, exploring and growing, and I enrolled in the class of 2012 as a biology major.

### Q. How have the research opportunities enhanced your experience?

**A.** When I first started to think about summer medical research or a summer internship, I mentioned to my professors about wanting to travel. I was met with enthusiasm and support and they urged me to apply, because they knew that this experience would not only stretch me physically and mentally, but that I would be changed by it. Furthermore, when I asked them if they would write me a recommendation, they were able to write not only about me as a student, but also about me as an individual.

### Q. What's been the focus of your research thus far?

**A.** The research program I chose to apply to was sponsored by the biotechnology company AMGEN and was hosted by the University of California, San Diego, and other research facilities, including the Sanford-Burnham Medical Research Institution, the Moores Cancer Center, the La Jolla Institute for Allergy & Immunology and the UCSD medical school.

The program consisted of 15 students representing states such as New York, Massachusetts, Kentucky, Texas, Oregon and South Dakota, along with 15 students from UCSD.

Individually we had the privilege of choosing where and who to conduct research with, ranging in varying disciplines such as cancer research, diabetes research, neurology, ecology, immunology, and virology.

One of the most challenging but exciting parts was choosing where to participate in undergraduate research for the 10-week program.

I have always been fascinated by the development of vaccines against disease, and the process of how our body fights disease. So, I chose to work at the La Jolla Institute of Allergy and Immunology, studying viruses and the adaptive immune system with Dr. Michael Croft's lab under the mentorship of Dr. Shahram Salek-Ardakani.

Having the opportunity to work alongside people who have made a significant difference in immunological and vaccination strategies was a dream come true.

My research project focused on studying immune response components that are needed for protection against infection with a severe virus. This has been a topic of concern due to the recent outbreaks of pathogenic viruses such as SARS and H1N1.

In my research, I focused on the components of the immune system that are The program was also designed to allow us to experience beautiful San Diego! Almost every night my friends and I would go to the ocean, which was less than a mile away.

Many late afternoons after work, and every weekend, we went surfing and boogieboarding. Once a week or so the dolphins would be swimming around dusk. Being able to swim next to them is something this South Dakota girl will always remember.

Late at night we would go on "grunion runs," which are small fish that come in when the tide is low. We would fry them up right up on the beach.

There are many other memories I have with my friends from San Diego, Kentucky,

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needed to protect the individual from these types of diseases. The title of my research was "Correlates of Protective Immunity against Respiratory Poxvirus Infection."

### Q. What did you gain from the experience?

**A.** The hands-on experience I gained from this research opportunity is something that is irreplaceable and it was humbling to work alongside people that sincerely wanted to make a difference, not only scientifically but a difference that will have a lasting impact on human health.

I deeply encourage all science majors to apply to summer programs. It may be intimidating at first, but taking a step out of your comfort zone will leave a lasting impact on you.

The peers I met within the program have become some of my closest friends, and I know they will impact my future decisions.

## Becka Bogue, Junior, Biology Major

New York, and Oregon, and I feel grateful and humbled to be able to combine these experiences with the opportunity to work at one of the top Immunology Institutions in the nation.

#### Q. How would you describe Augustana?

**A.** Augustana College is a place that encourages students to experience the world, to try new things and take that step.

This January term, Augustana has given me the opportunity to study ecology abroad in Guatemala along with seven other students. This is what makes Augie incredible.

Augustana wants you to not only know about things, but to *experience* things. Even though I came from a rural town in South Dakota, Augustana has opened my eyes to the world and after each experience away, I treasure the ability to not only come home to my family, but to come home to the College.