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PLANET FLEM



MANAGEMENT

When jobs go wrong

Having to dismiss lab members is not easy, but there are ways to make the process less painful for all involved.

BY CHRIS WOOLSTON

Most principal investigators (PIs) are eager to talk about their management success stories: postdocs and graduate students who have gone on to become science rock stars. But there's another reality of science that is rarely discussed. Sometimes, the relationship between PI and junior scientist crumbles beyond repair, or funds that support the lab dry up — and the PI must let that person go.

These are delicate matters — so delicate that lab leaders are often reluctant to consider the option. But there's a good chance they'll eventually have to. "Most PIs will have to go

through this," says Karen Peterson, director of the Office of Scientific Career Development at the Fred Hutchinson Cancer Research Center in Seattle, Washington. And if it happens early on, it can upset careers. "Young PIs have no idea what they're supposed to do," she says. "They usually make a mistake the first time around."

Whether they have to sack a graduate student or postdoc because of misconduct, poor performance or a funding shortfall, PIs must take care to handle the situation in the right way, experts say — emotionally, and in terms of policy and legal requirements. Messy dismissals can damage the reputations of PIs as well as the person losing their position,

and PIs who terminate someone without following proper procedure may be opening the door to litigation. Young PIs should therefore understand and embrace the policies at their institutions, and familiarize themselves with legal issues relating to employment, before they go ahead. They also need to adopt an approach that causes the least amount of trauma for everyone involved. Both sides can survive a sacking, if it's done with care.

TOUGH DECISIONS

A UK biologist was flummoxed when one of his graduate students kept tequila in a lab drawer, refused to take notes during a meeting and botched every procedure discussed ►

► at that meeting. For the biologist — who didn't want to be named, a sign of the stigma that surrounds the issue — these misdeeds and others added up to grounds for dismissal. The student was very enthusiastic about the research topic, but that eagerness wasn't translating to productivity, the biologist says. As a new PI, the biologist couldn't afford that kind of drag on his lab. "He produced no usable data and used valuable equipment time," the biologist says.

The PI says that he gave the student many chances to improve his performance, including step-by-step instructions for living up to the expectations of the lab. When the student didn't follow those instructions, the PI documented every misstep — every spreadsheet that never got corrected, every experiment that didn't get done.

The PI called a special meeting of the student's thesis committee, at which the student was told that his performance wasn't acceptable. This was followed by a last-chance meeting a couple of months later. The student was still in his first year, which eased the difficulty of decision to let him go.

At this university, as with many others in the United Kingdom, students are supposed to show 'acceptable progress' before they can start their second year of study. "All new PIs are advised to take this progression very seriously," the biologist says. "It's the easiest time to deal with bad students."

PROCEED WITH CARE

Unless a student or postdoc has committed an egregious violation of scientific ethics or workplace protocol — such as fabricating data or assaulting another lab member — the route to a potential termination should be travelled slowly, deliberately and with careful documentation, experts say. "You first have to have a conversation," Peterson says. "It's a verbal warning: 'Here's where you are, and here's where I need you to be.'" That warning should include specific and measurable steps that the lab member needs to take to get up to speed. If those benchmarks aren't met, the PI should issue a written warning that again spells out the steps needed to meet expectations. If the situation doesn't improve, the PI should start going down the long path towards termination, a process that can vary depending on a team member's title and position.

Graduate students generally aren't considered employees, but they are still protected by the policies of the institution. PIs who decide to dismiss a graduate student generally have to get approval from the thesis committee or the departmental graduation

TAKE PRECAUTIONS

How to fireproof your lab

Lab lay-offs can damage the career and reputation of everyone involved, so young principal investigators (PIs) should minimize the risk that anyone will ever have to be let go, says Karen Peterson, director of the Office of Scientific Career Development at the Fred Hutchinson Cancer Research Center in Seattle, Washington. She encourages PIs to think about fireproofing their labs when interviewing prospective members. Above all, potential postdocs and graduate students need to know the rules and expectations of the lab, and the more specific the better. "They know going in what to expect, and they can choose not to work there," Peterson says. If a postdoc or student doesn't want to work with mice, for example, or for a PI who intends to monitor their work closely, some labs wouldn't be a good fit.

