



## **Recruiting and Retaining Qualified Laboratory Scientists for the CDC**

*A Report of the Advisory Committee  
to the Director, Laboratory  
Workgroup*

***Adopted by Vote of the  
ACD on 11/14/2023***

## **Recruiting and Retaining Qualified Laboratory Scientists for the CDC**

**Issue:** *Excellent laboratory scientists are essential for high-quality, advanced laboratory testing, laboratory research and clinical laboratory testing. The market for such scientists is highly competitive with the private sector offering compensation that is extremely difficult for CDC to match.*

**Question:** *How can CDC better recruit and retain outstanding laboratory scientists to ensure high-quality, advanced laboratory testing at CDC?*

### **Review process**

The Laboratory Workgroup (LW) of the Advisory Committee to the Director (ACD) met virtually on Monday October 24, 2023. Dr. Tara Henning, PhD, who leads the Laboratory Leadership Service (LLS) Fellowship Program, provided an overview of the LLS Program. The LW then talked with the following CDC senior scientific staff and Office of Human Resources (OHR) staff who discussed challenges in recruitment and retention of senior laboratory staff at CDC: Kelly Mathis, Supervisory Strategic Business Partner, OHR; Jason Washington, Strategic Business Partner, OHR; Victoria Olson, PhD, Deputy Director, Office of Laboratory Science and Safety (OLSS); and Wendi Kuhnert, PhD, Deputy Director for Laboratory Readiness and Response, National Center for Emerging Zoonotic and Infectious Diseases

### **Summary**

The LW found administrative processes in place at CDC to recruit scientific staff to be unnecessarily complex, rendering it challenging, and at times impossible, to find and attract technically qualified personnel. Even when technically qualified personnel are ultimately identified, the ability to recruit the most capable personnel is often not administratively supported. The result is a shortage of talented and qualified scientists to direct and staff laboratories performing diagnostic testing, as well as those responsible for national preparedness and response functions during biological and environmental emergencies. Similar limitations were identified with respect to scientists working in and leading CDC's research laboratories.

Although it was beyond the scope and time allotted to fully define all challenges and propose solutions, the activity was detailed enough to put forth a recommendation that the federal government develop a strategy to support recruitment and retention of qualified scientists at CDC. The LW recommends that CDC Executive Leadership work with the federal Office of Personnel Management (OPM) to review current hiring and retention processes for both clinical and research laboratory positions and propose process improvements that will enable CDC to be staffed with talented and qualified scientists. The LW understands that Congressional action may be necessary to address some issues. In addition, and while such a federal review is underway, the CDC should consider internal approaches which are within the CDC's Office of Human Resources (OHR) purview, to address retention issues for scientists, including the establishment of career ladders and promotional opportunities available to other professional staff within CDC.

## Laboratory Workgroup Observations

Examples of existing CDC programs developed to enhance recruitment and retention.

1. The CDC's Laboratory Leadership Service (LLS) program is a 2-year postdoctoral service-learning **program** that combines core public health laboratory competency-based training with practical, applied investigations and public health service. Eligibility is based on having completed a doctoral-level degree in a laboratory-related discipline (e.g., microbiology, molecular biology, organic chemistry, environmental chemistry, genetics, bioinformatics). Dr. Henning indicated that 94% of the graduates remain in public health, many at CDC. [Laboratory Leadership Service \(LLS\) | CDC](#)
2. The CDC OHR has a Career Ready Program within the Office of the Director; limited information is available on the CDC website regarding activity of this program. [Office of Human Resources \(OHR\) | About | CDC](#)
3. In specific mission-critical areas, such as in the Data Modernization Initiative (DMI), the OPM has given CDC direct and immediate hiring authority. Recruitment of technical positions for DMI is on-going. [Direct Hiring Authority | Working at CDC | Careers at CDC](#).
4. The federal Title 42 Career path is available at CDC. Title 42 appointments are intended to attract and retain scientific personnel by providing hiring flexibility and salaries competitive with the private sector. Title 42 appointments can last for five years with an unlimited number of extensions; the CDC OHR shared a perception that individuals in Title 42 positions are not, "true employees."

Observations and examples of challenges of current CDC policies and procedures

1. A CDC Senior Scientist indicated that there was no direct line of promotion at CDC that allowed an individual scientist to stay focused on and direct high technical level, innovative, laboratory work. All promotion pathways required entering administrative/supervisory career pathways, which require a different skill set. This approach to career advancement accelerates the loss of technical expertise in the diagnostic laboratory and risks poor fit of an individuals' skills with the new role in the organization. The LW heard that recruitment and retention of epidemiologists was easier than scientists since epidemiologists have a more direct pathway to promotion. The LW did not see data or examples to support this anecdotal observation.
2. CDC senior scientists indicated that while they draft the Position Descriptions for scientist recruitments, information detailing the specific qualifications required are not included in the version used for advertisement, with specifics replaced with more general competency requirements. In addition, the recruiting scientists have little role in deciding which questions the applicant will be asked, since OHR supplies a list of questions without any input on which are the most important for the position. This makes it unlikely that a search will yield an individual qualified for the role. As an example of this situation, a first attempt to hire a deputy Clinical Laboratory Improvement Amendments (CLIA) Director at CDC resulted in only one internal candidate who ultimately declined the position because of salary considerations. In a second recruitment attempt, the recruiting scientists at CDC became aware of two experienced CLIA-laboratory director candidates who applied but did not pass the first review of applications by OHR (referred to as the Certification Process) and therefore could not be interviewed.

