A word to the wise: Scientists offer their best career and life advice

Lauren Fish
This year on *Science Changing Life*, we've had some amazing scientists join us—sharing their work, their stories, and what drives them. There's one question we love to ask our guests: *What advice would you give to scientists just starting out?* The ones who are at the very beginning of their journeys.

With graduation season here, it felt like the perfect time to pull together some of their answers. So, if you're one of those new grads—or just someone looking for a little inspiration—here's what our guests had to say.

//

Eric Topol, episode 50
Well, there's hard to come up with just one, but I think the idea that you'd like to not just follow something that excites you in your career, a path, but be open to change, be open to, as I moved across different areas, whether it was genetics, then the idea of digital or whether it's regular cardiology to much more research-based and working with induced pluripotent stem cells that I never thought I'd be doing that, and various things. So the idea is you start something that really gets you intrigued and revved up, and then you don't necessarily have to lock into that. In fact, you may get more excited that you don't ever have to give up that first area. But diversify is okay. Some people are saying, you just should just stay on it and become the world authority on this particular

I get restless and I get bored. If I did that, I could never do that. So I think one major point is that there's a little too much of this laser focus that it's okay to have more than one interest, and you're never really giving up. The one that you had is that you're adding on, and you need to have lots of, at least for me, the stimulation that it provides, then its challenges and it makes you, I think, even more into your work and hopefully the success of what you're going to get out of it.

Hugh Rosen, episode 46
People are self-sustaining, and they need to take a level of risk in order to sustain themselves and sustain our institution. And so what I tell them is there are a mixture of activities and choices that you will face. There are the things that are predictable, and that might be sort of bread and butter that sustain you, but never lose sight of the riskier big idea that is going to make the transforming difference. And so what we, I think love at Scripps are people who know how to balance and manage that risk. We look for people who have that sort of fearless nature, that self-confidence, that vision in their science that allows them to manage the basics and manage risk at the same

time, and therefore do something that is big and unexpected. So what do I tell them? Never be afraid.

Cindy Ehlers, episode 55
My advice is that everybody needs to work in teams. You can get a lot farther working in a team than you can working by yourself in your lab. And I think it's very important to have mentors that you can go to continuously to help you talk through things, to help you through times when you're having problems with grants or this or that. So I really think it's very important that the institute have mentors for people to be able to go to at any time and discuss their research and personal factors. Oftentimes, women come to me and ask, "How do you have a kid and be a scientist?" Or those kinds of things. And often just having one conversation with someone can make all the difference in someone thinking, "I can do that."

Donna Blackmond, episode 45
I think it's very easy today for young scientists to get discouraged for various reasons. I mean, maybe we had less information in my day, so we didn't know what we didn't know or something. It might've been harder to get discouraged when you can see everything online and what everybody else is doing. I mean, that may also help provide a community of people to talk to, which is part of what I would say to young scientists is try to stand your ground. I mean, if you are passionate about something and you want to do it, don't let people tell you. I mean, obviously you can take people's advice or you can listen to people, but you should stick with your guns if you think you've got something that, I mean, I mentioned earlier on about the RPKA methodology. I suffered a lot of abuse. People telling me it was ridiculous and crazy.

It's the most important thing is to have faith in yourself. And that may mean asking for a lot of advice about whether your ideas are worthwhile, but you definitely need to not cave into other people if you know what you want to do.

Shannon Miller, episode 49
I am a huge proponent of mental health. I love my weekend days where I just do nothing or I take a day trip to go outside. I think that on day-to-Day in science, my brain is my biggest asset. And so if my brain isn't up to snuff, then I'm not going to be able to do the research. And so making sure I have those self-care moments are how I relax. And I specifically love and I encourage people to step away from your research when you hit a roadblock because a lot of times you'll step away and you'll come back after a relaxing weekend and it'll be very clear what either you made a mistake or you overlooked this one area, or it's quite obvious that that direction is the best way to go.

One of the things that has helped me the most throughout my career is not being afraid or embarrassed to ask questions and ask for help. I think that a lot of scientists have this notion of individuality where you have to do everything yourself. You have to do your whole project yourself. But I think it's a waste to not use the resources around you. If I stuck on a particular area of a project, why would I dive deep into a multi-hour literature search of a field that I don't know when someone who is an expert in the field is quite literally next door, and they could just explain it to you probably better than it precisely.

Julia Moore Vogel, episode 52, on scientists looking to research Long COVID

I think for long COVID, in particular, make sure that you ground yourself in the infection associated chronic condition literature that's already out there. I think a lot of people have the— this is another misperception, actually, that I missed before—that long COVID is 100% percent new; we've never seen anything like it. Well, actually, for SARS-1, they did a follow-up 10 years after, and people had long COVID-like symptoms. And it can happen after mono, it can happen after many different things. And so, making sure that you're not reinventing the wheel is important to be efficient in your resources. The other thing I would say is: The patient community is very valuable in terms of perspective for what needs to be done, what's helpful to the patient, and what the patient can do.

Jay Pandit, episode 44

I can throw so many different one-liners at you, but really I'll say what I tell my kids. I think be kind whenever you can and don't burn bridges if you can possibly avoid it, because you never know when people come back in your life to help you out. And always have a growth mindset. Always be willing to learn and stay humble because if anything, this whole chat, GPT and G PT four World has taught us is that you can have a brain in a box. You don't have to be the smartest person in the room.

Lauren Fish

We hope you found something in these stories that resonated—whether it's a bit of advice to carry with you, or just a reminder that there's no one right path in science. To all the new grads out there: congratulations. We can't wait to see where your curiosity takes you.

Thanks for listening, and we'll catch you next time on *Science Changing Life*, where listeners come curious, and leave informed.