



## Advice on how to prepare for careers at the Department of Health with a science PhD

### Organization of Public Health Services

- Office of the State [Epidemiologist/Environmental and Occupational Health Services](#)
  - [Communicable Disease Service](#)
  - [Consumer, Environmental and Occupational Health Service](#)
  - [Cancer Epidemiology Services](#)
- Division of [HIV/AIDS, TB and STD Services](#)
- Division of [Family Health Services](#)
- Division of [Public Health Infrastructure, Laboratories and Emergency Preparedness](#)
  - [Public Health and Environmental Laboratories](#)

Within Public Health and Environmental Laboratories:

#### **1. [Public Health Laboratory Services](#)**

**A. Newborn screening** - The Newborn Screening Program tests more than 110,000 dried blood spot samples per year from New Jersey's newborns. NJ law requires that every baby born in the State be screened for 55 disorders that can cause serious health problems.

**B. Microbiology** - The Microbiology Program processes more than 140,000 tests a year across a wide range of disciplines and including both culture and non-culture procedures. The units involved include Enteric / Food /Pulsed Field Gel Electrophoresis, Mycobacteriology, Sanitary Bacteriology, and Special Bacteriology.

**C. Automated assays** - The Automated Assays Program utilizes advanced, state of the art instrumentation for the detection of substance abuse, infectious disease, and sexually transmitted diseases.

**D. Biothreat response** - The primary responsibility is to apply microbiological and molecular technologies for rapid detection and identification of bioterrorism agents such as Bacillus anthracis (causative agent of anthrax).

**E. Virology** - Influenza, Arbovirus Vector Borne Disease Surveillance, HIV Testing, Rabies, Outbreak Investigation

#### **2. [Environmental Chemistry Laboratory Services](#)**

**A. Radioanalytical Services Laboratory** - This laboratory is responsible for maintaining radiological testing capabilities for the analysis of drinking water in support of the federal Safe Drinking Water Act. The laboratory also performs

radiological analysis of soil, vegetation, and air filter samples. It also serves as a testing resource in response to incidents involving the accidental or intentional release of radioactivity into the environment.

**B. CT/Biomonitoring/Food Testing**- This laboratory program has three sections: Chemical Terrorism, Biomonitoring and Adulterated Food Testing.

**C. Inorganics** - This laboratory program is subdivided into two principal testing areas: General Analytical Chemistry Testing and Trace Metals Testing.

**D. Organics** - This laboratory program is subdivided into three sections: Gas Chromatography/Mass Spectrometry (GC/MS); Gas Chromatography (GC) and High Performance Liquid Chromatography (HPLC); and Sample Preparation.

**E. IT/Data Management:**

The IT Group is responsible for the support of the Laboratory Information Management System (LIMS), as well as internal and client information processing.

3. [Clinical Laboratory Improvement Service](#)

4. [Policy Planning and Regulatory Compliance](#)

Almost every state has a department of health and some large cities such as NYC and Philadelphia do as well. The cities mostly perform HIV, TB, STD testing.

A postdoc is not necessary nor is an MPH. Think about doing a fellowship.

How to get your foot in the door:

Association of Public Health Labs has a postdoc/fellowship program that sends people either to the CDC or to the State Public Health Department. The placement works as a match process.

<http://www.aphl.org/mycareer/Pages/default.aspx>

The Oak Ridge Institute for Science and Education (ORISE) also has a fellowship program.

<http://orise.orau.gov/cdc/>

Research Triangle Institute has internships and fellowships

<http://www.rti.org/page.cfm/Internships>

<http://www.rti.org/page.cfm?obj=906350AC-3D81-446D-A255F06C5DE6B72F>

Other companies may have fellowships such as Exxon Mobil, J&J, Perkin Elmer, Biorad

Something to look into is whether fellowships have a professional development fund which could be used to develop soft skills.

**Hard skills they are looking for:**

Good hands, troubleshooting, assay development.

Technical writing skills.

Get a Medical Laboratory Science Tech degree. You can do this online. A good online course is: <http://shrp.rutgers.edu/programs/clsweb/>

**Soft Skills to develop:**

Show a desire and skill to lead (grow a program) and manage (deal with personnel).

Take on leadership roles. Show that you are dedicated, responsible and a team player.

Go to meetings and present. Network.  
Learn how to manage a budget.

**Where to find the jobs**

Check the Department of Health website for job postings:  
<http://web.doh.state.nj.us/apps2/hr/hlthpos.aspx>

They don't interview until after the deadline for application.

To qualify for a CLIA Laboratory Director position with a PhD, you also need board certification which you can study on your own and then take the board exam ([http://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/Certification\\_Boards\\_Laboratory\\_Directors.html](http://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/Certification_Boards_Laboratory_Directors.html))

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Sponsored by Graduate School of Biomedical Sciences at Robert Wood Johnson Medical School (GSBS at RWJMS) and Center for Innovative Ventures of Emerging Technology (CIVET)