

to create concert halls, opera houses and other performance venues in Europe, Asia and Oceania.

Scelo designs with his ear: his main objective is “to make sure the music sounds great”. Although he has a doctorate in architectural acoustics and a master’s in physics, he maintains that he could not do his job were he not a musician. “My job is to link science and music,” says Scelo, who began playing guitar at 6, joined a classical orchestra at 18 and has been performing in orchestras and in the occasional rock band ever since. “As a musician, I understand what musicians need on the stage so they can perform under optimum conditions,” he says. “The outcome of my work is emotion. I have done good science if I see people at the end of the concert in tears.”

Classical pianist and violinist Jukka Pätynen, who researches concert-hall acoustics and music processing and auralization at Aalto University in Espoo, Finland, is equally reliant on his musical life for his science. “The orchestral sound and musical content is quite familiar to me — it’s one of the biggest strengths of my background for my research work,” says Pätynen, who performs regularly in a regional orchestra. “Because I am a concert pianist, I know what I’m talking about when I take a room’s acoustic measurements. It’s quite easy to get into the details of the sound and how the orchestra would need to sound there or here, and how things sound different in different parts of a room.”

Are there downsides to fitting a second life as a musician into the taxing, time-consuming career of a researcher? Only that, sometimes, the music has to take a back seat. Singer and ukulele player Ali Dreyfuss, a doctoral student in theoretical nuclear physics at Louisiana State University in Baton Rouge, gigs as often as she can with the swing-blues band Solomon Douglas Swingtet. Sometimes it is nowhere near as much as she would like — she has not travelled with them since last November, thanks to a gruelling class and research schedule combined with band dates that are not worth her while monetarily to fly out of town.

Still, Dreyfuss says that she welcomes any chance to step up onstage and immerse herself in torchy blues or high-octane swing. For her, too, music provides a way to recharge. “My work creates little bursts of activity and creativity, but as a nuclear theorist, I have to recognize all these rules and restrictions — I have to put pieces together, like a puzzle,” she says. “After doing that for hours and hours and hours, you’ve accumulated a bunch of stress and frustration, and something needs to discharge your brain. Music gives you a different way to unplug.” ■

**Karen Kaplan** is the Careers editor for Nature.

## TURNING POINT

# Winnie Tang

*Epigeneticist Winnie Tang was one of ten US-based women to attend the fifth annual US–China Young Scientists Forum, sponsored by the US Department of State, in April. The Chinese native, who is a researcher at Johns Hopkins University in Baltimore, Maryland, explains why such events are so important for international scientists.*

### What were your early-career ambitions?

As an undergraduate at the Chinese University of Hong Kong, I didn’t think about my career very much. I just wanted to do a PhD in Hong Kong, research multidrug-resistant and radiation-resistant forms of liver cancer and maybe one day become a teacher. When I started my PhD, my adviser had just moved back to Hong Kong from a stint at Harvard University in Cambridge, Massachusetts, and encouraged his students to go to international meetings to network and to look for research opportunities. And, in fact, I met my future postdoctoral adviser — cell biologist and physiologist Shuk-mei Ho, then at the University of Massachusetts Medical School in Worcester — at a meeting of the American Association for Cancer Research.

### How did your US move affect your career?

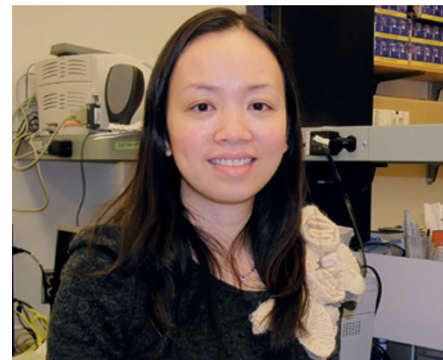
It provided more research opportunities in newer fields as well as the chance for interaction with a variety of researchers — clinicians, molecular biologists, environmental-health and cancer researchers. I realized that I wanted my own lab and to develop collaborations with other scientists.

### What did you work on as a postdoc?

Epigenetics — profiling gene expression in prostate cancers. Ho encouraged me to apply for a US Department of Defense postdoctoral trainee award, in part because it is one of the few programmes available for researchers who don’t have US citizenship. The fellowship was a turning point for me because it allowed me to follow Ho to the University of Cincinnati in Ohio when she became its director of environmental-health science. There, I focused on the role of environmental-chemical exposure and endocrine disruption in prostate cancer, which was more in line with my goal of doing research that was translatable to the public.

### How did you set about finding a job?

Ho encouraged me to apply for a Pathways to Independence award from the US National Institutes of Health (NIH). I got it and worked for two years at the University of Cincinnati before looking for tenure-track positions at



other institutes. When I saw that Johns Hopkins wanted to hire a genetics and toxicology researcher, I thought, ‘Bingo’. The NIH grant made me very competitive for the position.

### What was your biggest challenge there?

Learning how to be a professor: it was the first time that I had been in charge of teaching, managing budgets and mentoring students. I was overwhelmed for the first two years. Now that I’m figuring that out, I’ve got to secure funding. I’ve built a lot of collaborations here, partnering with colleagues who study the epigenetics of asthma in humans and other animals. I am now trying to get an R01 grant, the NIH’s largest grant for individual investigators.

### What is the US–China Young Scientist Forum?

It is an annual one-day event to bring women researchers from the United States and China together. Women from China are eager for career advice on issues such as work–life balance and gender disparity in the workplace. For example, they note that their bosses often save the best opportunities for men. They also want to find possible collaborators: they want to do well in their institutes in China and are looking for ways to create opportunities there.

### What connections did you make there?

I met Qian Wu, a breast-cancer researcher at Nanjing Medical University in China, and she is working in my lab as a visiting scholar for the next six months. She decided after the forum that she wanted to learn more about epigenetics so that she could open up that area of research at her home institute. Right now, US labs have a lot of visiting scholars from China because the government there has more funding for overseas trips. While funding here remains tight, this is a nice way for US scientists to forge collaborations. ■

INTERVIEW BY VIRGINIA GEWIN