

American Chemical Society AMA: I'm Jennifer Novotney, the Public Programs Coordinator at the MIT Museum. Ask me anything about transitioning from the lab or working in a science museum!

AmerChemSocietyAMA ¹ and r/Science AMAs¹

¹Affiliation not available

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I'm a senior graduate student in a good department, about to publish and then leave (roughly one year left). What steps can I take right now to get to your position?

While my university makes an effort to discuss so-called "alternative" career paths, invited speakers are more inclined to talk about what those careers are like than to give advice on how to get into those careers. The path of least resistance is to take that unlikely shot at a tenure-track job. How do I leave the academic path, if I decide I want to do so?

[subito_lucres](#)

Honestly, I believe showing my commitment to science communication and outreach really helped make me a viable candidate for my position. Since I was changing tracks I wanted to ensure that my resume showed that I was experienced with informal science education, and that I was also a scientist. Some places worry that you are making a large career change because you couldn't hack it in your original field, so the best opportunity (if possible) is to give yourself as much experience in your new fields. That being said, if you are uncertain as to what you want to do, I found volunteering gave me a chance to explore different fields before I went on the job market. It takes a lot of work (juggling a PhD and volunteering), but it will also show your ability to balance projects and your commitment to your new field!

Edit - I also wanted to add that your advisor can be a great asset as well. My PhD advisor allowed me to take a small internship (~3 hours per week) to work with the NanoDays Team at the Sciencecenter in Ithaca, NY

What are some of the skills necessary for your job?

What does your day at work typically look like?

[ticklecricet](#)

I wear quite a few hats in my current position. In addition to coordinating most of the talks and

discussions that we host in the museum, I am also the volunteer coordinator for a team of 25 volunteers, and I run our maker space on Saturdays. My typical day involves looking at new research from MIT (or broader if I have the time), designing hands-on activities related to current research, contacting researchers and student groups to see if they would like to present or share at the museum, and try to innovate new formats for engaging the public in science. Currently I am working on the final touches for our programs for the Cambridge Science Festival (April 15 - 24).

My job requires strong organization skills (I am usually planning between 5 - 30 events at a time), good management skills (running a team of volunteers and working with researchers), as well as a solid science foundation. I love being able to create new activities that allow the community to explore and understand the frontiers of science.

Hi. Thanks for sharing your experience, it's very empowering. I am going through the same process, I have a PhD in astrophysics and have been doing informal education for years on the side. Tell me please, do you think that blogging and winning these contests gave you an edge over PhD science educators to get the job? Who were your most likely competition for the job? What do you think gave you an edge over them to become Public Programs Coordinator?

[accrama](#)

So I just asked my supervisor, and she said that blogging and winning the contest just added to my overall package. She said that she really liked seeing all of the initiatives I had been involved with, and that made her feel that I was truly committed to sharing (and empowering others to share) science with the community.

There is a lot of competition for these types of jobs, but I think what gave me an edge was that I had shown dedication to this field, found new opportunities to contribute, and that I have a very positive outlook on engaging people in the community. The MIT Museum is on the smaller side of science museums, so it really takes a team that is willing to commit and go the extra mile for us to grow and engage more people.

Museum studies degrees are being more popular, but you'll have all of the experience from your PhD and your informal education work. If you are wanting to continue that type of work, you have the advantage of understanding how research works, how to connect with researchers, and a better grasp of the science itself - so you can focus on the audience more.

Hello Jennifer,

Could you describe the path you took to deciding to work in a museum? Was your graduate advisor supportive of your decision? I'm a microbiology graduate student slowly realizing that I do not want to pursue a professorship.

Thanks!

[thebrightesttimeline](#)

Hi! It did take me a while to decide I wanted to work in a museum. My dream position of being the next Bill Nye is still a bit away, but I knew I really liked engaging the public in science. I also knew that I personally liked interacting with people, so I started looking for positions that allowed that type of contact as well. From there I started setting up informational interviews with people who worked in fields I that seemed interesting, and that really helped me solidify the types of positions that I wanted. It was not a direct course (even had a huge period of doubt right before I graduated), but it gave me the chance to explore and look at other opportunities too.

My graduate advisor was very supportive and would pass on opportunities that he saw for me. I know many people who did not have the same support and it made this process a lot harder.

Grad school can be a hard place to figure out what you want (especially because you don't get a lot of opportunities to see many of your other options). I have been pleasantly surprised at how nice so many people are - so if you can find someone with a job you think you'd like, there is a good chance they'd be willing to talk with you about how they got there and what it is really like. Good luck! - JN

What kinds of professional development do you have afforded to you in order to keep up with new developments and practice in the field?

[mentaldent](#)

In many ways it is very similar to what I did as a chemist. I still read journal articles (mostly in education journals, but some museum publications), I attend annual conferences, and I go to quite a few science events myself and observe what the audiences seem to like.

The field also seems to be quite willing to help other people interested in museums. When I was looking for my position at the MIT Museum, I also was able to meet with quite a few museum professionals who shared their experiences and views on what is trending in the museum world. Even now the field seems quite willing to help brainstorm and share gained knowledge.

Does the creepy robot art in the MIT museum still creep you out or are you immune?

[iorgfeflkd](#)

It does not creep me out, but I could see how it could that! Our robotics collection is a classic here at the Museum.

