California. "You need to be working on a good problem and you need to have some interesting results," he says.

Candidates should also give a clear road map of where they are headed with their research, says Eileen Furlong, head of the Genome Biology Unit at the European Molecular Biology Laboratory in Heidelberg, Germany. She recommends that job candidates reserve the last 20–25% of their talk for discussing research plans and showing why she or he is the best person to address those questions.

A sign of success, says Furlong, is when audience members "leave the room thinking, 'That's really interesting and exciting, and I want to talk to that person.'"

### DEPARTMENT DISCUSSION

The talk should also convey how well the candidate would fit into the department, says Amanda Clark, a neuropsychologist at the University of Tennessee in Chattanooga who interviewed for her faculty position in 2012.

By looking at the university's website and promotional materials as well as other faculty members' programmes, Clark knew that the university valued people who would offer undergraduates some research experience. She therefore wove in details about how undergraduates and graduate students had participated in her research. She also knew that the department was looking for someone with expertise in biological psychology and neuroscience but did not have an animal lab or an imaging facility. So in discussing her research on brain trauma and neurodegeneration, she highlighted her use of human subjects in her studies.

Candidates also need to prepare for the unexpected, such as technical glitches, a pushy audience member during the question-and-answer session and even a power outage.

Caron was halfway through her talk for tenure — another key time where talks can make or break a candidate — and was about to tell the audience about her most exciting and crucial piece of data. Suddenly, the electricity went out. Worse yet, the talk was in a room with no windows, so the crowd of 75–100 people was left in darkness. "It was absolutely pitch black," says Caron. She had no choice but to wrap up her talk quickly.

"Then the most incredible thing happened," she says. "People asked questions. I was so touched by that. We all sat in the dark room and talked about science, which was really wonderful."

Even better, Caron got tenure. ■

**Amanda Mascarelli** *is a freelance journalist in Denver, Colorado.*

# TURNING POINT
# Shingo Kajimura

*Diabetes researcher Shingo Kajimura studies how fat cells can be manipulated to control obesity. In March, he was fêted for winning one of the US Presidential Early Career Awards for Scientists and Engineers (PECASE). He explains how favourable timing has helped him to advance his career.*

KATHLEEN JAY/UCSF

**Did you always plan to become a researcher?**
No. Growing up in the suburbs of Tokyo, I went fishing every day and loved to see living things. I was planning to try to work with animals — as a national park ranger at a zoo or an aquarium, for instance. No one in my family had ever attended university or earned a degree, so I had not even known that the job of scientist existed until I started there. But I had good mentors at the University of Tokyo, who guided me towards science. I was surprised by how much I loved it.

**What led you from Japan to the United States?**
I won fellowships that allowed me to spend my entire graduate time in the United States, and spent two years in Hawaii and three years in Michigan studying fish physiology and developmental biology. I thought about going back to Japan after that, but I felt like I could be more intellectually independent in the United States, and that was important to me. Then a Pathway to Independence award from the US National Institutes of Health (NIH) gave me the confidence to become a principal investigator here.

**What led you to study brown fat?**
I received a fellowship at Harvard Medical School in Boston, Massachusetts, to examine how mitochondria help living things to adapt to different environments and whether that process could be manipulated. When brown fat was discovered in adults, it opened up new opportunities for research into obesity and related diseases such as insulin-resistant diabetes. I decided to focus on brown fat in mammals because it is one of the most mitochondria-rich cell types in the body, which means it has a big role in regulating the body's adaptation to different environments.

**How did the discovery of brown fat in adults affect your own career?**
When I started the postdoc in 2006, the brown-fat research field was pretty inactive because nobody knew adults had brown fat. When that was discovered in 2009, it led to additional funding for brown-fat research. I was trying to see whether we could convert white fat cells into brown fat genetically or chemically. In 2009, I had a paper published in *Nature* about the body's ability to convert some cell types to brown-fat cells (S. Kajimura *et al. Nature* **460,** 1154–1158; 2009), a process now known as direct reprogramming, as well as papers published in other journals. The following year, I received the NIH grant and landed a post as an assistant professor at the University of California, San Francisco.

**What does the PECASE award mean for you?**
The money helps, and the award has also connected me with many talented young scientists in different fields for potential collaborations.

**What are your biggest challenges right now?**
Even if I earn tenure, I still have to get grants, and that is tough. And I have gone from being a player in the lab to a coach. Nobody gets training in how to manage lab staff, and everyone does it in their own way. For graduate students with less experience in bench work, I start them with relatively easy experiments; for postdocs, I encourage them to help on projects close to the finish line so that they can co-author a paper. It helps them get used to the new environment and to work as a team member.

**What is the best advice you have ever received?**
One of my mentors always said that if the science goes well, everything else will follow. So I try to spend as much energy as I can on the science and not worry about other things. It is not always easy, but I remind myself that it is really about the science.

**What is the secret to your scientific success?**
Internal passion. I am not a genius but I genuinely love science, so I don't feel like this is my job really. ■

INTERVIEW BY SCOTT KRAFT