

CAREERS

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BY HELEN SHEN

For James Nelson, a molecular and cellular physiologist at Stanford University in California, having a lab manager means having more time for science. He does not worry about whether his laboratory is on track to meet its monthly budget, nor does he fret about upcoming chemical-safety inspections. Kathy Siemers, his long-time lab manager, handles those responsibilities for him — along with a long list of other duties — to keep the laboratory running smoothly. “I can’t imagine the lab without Kathy,” says Nelson. “It would be a disaster, and it wouldn’t be as much fun.”

Not all laboratories can afford lab managers in today’s funding climate; tight research budgets in countries such as the United States, France and the United Kingdom have left many researchers unable to hire new staff. But principal investigators (PIs) who are able to support a lab manager can reap long-term gains in time and money that more than justify the investment. Median lab-manager salaries are about US\$49 to \$59 per hour in the United States and about £23 (\$39) an hour in London, according to data from Kelly Services, a staffing firm in Troy, Michigan.

Early-career PIs often hire lab managers using some of their university start-up funds. More-senior faculty members typically depend on research grants to support their managers. Rarely, if ever, does a US university pay a lab manager directly.

But a savvy lab manager, no matter how they are funded, can reduce research costs by hunting for the best deals on supplies or reagents and by monitoring overall spending. PIs who have lab managers may spend considerably less time on administrative tasks — such as placing orders or filing regulatory paperwork — and spend more time on developing or running experiments.

Many lab managers, who might have pursued the position as a career or as a prelude to a PhD, also help to run experiments and assist postdoctoral researchers or graduates with time-consuming research steps, such as tissue culture or animal care.

Different laboratories will require lab managers with different strengths, and smaller labs might require only part-time help. But whether full time or part time, the job requires organized individuals with strong communication skills, technical expertise and a knack for multitasking. A good lab manager can become a long-term collaborator and a repository ▶

LABORATORY CAREERS

Catalysts for efficient science

A good lab manager can smooth the running of a laboratory, saving time and money.

► for lab expertise; whereas students and postdocs cycle into and out of a laboratory every few years, the lab manager remains.

Nelson hired Siemers, who had been a lab technician for a number of years, in 1987 to help manage his first laboratory at the Fox Chase Cancer Center in Philadelphia, Pennsylvania. In 1990, Siemers moved across the country to help Nelson to start his new laboratory at Stanford. As the lab group has grown, so have Siemers' responsibilities.

In addition to helping scientists with their experiments, she trains new postdocs and students on lab procedures, discusses experimental results with team members and makes sure that the laboratory meets safety regulations. She helps Nelson to plan his annual budget and manages day-to-day spending on multiple projects funded by different grants.

"It allows me to be more productive with things that I enjoy doing," says Nelson. "I can worry about teaching and grant writing and talking science to people in my lab."

Large, established laboratories such as Nelson's are not the only ones that can benefit from a lab manager's help; an effective manager can enable a fledgling laboratory to get off the ground quickly. At the University of California, Davis, evolutionary biologist Santiago Ramírez hired a lab manager in October 2013, just months after launching his laboratory. He found Cheryl Dean's CV through an electronic mailing list and was attracted by her experience in population genetics and chemical ecology as a research technician. Dean is now mentoring one undergraduate student and one lab technician, and will probably take on more training

responsibilities as the laboratory grows.

Bradley Voytek also hired a lab manager last year, soon after landing his first tenure-track faculty position at the University of California, San Diego. The cognitive neuroscientist was faced with moving 800 kilometres from Berkeley, California, with a toddler in tow and a baby on the way, but he was determined to start running experiments as soon as possible.

In advance of his arrival in San Diego in March, Voytek hired Torben Noto through a job advertisement, and the new lab manager helped to process much of the regulatory paperwork needed to start human brain-scanning studies. Noto will help to collect and analyse data from these experiments, and he will work on turning Voytek's data-analysis code into an online, open-access resource.