3. Scientists leading recruitment efforts have little to no involvement in the certification process and perceive that they often lose the best candidates before the interview step. The OHR does the certification based on scoring rules and criteria all federal agencies follow. It was also noted that an applicant's self-assessment and the particular words they use to describe their expertise impact scoring and potentially appropriate candidates are often disqualified at an early stage. As a result, people with extensive experience applying for federal jobs tend to advance for consideration ahead of people with the right experience and credentials for a laboratory position.
4. OHR often requires that recruiting outside of the Agency be justified if there is a different proposed applicant pool than in the past. This policy means that not all positions are openly competed and available for external applicants, who may have the expertise that CDC needs. Many clinical diagnostic laboratories throughout the U.S. employ medical laboratory scientists without doctoral level degrees but with bachelor's degrees, which satisfies the federal CLIA requirements for diagnostic laboratory personnel that perform high complexity testing. It is the perception of the LW that this approach is not widely used within the CDC.

Other federal agencies have developed mechanisms for recruitment and retention.

1. The U.S. Food and Drug Administration (FDA) and the National Institutes of Health (NIH), for example, have thousands of highly qualified scientists. They use various appointments (including title 42), retention programs, and other mechanisms to avoid hiring issues experienced by CDC. The CDC can learn from experience of other agencies in working with OPM to develop a recruitment and retention process for laboratory scientists.

## **Recommendations**

The LW previously recognized the importance of having a robust, diverse workforce for clinical laboratories, comprised of scientists who have the education, skills, and qualifications to support and lead high-complexity laboratories. Scientists are also needed to work in and lead CDC's research laboratories. The CDC's administrative challenges in recruiting and retaining highly qualified scientific staff result in a national vulnerability that puts public health and safety at risk. The LW therefore strongly recommends that CDC makes hiring highly qualified scientists to lead clinical laboratories and research laboratories an institutional high priority.

<https://www.cdc.gov/about/pdf/workgroup/EnhancingCDCLaboratoryPoliciesPracticesSystems.pdf>

1. CDC executive leadership should urgently request a review of federal recruitment policies and procedures and a report on policy changes that can be made to address this issue. The LW understands that some changes may require Congressional action but believes progress can be made short of such reforms as well. This review should include:
  - Review of current policies that impact recruitment of scientific staff, especially in contrast to the process of recruiting epidemiologically- and medically-qualified staff.
  - Review of the current applicant certification process to determine why qualification requirements, including the level of education and professional certifications the applicant has attained, are not always included in the Position Description. This should be conducted by a team comprised of CDC senior scientists, senior administrative staff and members of OHR.

- Review of the salaries of CDC scientists at all levels of education and responsibility in comparison to equivalent positions in academia and private industry.
2. CDC should strongly consider capitalizing on the success of the LLS program to design an additional year that could prepare LLS Fellows to sit for the board exams to qualify them as clinical laboratory directors. This program could be modelled on the program offered by the American Society for Microbiology which offers a two-year postgraduate training programs in medical and public health laboratory microbiology and in medical laboratory immunology. The training is overseen by the Subcommittee on Postgraduate Educational Programs (CPEP), and programs are typically administered by clinical microbiology and immunology laboratories. This idea is not new. It was previously proposed by CDC senior scientific staff who, as part of the plan, had engaged local clinical laboratory and jurisdictional public health laboratory partners to provide rotations and experiential learning opportunities. The idea was not internally supported at CDC. Given the critical need at CDC, and elsewhere in public health, for clinically qualified personnel, the LW strongly urges that CDC re-consider this initiative.
  3. CDC should enhance retention of scientists by developing a career path that will support laboratory scientists advancing in their careers while remaining in the laboratory doing critical work for the American people. As an example, CDC could consider creating a senior scientist or lead scientist position for individuals who are very experienced and have expertise that is only accrued after long experience in the laboratory. CDC could model this position on one which already exists at large state public health laboratory. The responsibilities of the Lead Scientist position at this public health laboratory include method development, test validation, recommending improved technologies and instrumentation, serving on advisory committees, and providing training as well as project management of grant and other scientific initiatives. The position does not have supervisory responsibilities and reports to a high level in the organization. For scientists who have skills in operational and administrative roles, training opportunities and promotional credit should be given for achievement in training and educational opportunities, including board certification, “bench to supervisor” training and licensure of laboratory technicians.
  4. The OHR at CDC should contact Human Resources offices at other federal agencies that require scientific and technical staff to become informed about their scientific hiring practices and policies. These agencies could include: NIH, Department of Energy, Veteran’s Affairs, FDA, the Indian Health Service and the United States Department of Agriculture. In particular, CDC should consult with Veterans Affairs regarding how they have developed and funded the VA Learning Opportunities Residency (VALOR) program to recruit, train and retain nursing staff in Veteran’s Affairs hospitals. <https://www.va.gov/oklahoma-city-health-care/work-with-us/internships-and-fellowships/va-learning-opportunities-residency-valor/>