ASM/CDC Fellowship Program Celebrates 20 Years

Steve Monroe and Mei-Shang Ho in the lab in 1987. This photo was featured in US News & World Report.

For 20 years, the ASM/CDC Fellowship program has produced an impressive rank of trained infectious disease microbiologists dedicated to addressing public health issues. The program is just one of many at CDC that have helped shape scientific research in the interest of public health.

Formed in 1993, the ASM/CDC Program in Infectious Disease and Public Health Microbiology is a joint effort between the American Society for Microbiology (ASM) and CDC that offers postdoctoral microbiologists two-year fellowships in residence in CDC host laboratories. During their time at CDC, fellows acquire experience in public health aspects of microbiology, particularly those aspects related to infectious disease diagnosis, prevention, and control.

Fellows in the ASM Fellowship program perform research at one of CDC’s campuses under the guidance of a CDC mentor. They have the option to study bacterial and mycotic diseases, viral and Rickettsial infections, nosocomial infections, HIV/AIDS, vector-borne infectious diseases, or parasitic diseases. Since 1994, 163 fellows have participated in this highly competitive program, hosted by lab branches in NCEZID, NCIRD, NCHHSTP, and CGH. The program is coordinated by the Partnerships and Training Program Team in NCEZID’s Division of Preparedness and Emerging Infections.

Over the years, CDC has relied on programs such as the ASM fellowship and its precursor, the National Research Council’s Research Associateship Program (RAP), to produce some of the public health arena’s most talented players. Graduates of these programs can be found in government agencies, academic institutions, and private organizations such as laboratories and nonprofits. Many of the graduates choose to stay at or return to CDC, including Steve Monroe, who came to CDC in 1987 as a RAP fellow and is now deputy director for NCEZID.

Fellowships such as these are critical to CDC’s workforce development, according to Monroe, because they open the door to a continuous influx of new ideas and new ways of thinking and problem-solving. “Bringing in fellows is a great way to keep CDC fresh,” said Monroe.

In addition to recognizing its 20th anniversary, the ASM Fellowship program also has undergone some significant changes—the biggest being the formation of the ASM/CDC Scientific Advisory Committee (SAC) in 2013. The committee was formed to strengthen the program and address
challenges it has faced over the years by providing additional scientific oversight. Made up of a principal scientist from each center with laboratories, the OID senior advisor for laboratory science (ex officio), and an ASM Steering Committee representative, the ASM/ CDC SAC is responsible for providing guidance for mentors and fellows, monitoring and enhancing the fellows’ experiences, advising on program goals and objectives, and overall program evaluation, among other things.

Jan Nicholson, ex officio member of the ASM/CDC Scientific Advisory Committee.

Much of the committee’s work focuses on enhancing the fellows’ experience at CDC. Jan Nicholson is an ex officio member of the ASM/CDC SAC and believes that the committee’s accomplishments thus far have improved the ASM Fellowship program. She oversaw the program in 1996, while serving as acting associate director for laboratory science (ADLS) at the National Center for Infectious Diseases and again starting in 1999, when she became the center’s permanent ADLS.

“We want to make sure the fellows have a great experience so that they are ready for the next step in their careers,” said Nicholson, who retired from CDC in December after 33 years of service, most recently as OID’s senior advisor for laboratory science. “That means ensuring that fellows are aware of and participate in scientific meetings and trainings, introducing them to others in their field, and helping them develop oral and written skills for presenting their science—all things this two-year fellowship should guarantee.”

Lia Haynes, chair of the CDC/ASM Scientific Advisory Committee.

Lia Haynes, ADLS in the Division of Viral Diseases, is the chair of the CDC/ASM SAC. As the chair, Haynes provides leadership to the CDC/ASM SAC in carrying out its responsibilities of providing scientific oversight of the fellowship program. The NCEZID/DPEI Partnership and Training Program
Team Leader, Angela Slaughter, and Training Program Coordinator, Ruth Pruitt, both Ex Officio members, work closely with Haynes to provide program support to the CDC/ASM SAC.

The committee is also taking steps to bolster the recruitment, screening, and training of mentors. “We want mentors to give ASM fellows opportunities to network, offer them guidance about career opportunities that are out there, and make them aware of training opportunities outside the bench science,” said Nicholson.

