

SCIENTIFIC BEQUESTS

Control your assets

When a principal investigator (PI) has to leave his or her job suddenly, there can be squabbles over who gets the samples. But the effects are likely to be lessened and easier to circumnavigate if labs have carefully catalogued all the specimens, reagents and technologies, such as transgenic mouse lines or proprietary imaging tools.

In many cases, these resources are considered the property of the institution, so starting early in their employment, PIs should make sure that they manage them in such a way that would give the rest of the research community access to them in the event of the PI's absence.

Scientists who are not bound by intellectual-property policies should make a detailed inventory of the scientific assets they might wish to distribute, says Ron Weiss, a partner at the Massachusetts law firm Bulkeley Richardson, who manages estates and estate planning for scientists and others. Ownership depends largely on the terms of the funding and on the investigator's contract, but some items may have been created or collected before the scientist joined the university or institute. "Understand the policies of your employment, and exactly what your relationship is. Usually you are an employee, but sometimes you are not. Scientists can leave a boatload of trouble if they don't adhere to the policies and someone else benefits at the expense of the institution that had the rights."

Scientists working at government

laboratories or with private companies are unlikely to own much of their data. But those who work independently and who have taken steps to protect their intellectual property will probably have assigned all the rights to an entity such as a limited-liability corporation, says Weiss. In the event of the scientist's death, the entity could then be sold to a pre-chosen buyer, and the research materials could be bequeathed through a memorandum referenced in a will.

Another approach to managing specimens is to distribute the goods up front. Josh Drew, a lecturer at Columbia University in New York, studies the evolution and conservation of coral-reef fish across the southwestern Pacific Ocean. For his fieldwork, he collects fish, clips a small segment of gill for DNA analysis and stores the fish in formalin. Once home, he donates the specimens to the American Museum of Natural History in New York so that others can study them long after he has left academia.

Drew admits that when he started the scheme he had not been thinking of what would happen to the specimens if he died suddenly or had to cope with a long-term illness. But he recognizes that his actions would help to cover his students and colleagues if that should happen. Drew has placed a two-year moratorium on access to the samples so that he has time to publish his research. "If I don't publish within two years, that's on me," he says. **H.H.**

tracks and applied to medical school. When he was accepted, he withdrew from the PhD programme and is now a second-year medical resident at McGill University in Montreal, Canada. He has already published a paper from his graduate work⁴ and aims to publish another in the future.

Cribbs, too, found a new direction. As he wrapped up his PhD research, he realized that he lacked the knowledge to properly analyse some of the data he was generating. After he finished his PhD, he applied for and got a UK Medical Research Council fellowship in bioinformatics, which is designed to train biologists in computational biology. Although his interest in bioinformatics was spurred by his supervisor, he says that he probably would not have changed course so dramatically and sought additional training had he not become much more independent than his peers. "I'm not sure I would have tried something new if I hadn't developed

this confidence," he says. "I collaborated with quite a few people and found out my strengths and weaknesses."

Such experiences are difficult and traumatic, but there can also be constructive outcomes. "It changed me, I grew up, it made me a better scientist," says Cribbs. "If you don't ask for help you don't get it — and that can make the difference between finishing and not finishing." ■

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TRADE TALK
Quality wrangler

After finishing her postdoc in chemical biology at Stanford University, California, Leslie Cruz took a job in regulatory affairs at Alexza Pharmaceuticals in Mountain View, California. She

explains how she continues to use the skills she learned in the laboratory.

What does it take to leave the bench?

The hardest thing for me was to realize that I wasn't happy. In graduate school, I would occasionally question my career path but was always led back to research in the laboratory.

What changed?

My postdoc adviser directed me to the university career office, which recommended *Career Opportunities in Biotechnology and Drug Development* (Harbor Laboratory, 2008). I read it cover to cover and took every quiz about how one's personality would be suited to different areas of the pharmaceutical industry. To my surprise, my results were the worst for discovery research and highest for regulatory affairs and project management.

Does your role use your scientific training?

I use it every day. I read a lot of 'quality documents' — regulatory submissions to establish that our pharmaceutical products are made using exacting procedures and have passed rigorous tests. I can see the trends in the data, read the graphs and methods and understand them.

What lessons did you learn from the lab?

It's not only what I learned but what I did: I wrote numerous grant applications. The important part of that was that I loved it, the reading and reviewing and documentation. That's what I do now, only with submission documents for regulatory agencies. The other part that I learned was working with people. At my job interview, people kept asking what I did outside of conducting experiments — they wanted to know that I had the skills to influence others. In my graduate programme, I was always the lab's contact for environmental-health and safety compliance, and worked with everyone to make sure that they were doing their training and paperwork. I had no idea that this would help me to get this job. I just did it because I enjoyed it. ■

INTERVIEW BY MONYA BAKER

This interview has been edited for length and clarity; see go.nature.com/vl1lign for more.