It actually got me inspired to learn more about robotics. I started by watching the DARPA robotics contest (which was both exiting and a little underwhelming with how slow the robots moved), and then I read a lot of Isaac Asimov.

Hi, thanks for doing this! What advice do you have for someone interested in getting a job like yours after a PhD? I'm only in my second year but currently I think I either want to do something with science outreach, or more of a lecturer at a university (I don't want to do academic research, but I know these positions are also hard to find because there aren't very many).

Also, if you don't mind me asking, what is a typical salary range for a position like yours? From what I have seen people that only teach or do informal education like yourself make a lot less than those in industry or a tenured professor, and sometimes it seems especially low for how much school you have to go through. Any advice you have would be appreciated!

[_your_name_here_](#)

My biggest advice is to get involved and do outreach beyond what is required for your PhD - you want to establish yourself as someone who is committed to these types of projects. If you do that, and have your PhD, you have a very solid package with a great skills set.

I know a lot of people do not talk about their salaries, and the museum field is notorious for underpaying their professionals. My salary is 55K, which is towards the middle of salaries in Boston. It is lower than what I would make in industry, but higher than many of the other positions in the museum

field. I have actually found that it can be a good bargaining tool on my side, because it shows that I am in my current position because I want to be, not because of the money. Hope this helps! - JN

Hi Jennifer, this AMA is awesome!! I studied biochemistry in England, graduated last year, and have been struggling to decide where to go from here (I've avoided answering the question by travelling lol) but I've been interested in science outreach and communication since I made a video explaining the three parent babies (mitochondrial DNA).

Any advice for someone starting out?

[lilycama](#)

I am glad that you are enjoying this AMA! I am jealous of your travels (I started at MIT about two weeks after defending so I haven't been able to travel as much as I would like).

My two pieces of advice for you are to keep creating content, and always remember your audience! By regularly making videos (or whatever else you decide) it shows commitment (and can possibly lead to some exciting opportunities). My second is to think about your audience and who you are trying to engage. This can continue into your positions in the future. Good luck! - JN

Hello Mrs. Novotney!

How far can we go teaching chemistry to kids under 12 years? What are some cool ways to teach them?

Also, from all the exhibits you explain, what's your personal favorite?

[CasualAttire](#)

I think there are many opportunities to explore for children under 12 in chemistry, it just sometimes takes a bit of creativity! I tend to enjoy exploring aspects of material science with younger students because it still ties into the chemistry, without worrying as much about laboratory safety. There are a lot of key concepts that you can explore without even needing to understand the periodic table (states of matter, polymers, etc.)

My favorite exhibit at the MIT Museum changes pretty often, but my current favorite is called "Projects & Prototypes" which features work of MIT students. I think it really embodies the innovative nature of MIT and it can be quite inspirational to visitors.

Do you miss being in the lab? I had to leave chemistry for sales because I was basically getting paid like a teacher, but without the sweet 14 weeks of vacation a year. But every day I miss being in the lab.

[teefour](#)

I do miss being in the lab. There is something quite thrilling about being at the frontier of science and trying things that have never been done before (I view it a lot like being an explorer in a new land). But I also enjoy using a similar form of creativity to come up with new methods to share these developments with people too.

How much do you get paid?

[OG_No_Haze](#)

55K - not great for someone with a PhD, but still reasonable for the museum world. Museums are notorious for underpaying their staff, and there is starting to be an internal push in the museum world to be more transparent about these things (with a hope of higher salaries)

Academic faculty positions are scarce and highly competitive. It seems like science communication positions should be even more scarce and more competitive: they are available at fewer institutions, there are fewer positions per institution, the job can be done by a bigger pool of candidates, and it sounds like more fun. Is that right? How would you advise someone who is intimidated by a career path that must have an even lower success rate than an academic faculty job search?

[YouImbecile](#)

There is definitely a lot of competition for these positions (and they don't always carry quite the same esteem as professorships), but I don't quite know how they rank in success rates.

For me it was a matter of what type of career did I want in the long run. I know that I am the type of person who will not be satisfied with something that is not my best, so I wanted to commit the time and effort to something I am passionate about. When you have a passion for a project or idea, it will come through in everything you do!-JN

Although you found your calling in science "communication and outreach," it seems there was a brief period between your disillusion with academia and introduction to this calling. Could you discuss some other jobs and opportunities you became aware of outside of academia that current graduate students facing similar disillusion might be interested in?

[_spraynardkruger](#)

There definitely are quite a few depending on your personal interests. Quite a few students will go into consulting (either building off their lab experiences, working with clients, or even helping scientists communicate), or acting as a liaison between research sectors and marketing (or clients), there are options in educational curriculum development, getting involved with policy or advocacy groups, science writing, museum work...

I am certain there are quite a few more, but those were all people that I've had a chance to chat with!

What took your blog to the next level for your career?

Also could you please link the blog if possible?

Thank you for your time! -C. Boho

[cboho7](#)

I sadly have to say I have let my blog slip (but I am hoping to come back to it!) My goal was to try to counter some of the chemophobia that we have in our world, but I don't think I got it as far as I would have liked! For my career it helped show that I was really committed to science communication, and I think it helped me practice writing for a non-technical audience.

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