



Astrophysicist Federica Bianco duels her opponent in a boxing match in Richmond, California.

she says. Fortunately, the vast distance to the ground does not necessarily register when she is leaning out of an aeroplane. “It’s like looking at Google Maps,” she says. Still, there is just enough risk and excitement to put the rest of her life — especially her research — in perspective. “When I’m scared or nervous about something in science, I think: Maria, you jump out of aeroplanes. You can do this.”

Although skydiving falls into Carroll’s category of ‘permissible hobbies’, Sapar does not talk much about her pastime in the lab, and has decided against putting it on her CV. She reckons that future employers will care more about her research and publication history than her jump count, and there is always the chance that someone might take a negative view of her hobby. “When I tell people about it face to face, I always get one of two reactions. It’s either, ‘Oh, that’s cool,’ or ‘Why would you ever do that?’”

Adam Ruben, a malaria-vaccine researcher with the biotechnology company Sanaria in Rockville, Maryland, has had some scary moments of his own while practising his hobby: stand-up comedy. As a graduate student at Johns Hopkins University in Baltimore, Maryland, he would head to the city’s clubs and bars to try out some jokes in front of often less-than-impressed crowds. “I’d go to open-mic nights where there were 30 other comedians and 5 audience members. It was terrible,” he says. After moving to nearby Washington DC, he started to perform for bigger audiences that were receptive of the occasional foray into science humour.

Ruben still takes time away from his work to develop his act and perform live shows. In addition to one-liners, he often tells stories about his time as a PhD student, a topic that he mined heavily for his book,

Surviving Your Stupid, Stupid Decision to Go to Grad School (Three Rivers Press, 2010). For example, he talks about the time that he worked three straight 21-hour days to provide data for an adviser’s presentation. The twist — as many scientists in his audiences might guess — is that the data never got used. He says that he is generally happy with his education and scientific career, but he is also grateful that he has a platform through which to joke about its flaws. “Academia could use more humour,” he says, even if some of that humour has a sharp point. “Only by complaining about something can you actually do something about it.”

Like Ruben, Bianco is actively looking for gigs. She has yet to schedule her next bout, but is still devoting many hours to the ring. She spars with a partner several times a week, and she is always trying to get better. “Getting a PhD in physics made me a competitive person,” she says. At first, she was worried that her fellow researchers might look down on her hobby. But the word is out about how she spends her time outside the lab, and she has been pleasantly surprised by the positive responses from both the boxing and physics communities. Boxers whom she meets are always amazed to learn that she is an astrophysicist, and physicists have been completely supportive of her pugilism. “Everyone is amused, interested and somehow, even proud,” she says.

Depending on the setting, she is either a physicist-boxer or a boxer-physicist. Either way, she is proof that scientists can be more than their work, especially if they happen to have a wicked right hook. ■

Chris Woolston is a freelance writer in Billings, Montana.

TRADE TALK

Science educator



Elizabeth Waters manages the outreach teaching laboratories at the Rockefeller University in New York City, where high-school students and their teachers can use state-of-the-art equipment. She

explains how boosting others’ enthusiasm for and understanding of science builds on what she liked most about scientific research.

What skills from the lab help you to do your job?

As a researcher, I was fortunate enough to receive my own grant and manage the grant budget myself. I learned how to keep tasks and costs in line with the goals of the project. And learning how to establish collaborations with other researchers was very relevant to what I do now. Making sure that I understand other people’s expectations of my role and their expectations of their role — that is really critical. All of the details around running a class smoothly depend on those skills.

When did you first work with students?

The lab that I worked in as a researcher at Rockefeller often hosted a high-school or college student. I asked for students to mentor and realized that I was starting to think more big-picture about the students’ research experience, working out what kinds of projects would be good for them. I did that because I loved to see other people have the opportunity to talk about science and get excited. Now, we’re bringing students into labs that are just like those in which Nobel prizes have been won. The iterations of moving from training one student to the next gave me skills that I use all the time.

How did you make it into a career?

I started talking to lots of people when I was a postdoc, asking, ‘What is your favourite part of your job?’ I tried to identify the theme that really resonated most with me. Science education was at the top of my list. Then I tailored my CV. I volunteered to organize a yearly outreach event for fifth-graders, and taught a medical laboratory class at Hunter College in New York City, where I was an adjunct professor. Making time for those activities and for networking was not neglecting my research duties. It was serving my scientific career. ■

INTERVIEW BY MONYA BAKER

This interview has been edited for length and clarity; see go.nature.com/gpmhxr for more.