

Meet the Fellow

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Ashley M. Barbarino, PhD

Host Laboratory: Los Angeles County Public Health Laboratory

Degree of Study: PhD

Graduated: 2025

School: The Lundquist Institute at Harbor - UCLA Medical Center



Tell us about your educational background?

I have a Bachelor of Science degree in biochemistry from California State University - Dominguez Hills and a Doctorate in translational research with a focus in infectious diseases and immunity from The Lundquist Institute at Harbor - UCLA Medical Center/Charles Drew University.

What brought you into laboratory science?

I have always had a love for medicine and biomedical science. When I first started my collegiate journey, my initial goal was medical school. However, after working in pediatrics as a medical assistant, I would often discuss my interests with the pediatricians. Those discussions led me down a path where I became intrigued by medical/clinical research.

The moment I experienced performing research in a laboratory, I knew this was for me. I felt at ease working with the different reagents, organisms, and experiments. With every experiment there was a chance to solve problems and think outside the box like a puzzle. Although research was an amazing opportunity that I had the honor of working in for years, I knew that I wanted to do more with my education and knowledge.

All my research, except my undergraduate research, had clinical implications. This was fulfilling for me to know that something that we discovered could be used for the greater good. However it usually was never a direct impact. After becoming a PhD candidate, I started to realize that I did not want to stay in academia, nor did I want to pursue an industry career. I was looking into other options when I became an American Society of Microbiology (ASM) Future Leaders Mentorship Fellow and attended my first ASM Microbe meeting. At the meeting I went to a panel for people who were a PhD candidate/student or recent post-doctoral fellow in microbiology or related sciences. On the panel was a clinical microbiologist who described her pathway after receiving her PhD, and what she needed to do to achieve her licensure.

The moment she started describing what she did for her daily workload, I knew laboratory science was the career path I wanted.

How did you hear about the Public Health Laboratory Fellowship Program?

During my PhD, I worked closely with our clinical partners at Harbor - UCLA Medical Center in the Infectious Diseases Department. I knew the chief of medicine for infectious diseases and would discuss my ambitions of becoming a clinical microbiologist with him. He suggested talking to our clinical microbiologist at Harbor - UCLA who oversaw the microbiology laboratory. Holly Huse, PhD, D(ABMM), agreed to talk to me about her experience in her career. She allowed me to attend the current Infectious Disease resident's lecture and rounds so I could gain clinical experience. I wanted to do more in the laboratory but, due to not having the proper licensure, I was denied. Huse told me to investigate the Public Health Laboratories in Los Angeles County instead of the hospital settings. I found Nicole Green, PhD, D(ABMM), contact on the ASM mentors list and contacted her. I told her I was interested in clinical microbiology, and she asked if I would be interested in public health microbiology instead. I agreed that this is also a pathway I am considering. After interning in the public health laboratory for a couple of months while finishing my doctorate, Green encouraged me to apply for the Public Health Laboratory Fellowship Program.

How did this fellowship match or exceed your expectations?

This fellowship has exceeded my expectations. It allowed me to gain essential experience in a public health laboratory that would be incredibly difficult

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to gain if not in a clinical laboratory setting. Much of the science and technical aspects are similar to the experiments I was already performing; however, the workflow, documentation, and quality assurance were completely new to me. Being integrated into the public health laboratory had broadened my scope and opened my eyes to the world of public health.

potential outbreaks or surveillance, attending leadership meetings, performing internal QA audits, and assisting with regulatory oversight. Exposure and experience of a laboratory director were our overall goal for this fellowship.

How has your fellowship experience inspired you?

I have always had strong feelings about the importance of public health in our society. However, being on the front line of outbreaks, emerging disease discussions, food safety, One Health, surveillance projects, etc., this fellowship opened my eyes to the realization of the underexposed truth of how much public health is involved in creating a safety net for our communities. This is an unprecedented time, where public health is being challenged and budgets are being cut. I am seeing firsthand the receding of the safety net that has been implemented for so long and witnessing difficult discussions to be made in the testing capabilities of public health.

Los Angeles County Public Health Laboratory staff from left: Wing Leong, Ivette Yanez, James Volz, Ashley Barbarino, Nicole Green, lab director, Karen Nguyen, Monique Sanchez and Ashley Nicholas.



Tell us what you learned from your mentor.

My mentor is incredible. From day one, Green was and remains to be completely hands-on, ensuring that I am experiencing every aspect of what a laboratory director is involved in. Every task that I am given has a learning opportunity for me to grow professionally within this field. I am humbled and amazed by the amount of knowledge that she harbors and try to take in the wisdom she offers. I have never met another individual who is as dedicated, hardworking, and intelligent as Green. She is truly one of a kind.

Tell us about your project assignments/laboratory roles.

Many of my projects revolve around administrative duties that are typically given to the leadership team. This includes writing and implementing verifications or validations, writing standard operating protocols, writing manuscripts, performing research projects, discussing with vendors about instrument implementation, leading epidemiology-lab programs such as Combating Antimicrobial Resistant Gonorrhea and Other STIs (CARGOS), assisting with point prevalence surveys for

How would you describe the Fellowship to other students?

This fellowship has given me an opportunity unlike anything else throughout my career. It allowed me to be fully integrated in public health and to gauge if this is truly the path I want to take in my professional career. If a student is interested in public health laboratory science, I feel this is a wonderful option to test the waters before jumping all the way in.

Aside from the laboratory and the science, did you gain any other beneficial life experiences?

The amount of networking that I have been able to achieve with this fellowship has been amazing. I have met so many different people involved in public health within my own county and state as well as other states throughout the nation. I have met so many leaders in the field that have been so gracious to speak to me and allow me to discuss career/life decisions with them including my mentor. Not only laboratory members but also the team at APHL has been such a valuable resource developing professionally.