Despite a bumpy few years for US government research funding, skilled lab managers remain in demand across academia and industry, says Jamie Stacey, a vice president at Kelly Services. By 2019, the market for lab managers is projected to grow by up to 6% in some US cities, according to data from Kelly and the labour-analysis firm Economic Marketing Specialists International in Moscow, Idaho. In the United Kingdom, the market is projected to grow by about 2.3%.

PIs, government science agencies, biotechnology companies and private research institutes often look for managers with bachelor's degrees in science fields and extensive experience working in laboratories, frequently as research technicians (see *Nature* 473, 545–546; 2011). Graduate degrees are relatively rare among lab managers, says Stacey. But for some PhD-educated scientists, lab management can

serve as an alternative career to becoming an academic researcher (see 'Back at the bench').

Lab-management duties can vary between laboratories, and between university and corporate settings. Managers in industry, for example, might spend less time on administrative tasks, such as purchasing or equipment maintenance, which many companies handle through centralized systems.



"I enjoy the opportunity to learn new techniques and to work with different people."

Cheryl Dean

The US National Institutes of Health (NIH) in Bethesda, Maryland, does not have a 'lab manager' designation, but many NIH labs employ the equivalent: technicians or staff scientists who help to run experiments, stock lab supplies and maintain safety compliance. At the Janelia Farm research campus of the nonprofit Howard Hughes Medical Institute (HHMI) in Virginia, lab managers

are called 'lab coordinators' and are paid directly by the HHMI. They act as intermediaries between researchers and the institute's operational departments, which place orders, repair equipment and maintain safety standards.

Before becoming a lab manager at Davis, Dean worked for nearly 20 years as a research technician studying fish population genetics for the US National Oceanic and Atmospheric Administration in Santa Cruz, California, and the Washington Department of Fish and Wildlife in Olympia. She found her current job after her family relocated to the Davis area. Like many other lab managers, Dean says that her career path has involved more serendipity than explicit planning.

But the position suits her well. "I enjoy the opportunity to learn new techniques and to work with different people," she says. Whether a laboratory head decides to hire a career lab manager or an aspiring graduate student is a personal choice, says Voytek. Inspired by his own experiences as a lab manager before attending graduate school, he was interested in training someone else.

"It was a good way of seeing if this was what I wanted to do for the rest of my life," he says. Now with a lab of his own, he says that his background in managing the nitty-gritty details of a research operation made him a more efficient scientist. "I think it's an incredibly valuable experience," he says. ■

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SCOTT BLANKENSHIP

BACK AT THE BENCH

An alternative to the tenure track

A lab-manager job is as much about fulfilling professional goals as it is about maintaining a laboratory. For some PhD-trained scientists who become disenchanted with a future as an academic researcher, the role can be a different way to stay close to science.

Laura Berkowitz became a lab manager at the University of Alabama in Tuscaloosa after seven years as an assistant professor elsewhere. She enjoyed working with her students, but she found that teaching left too little time for her research on the nematode *Caenorhabditis elegans*.

In 2006, Berkowitz saw a lab-manager job advert posted by Guy and Kim Caldwell at the University of Alabama. The team, whose laboratory uses *C. elegans* as a model organism, thought she was a great fit for the job. "We don't view Laura as someone who manages things in our lab,"

says Kim Caldwell. "She's really a research colleague."

Since 2007, Berkowitz has helped to design experiments and runs her own projects while mentoring students, maintaining worm strains and more. She can now balance lab work with teaching in a way that she could never do as a faculty member.

Anthony Popkie, a postdoctoral researcher studying cancer at the Van Andel Institute in Grand Rapids, Michigan, will also leave the tenure track for a job as a lab manager at the end of June. Popkie had doubts about pursuing a faculty post, so he jumped at the chance to take on a support role in the laboratory of a prominent oncology researcher. He says that lab managing will allow him to continue to do the research he loves without the stress of starting his own laboratory. **H.S.**