

**TO: Nakatani Foundation**

## **Nakatani RIES 2024 Final Report**

Your Name: Noah Anderson

Your university: Georgia Institute of Technology

Host Lab in Japan: Omasa Lab – Osaka University

**Meaning of Nakatani RIES Fellowship:** How would you describe the meaning/impact of the Nakatani RIES Fellowship

The Nakatani RIES Fellowship is the opportunity of a lifetime to gain powerful experience in life science research while experiencing Japan from a unique and fulfilling angle. The relationships I formed and memories I made while on the program mean the world to me, and I believe those connections will last a lifetime.

Complete the following sentences with the intended audience for these responses being potential applicants to the Nakatani RIES Fellowship.

- My favorite experience in Japan was...
  - A weekend trip to the seaside town of Onomichi in Hiroshima prefecture, where me and some other US fellows biked across the Shimanami Kaido.
- Before I left for Japan, I wish I had...
  - Read the program itinerary more carefully to know what would happen.
- While I was in Japan, I wish I had...
  - Had more confidence interacting with Japanese people, since I found those interactions to be so memorable and fulfilling.

**Research Internship Overview:** Provide a description of your research project and experience during your research internship. How did your project relate to your current or future academic interests? What was the experience of working in an international research setting like? What will you take away from your research experience this summer and what impact do you think this has had or will have on your future academic career or research interests?

My research this summer was focused on antibody production in Chinese Hamster Ovary Cells, and if the production rate could be increased by upregulating a gene named VAMP3. As a result, I spent the majority of the summer working with my mentor Shuhei to design a line of cells with upregulated VAMP3 and determining their antibody production rate. This ties in heavily with my previous experience and interest in antibody therapeutics, and I found the experience of designing a cell line from scratch to be super illuminating. My work this summer has furthered my interests in bioengineering, antibody therapeutics, and pharmaceutical manufacturing, all subjects which I feel may become PhD research subjects of mine in the near future. The biggest difficulty was demonstrating my competency and prior experience to my mentors such that they would allow me to work independently, but I found the lab environment abroad to be similar to my prior experience in the US, which helped me to adjust quickly and begin making progress at the beginning of the summer.

**Lab Environment Overview:** Provide an overview of what the personal environment of the lab was like. Describe the personality and working style of your research group? What was it like working with your research mentor/s and the overall group dynamic in the lab?

The environment in the Omasa lab was generally closer to that of a group of friends than a group of co-workers, with students always interested in spending time with one another and chatting while working. They also frequently did activities together outside of the lab, such as dinners or rock climbing. Omasa sensei and my fellow students made me feel like a part of the team from the very beginning, and I was delighted to meet so many people who were interested in becoming friends. Most of my work was done in tandem with my mentor Shuhei, and our conversations during work were always lighthearted and full of laughter. Even on days where there was so much work to do in the lab that we barely sat down, I always look forward to arriving because of the friends I got to spend time with. My takeaway from the Omasa lab was that they work hard and play hard with everything they do.

**Daily Life in Japan:** Provide an overview of what your daily life was like in Japan. This could include the people you interacted with outside the lab on a day-to-day basis, food, your housing/living experience, your travels around Japan and the challenges you faced and the rewarding experiences you encountered over the course of the summer.

On an average weekday this summer, I would arrive at lab at around 10am and depart anywhere between 4pm and 6pm depending on how much work there was to be done. Kansai is a beautiful region, and so I would often travel with other Nakatani RIES fellows in to either Osaka or Kyoto after work to explore, eat the delicious food, or just soak in the atmosphere. Weekend trips to farther destinations were also a highlight of the trip, and I often devoted time after work to planning locations and itineraries for those far flung weekends. The trains and other public transportation were a constant blessing during my time there, as they made reaching destination both close and far feel much more within reach. The initial adjustment to life in Japan was challenging, with some confusing situations to resolve in order to get set up, but I found the process of making friend and growing familiar with life in Japan to be the most rewarding part of the while experience.

**Experiences with Japanese Culture:** Provide an overview of your most meaningful experiences with Japanese culture. This could be program activities or interactions you had with your lab or within your daily life in Japan that you think best exemplify aspects of Japanese culture or values. What did the experience/s teach you about Japan? What did they teach you about yourself?

During my time in Japan, I was struck by just how kind and inviting the people I met were. From strangers we met during travel to the friends I saw in lab every day, the hospitality and warmth of the Japanese people went a long way toward making my experience amazing. Whenever I would express any kind of issue or desire to my friends in lab, they would always offer ideas and advice to help me achieve my goals. In the most extreme case, my friend Sochi overheard me discussing my long walk to work, and so graciously offered to lend me one of her bikes for the duration of the summer. I found this kind of compassion to be infectious, and I believe it has helped me to be a kinder and more aware person since returning to the United States.