


Zane Kraft Laboratory Technician, MS

LABORATORY TECHNICIAN
ZANE KRAFT, M.S.



Place of Employment:
**Seattle Biomedical
Research Institute**

Type of Work:
HIV Vaccine Research

We do a lot of DNA alignments of HIV Envelope sequences. Another fun thing that we now do more of is computer modeling of HIV Envelope proteins with different mutations.

CAREERS IN THE SPOTLIGHT:
LABORATORY TECHNICIAN

What do they do?
Laboratory technicians, sometimes called “lab techs” or research technicians, do much of the day-to-work in the lab, including purifying and sequencing DNA, caring for laboratory machinery, and analyzing samples.

What kind of training is involved?
Some laboratory technicians have a 2 year Associate’s degree or a 4 year Bachelor’s degree. Some, like Zane Kraft, also have a Master’s degree (additional 2 year training).

What is a typical salary for a Laboratory Technician?
Ranges with experience from \$30,000/year (\$14/hour) up to \$60,000/year (\$29/hour) or more.

1. Where did you grow up?

I grew up in the Seattle area, in Kent, Washington to be exact. I went to Kentwood High School and for college I went to Central Washington University.

2. What do you do (i.e., what career or field are you in, what is the title of your position)?

I am a research technician, also called a laboratory technician, in an HIV vaccine lab at Seattle Biomed, a non-profit research institution in Seattle. I do a lot of different things in the lab – molecular biology, protein analyses, and cell-based assays.

3. How did you choose your career? When did you first know this was the career you wanted?

I think it all started in undergrad. Like so many others, I wanted to be an MD, and took lots of biology courses. I was in microbiology and went to talk to the professor and asked her what kind of work she was doing. I ended up liking it so much, I decide I wanted to keep on doing it!

4. Did your family support your decision to pursue your career?

Yes, definitely. The whole MD thing may have seemed much sexier, but overall they were very supportive.

5. What is the highest level of education you have?

I have a BS in biology with an emphasis in microbiology, and a Master’s in biology. Both are from Central Washington University.

6. What is the highest level of education reached by other members of your family?

Bachelor's degrees. I don't think we have any PhDs in the family that I can think of.

7. What is the salary range for a person in your position?

For the non-profits, which is what I can attest to, the starting salary is at about \$30,000 [\$14/hour] and the upper limit is about \$65,000 [\$31/hour] – a pretty wide range, depending on educational background and years of experience.

8. What do you like most about your job?

Well, obviously, every lab is a little different, but my boss is pretty flexible, and lets us venture out on our own ideas and test some of them. The flexibility of the hours is common with most labs, as long as you get the work done. You come in when you want and leave when you need to. And you're always learning new stuff.

9. What do you like least about your job?

Obviously I wish it paid more. Being in the HIV vaccine field, there are also a lot of disappointments. I think I have a thick skin now.

10. What's an abbreviated day in the life of your job?

This is always such a tough question, because every day is so different. On the average day, I come in, set up some PCR reactions [polymerase chain reaction], and then do a cell-based assay. Later on I'll probably do some data analysis, some number crunching and basic statistics, and prepare graphs of my data.

11. In one to two sentences, how would you say you use bioinformatics in your work? If you don't use bioinformatics directly in your work how, has bioinformatics impacted your career field?

We do a lot of DNA alignments of HIV Envelope sequences. Another fun thing that we now do more of is computer modeling of HIV Envelope proteins with different mutations. With the new grant from the Gates Foundation, we're looking at protein scaffolds that mimic specific structures of Envelope that we could use as vaccines, and how they react to monoclonal antibodies we have in the lab. It's all done with computer models.

12. Do you have any recommendations for students who are interested in entering your field?

One thing I always hammer into all of our interns is, if they are interested in science, when they get into college, they should seek out labs that have research opportunities. Whether you're working for free or if you're lucky enough to be with a lab that will pay you, the experience helps you immensely later on. When we hire, that's one thing we screen for—what type of research they did as an undergrad. It's amazing how many students coming out of college have no research experience.

13. What are your favorite hobbies?

I like to rock climb in my spare time; that's my biggest hobby, and hiking – outdoor things. I would love for traveling to be a bigger hobby. The flexibility with my work schedule helps a lot with my hobbies – sometimes I can sneak out at 3:00 pm to go to the gym.

Resources:

In the **field of laboratory research**, there are many different types of jobs available, depending upon what type of education and experience you have. For more information about different types of jobs in this field, including what you can do with different degrees (two year Associate's degree, four year Bachelor's degree, graduate, or professional degrees), visit NWABR's Student Career Center at:

<http://www.nwabr.org/students/student-resource-center/career-center>.

The site also includes descriptions of and links to different types of degree programs, various career paths, resources on writing a resume and cover letter and evaluating online resources, and tips for successful job interviews.

All of the links below can also be accessed from NWABR's Student Career Center.

To learn about **job prospects** and **salary information** for science technicians, visit the US Bureau of Labor Statistics:

<http://www.bls.gov/oco/ocos115.htm>.

The Commonwealth of Virginia has a "Career Guide for Biological Technicians" which details the **skills, knowledge, abilities**, and **tasks** required to be a biological or laboratory technician, as well as sample career path for a technician, beginning with a Laboratory Aide and ending with a Laboratory Manager. For more information, visit:

<http://jobs.virginia.gov/careerguides/BiologicalTechs.pdf>.

To read a *Seattle Times* article about the work Zane Kraft does, visit:

http://seattletimes.nwsources.com/html/localnews/2003139170_aids20m.html.

About.com offers a Career Brief for Laboratory Technicians, which includes short summaries about required **education, job outlooks, salary**, and "**a day in the life**" of a Laboratory Technician:

<http://careerplanning.about.com/od/occupations/p/laboratory-technician.htm>.

Some of the Resources above may also be used to research other careers that may be of interest to you in the future, including the Bureau of Labor and Statistics and the National Human Genome Research Institute.

Job Posting: Genetic Research Summer Internship

The laboratory of Dr. Leo Frankos is looking for motivated individuals interested in learning about genetic risk factors for bone cancer in young people and applied genetic research. Cancer is a complex disease, and our lab is working to identify genes that contribute to a higher risk for bone cancer, as well as genes that appear to protect people from developing bone cancer. We also develop cancer treatments, also called cancer therapeutics, in which we try to apply our genetic research findings directly to patient care. Interns will work closely with lab members and help analyze DNA samples, including DNA sequence analysis, and help present research findings to other members of the bone cancer research community. Prior lab experience is not necessary, but an understanding of molecular biology, including the role of DNA in encoding physical traits, is required. Applicants familiar with genetic testing and bioinformatics tools used to detect mutations are encouraged to apply. Additional computer skills, including Microsoft Office (Word®, Excel®, PowerPoint®), are preferred. Demonstrated experience of commitment and a willingness to learn new things is particularly valuable. Applicants must be hard-working, responsible, and able to work in a team environment. Address all inquiries to Dr. Leo Frankos, Seattle Research University, Department of Applied Genetic Research, Suite 400, Seattle, WA.