Thus far, the committee has developed guidance clarifying what the expectations of a mentor are, what the expectations of a fellow are, and being explicit about the components of a good scientific abstract. Soon, ASM fellows will begin presenting their abstracts to their peers and other scientists as a way to strengthen their oral communication skills.

“Thereinigoring the program and getting it back on better footing for a good experience—this is our aim. It will be a few years before we see the impact of our efforts,” Nicholson said, noting that the next class of fellows will be selected this summer.

Looking forward, the committee will work on providing guidance to the program in the form of a Fellowship Program Evaluation Plan, which will evaluate the overall effectiveness of the program and ensure that it continues to be an effective and productive initiative for everyone involved.

Former and current ASM fellows: Row 1 (l-r): Shiva Gangappa, Claressa Lucas, Sandra Steiner, Amy Denison, Todd Smith; Row 2: Celine Taby; Row 3: JC Forbi, Justine Pompey, Shaw Gangis, Sheila Akinyi; Row 4: Mahamoudou Outtara, Nnaemeka C. Iriemenam, Naomi Lucchi, Mike Farrell; Row 5: Christopher Paddock, Terrence Tumpey, James Lara.

“The committee has worked diligently over the past year to strengthen the foundation of the fellowship program. We want to make this a successful training program in the public health aspects of microbiology with the primary focus on developing future scientists who will pursue research careers addressing public health issues,” Haynes said.

The hard work, careful thought, and planning that goes into providing scientific oversight is well worth the effort, Nicholson said, because the ASM program offers a tremendous return on
investment. “Our return on investment—it’s the fellows who return to CDC and contribute.”

The next part in this 2-part series will explore the stories of some of those fellows who have remained a part of the CDC family. Stay tuned to hear their personal stories, coming tomorrow in *CDC Connects*.

This *Inside Story* by Laura Smith

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Part 2: ASM Fellows Building Careers in Public Health

It’s clear that the fellowship is the reason that many current and former ASM fellows came to CDC, and often, it is also the reason that many of them stayed, made contributions to public health, and became leaders. Read the stories of current and former ASM fellows below.

**Joseph Forbi, Fellow, NCHHSTP**

Joseph Forbi joined CDC in February 2008 as an ASM/CDC postdoctoral fellow in the Molecular Epidemiology & Bioinformatics Lab, Division of Viral Hepatitis. “As a fellow, I had abundant opportunities to apply complex and modern techniques for practical applications to resolve some puzzles surrounding the global evolutionary dynamics of HAV, HBV and HCV,” Forbi says. “The team-based approach to laboratory research, diverse research background of laboratory members, and a unique preceptor arrangement contributed significantly to [the] success of my fellowship and my understanding of hepatitis viruses. The ASM/CDC Fellowship provided Forbi with greater research and training opportunities than would have been available elsewhere. “At this time, we have a list of the most exciting research projects to be carried out in the days ahead. As research on hepatitis is rapidly expanding, I believe that the fellowship has equipped me for the role as a subject matter expert and all its challenges.”
Nnaemeka C. Iriemenam, Microbiologist, CGH

Nnaemeka C. Iriemenam, PhD, joined CDC in 2009 as an ASM/CDC postdoctoral research fellow in the Clinical Immunology and Molecular Epidemiology Laboratory, Division of Parasitic Diseases and Malaria. “The accomplishment of my ASM/CDC Fellowship Program provided me the opportunity to become the Atlanta Research and Education Foundation (AREF) principal investigator/supervisor in 2012. It also helped my interactions with other scientists and epidemiologists at the Center for Global Health to learn how information derived from basic science can be applied to control malaria and other infectious diseases.” Iriemenam believes that training is a great strength of the ASM/CDC Fellowship Program that greatly benefited his career in infectious disease research at CDC.

Steve Monroe, Deputy Director, NCEZID

When Steve Monroe came to CDC in 1987 as an NRC/RAP fellow, he had no idea he would stay and build a career in public health. “I don’t think I could have defined ‘epidemiology’ when I walked in the door,” he says.

