

# Health Career Observer



The Official Newsletter of the WNY R-AHEC

September, 2025

## Toxicologist

A **toxicologist** is a professional who researches and identifies the impact of chemicals, toxic materials, new medications and radiation. They test things such as tissue, water and food samples for the presence of harmful chemicals. The toxicology field is broad and includes many areas, from forensics to medicine. Specializations include: Clinical, providing toxicological diagnosis for poisoned patients; Regulatory, assessing health hazards; Occupational, investigating health risks of chemicals in the workplace; Forensic, providing information to the legal system on illegal drugs and chemicals; Medical/pharmaceutical, investigating the unwanted effects of drug treatments; Environmental, investigating the impact of chemicals on the environment; Aquatic, investigating the effects of chemicals on marine organisms; Terrestrial, focusing on the effect on organisms following exposure to artificial or natural chemicals in soil; and Neurotoxicology, studying the effects of toxic systems on the nervous system. Toxicologists can work in a lab or an office environment.

**Average Annual Pay: \$120,000**



*"The most rewarding part of my job is being like a detective and solving the tough cases"*  
-Alex Rogers, MD, Medical Toxicology Fellow

## How Do I Become a Toxicologist

**PROJECTED JOB  
GROWTH RATE IS  
10% BY 2033**

Employers usually require toxicologists to have a bachelor's degree in toxicology, biology, chemistry or a related field. Although this is a minimum requirement, toxicology is a highly competitive field, so you may choose to pursue a master's or doctoral degree. After graduating from a doctoral program, candidates usually enter a postdoctoral fellowship. Fellowships often last several years and allow a toxicology fellow to perform research, learn from experienced professionals and gain additional training that can help them succeed in the field. Certifications can be useful in helping toxicologists gain employment and advance in their careers. Certifications include the American Board of Toxicology, the American Board of Forensic Toxicology and the American Board of Applied Toxicology.

## What Does a Toxicologist Do?

- ✓ Research and identify substances harmful to humans, animals, or the environment.
- ✓ Participate in controlled experiments to evaluate the safety of chemicals and assess risk.
- ✓ Devise regulations for the uses of certain substances and provide advice on their handling.
- ✓ Comply with regulatory bodies to ensure safe practices within local, national, and international guidelines.
- ✓ Produce reports, present findings, and advise on effective treatment for organisms or environments affected by adverse chemicals.
- ✓ Provide rigorous quality control and data management.



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## A Professional Account

Alex Rogers, MD, Medical Toxicology Fellow  
shares his insight into the field of Toxicology.

*"My name is Alex Rogers, I am an Emergency Medicine doctor in my second year out of residency and a Fellow in Medical Toxicology. Essentially, I have two jobs: I work in the Emergency Department at Upstate Medical University and in the Poison Control Center. I act as support for our poison specialists (we call them SPIs), so when there is a complex case or a patient who is very ill after a toxic exposure, I get called and help the medical team treat the patient."*

### What is the most rewarding part of your job?

*"The most rewarding part of my job is being like a detective and solving the tough cases, looking for clues from the patient's labs and exam to find out what they were exposed to and how to treat it."*

### What is the most challenging?

*"The most challenging part of my job is that people do not always realize just how dangerous household materials can be. From medications to cleaners, we get calls about mishandled toxins and it is frustrating knowing how easily these situations could be avoided."*

### What do you wish you knew back in school that you know now?

*"In high school, I was a perfectionist, and my goal was always to be right and get the best grades, be the best musician, or be the best athlete. I wish I had known then that it was important to dig deeper and focus on learning and improving yourself, rather than comparing yourself to others."*

### Anything else you want to share?

*"Toxicology is a very broad field, where science, problem solving, and patient care all collide. If you enjoy all of these things, a path in medicine and toxicology may suit you well!"*



Click on the image for information  
on Toxicology.

<https://www.youtube.com/watch?v=A0NNyjVvnYo&t=113s>



Click on the image for a day in the life of a  
Toxicologist.

[https://www.youtube.com/watch?v=v\\_7ySZbj4cI](https://www.youtube.com/watch?v=v_7ySZbj4cI)



The Upstate New York Poison Center is available 24/7 to help with questions or emergencies about poisons, medicines, chemicals, and more. You can call the free, confidential hotline at 1-800-222-1222 and talk directly with a Registered Nurse, Pharmacist or Physician, all experts in poison information. Even if it's just a question or you're unsure, the Poison Center is a safe place to get fast, reliable answers. Save 1-800-222-1222 in your cell phone, just incase! Visit [www.upstatepoison.org](http://www.upstatepoison.org) for more information.



For more information visit

<https://www.toxicology.org/careers/toxicologist/becomeTox.asp>



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