“The ASM Fellowship has provided an important path for me to continue to grow as a researcher, an international collaborator, and a mentor of younger scientists.”—Mauricio Lascano, biologist, CGH

That all changed after he began working with his CDC advisor, Roger Glass, in what was then known as the Respiratory and Enteric Viruses Branch. “Roger was a strong believer in connecting lab and epi . . . . Being able to make that direct connection between my work in the lab and saving lives—that got me hooked on public health as a career.” That fellowship is the reason Monroe and many others came to CDC, stayed, made major contributions to public health, and became leaders. “The ASM and the EID laboratory fellowships are important today for exactly that reason—to give people who might not be thinking about a career in public health the opportunity to see what it’s like and get hooked, like me.” Likewise, CDC has much to offer fellows. “Part of the attraction of working here at CDC as an infectious disease microbiologist is that all the weird stuff comes here—SARS, hantavirus, and so many other emerging infectious diseases.” The allure of weird infectious diseases hasn’t waned for Monroe. In February, he will celebrate 27 years at CDC.

Elizabeth Hunsperger (center) in Tanzania responding to a dengue outbreak and conducting a lab training session.

Elizabeth Hunsperger, Activity Chief, Dengue Branch, DVBD, NCEZID

When Elizabeth Hunsperger, PhD, was awarded the ASM/CDC fellowship in 2002 in the Division of Vector-Borne Diseases in the Arbovirus Disease Branch, she had no experience in arbovirology but
was a virologist by training. “My original career plan was to become a professor at a university and establish my own research lab, but after two years with the DVBD, I was fascinated with public health and applied science.” Hunsperger’s colleagues in DVBD encouraged her to apply for a position at the CDC Dengue Branch in San Juan, Puerto Rico, working with dengue virus. “I was thrilled when I was accepted for the position. And, shortly afterwards, I was also accepted as assistant professor at the University of Rhode Island. I decided to pursue a career in public health with CDC and never looked back.” Hunsperger is currently an activity chief of the Immunodiagnostic, Development and Research Laboratory. “The ASM program launched this amazing experience for me and I am eternally grateful for their support during my fellowship and the outcome of the fellowship program towards a very successful career at CDC.”

Paul Rota, Team Lead, Measles, Mumps, Rubella, Herpesviruses Laboratory Branch, NCIRD

When he began his career at CDC in 1986, Paul Rota quickly realized that CDC was a very different research environment compared to the academic laboratory where he earned his PhD.

“It is thanks to the ASM Postdoctoral Fellowship that I could get a foot in the door and move towards providing such a service to the public here at CDC.”—Amy Denison, microbiologist, NCEZID.

Rwanda National Reference Laboratory, ASM Bioresource Center. L-r: Thérèse Mukankwiro, Claude Muvunyi, MD, Marie Fidele, MD, Wangeci Gatei, PhD, Emmanuel Rusanganwa.

“I served as preceptor for nine NRC or ASM fellows, and am happy to report that most of them are still contributing to public health laboratory science. I am also a member of the newly formed Scientific Advisory Committee for the ASM fellowships, which will provide scientific oversight for the program. CDC plays an important role in training the next generation of public health laboratory scientists and will be vital to commit the resources necessary to maintain and, hopefully expand, the ASM Fellowship Program as well as other laboratory training programs.”

“My relationship to ASM has come full cycle, as they are one of the international partners building capacity, strengthening microbiology as part of the laboratory systems in Rwanda. It has been great having to deal with familiar faces like Lynee Galley, whom I have known for years, from the time I was a student and now as a partner in program implementation. ASM has been a steadfast partner for the last 14 years.” – Wangeci Gatei, laboratory team lead, CDC Rwanda.
James Lara, microbiologist, NCHHSTP.

“I viewed the ASM/CDC fellowship as a way to improve upon my candidacy for employment, albeit, without having a clear understanding with whom or in what position I’d be working after the two-year fellowship. In the end, the ASM/CDC fellowship turned out to be more than what I expected; it not only provided me with skills for developing innovative approaches to analyze public health data, but also launched my career at CDC, securing my involvement in areas of research most endeared to me.”

For a related story, see Part I.

This Inside Story by Cathy Young

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