PIs should not get upset if prospective postdocs decide to work elsewhere, Peterson says. And if they find themselves complaining that there aren't enough good

postdocs available, they may want to take a look at their approach. "Their expectations may be unrealistic," she says.

When conflict bubbles up, early intervention can help to keep the lab intact, Peterson says. "The PI should talk directly to that person in private," she emphasizes. The conversation should focus on specific missteps and their impacts on the lab. "Don't say, 'You're being a jerk,' and don't say something inflammatory," she cautions. "Just mention that they've been showing up late to lab meetings, and then shut up and listen. You might learn something that can be changed."

As an ombudsman for her institution, Peterson has seen first-hand how consultation with a neutral third party can often help to prevent a dismissal. "PIs come to me because they want to keep a person," she says. By giving both sides a chance to explain their issues, she can often find enough common ground to keep a lab together. **C.W.**

programme, a process that becomes much more difficult once a student has passed qualifying exams or has been approved for a second year of study. Looking back, the UK biologist is glad that he had regular meetings with his student from the beginning, giving him a chance to spot trouble early on. "When the student didn't respond to help and advice, we had plenty of time to go through a formal process before the one-year deadline," he says.

Postdocs, by contrast, are generally employees of their institution, so they fall in a different category. In the United States, their job security lies almost entirely in their contract, says Stephanie Caffera, a partner with the global law firm Nixon Peabody in Rochester, New York. As she explains, if there's no contract in place, "you have no right to your job". Lab employees in the United Kingdom, however, are safeguarded by not just contractual rights, but also a law that prohibits unfair dismissal for anyone who has been employed in the same job for two years, says Jane Byford, a partner with the firm Veale Wasbrough Vizards in Birmingham, UK. "You have to have a fair reason for termination," she says. This can include a shortage of funds, a documented lack of performance or lab misconduct.

Many postdoc contracts, however, include an initial six-month probationary period, during which they can be dismissed relatively easily. After that, a PI must provide documentation to the institution's human-resources department to justify the move,

and the postdoc will need ample time, which should be spelled out in the contract, to look for another position. At Fred Hutchinson, Peterson says, postdocs are entitled to a six-month warning before they are let go, unless they've done something serious enough to warrant a quick dismissal.

The consequences of a misstep in the termination process can be severe. In both the United Kingdom and the United States, postdocs can, and do, bring suits against universities for wrongful termination. As Byford explains, UK employees can appeal their terminations to a government employment tribunal, and if it's found that they have been unfairly terminated, the university or institution may have to pay a fine of up to a full year's salary. Lawsuits in the United States can be even more expensive to the institution. "Universities are great fodder for plaintiff lawyers," says Caffera. Although some states, including New York, allow employees to sue their PIs directly, in most cases the universities will be on the hook for any payouts. And although the PI might not face fines, the damage to his or her reputation could be substantial, she says.

In many countries, dismissed workers can potentially sue for discrimination if they feel that they were let go because of their gender, age, race or other non-work-related reasons. Caffera says that this scenario underscores the importance of documentation — thorough and careful records of infractions in the lab could someday prove crucial to the defence of a discrimination lawsuit.

Even when there is no conflict, PIs may have to sack lab members when funds evaporate unexpectedly. Darren Boehning, a molecular biologist at the University of Texas in Houston, has twice had to reluctantly let go of postdocs when grant money dried up prematurely. In one case, the postdoc had only a month's notice. "Every postdoc contract I've seen says that the position is dependent on funding," he says. In this case, he knew of colleagues who were looking for a postdoc, and the individual was able to move to another lab. She eventually went on to a faculty position — as did the other postdoc who was released ahead of schedule. "You have to help them transition if you can," Boehning says. Not only can such support help to save the career of the person who is being let go, it can protect the PI's reputation.

CLEAR COMMUNICATION

Graduate students and postdocs at the European Molecular Biology Laboratory (EMBL) in Heidelberg, Germany, rarely leave their labs before the end of their contracts, says Helke Hillebrand, academic coordinator and dean of graduate studies. Once they pass their one-year probationary period, graduate students are under contract with the institution, which means that any dismissal would have to involve the human-resources department and the graduate-studies office. "They would never be totally dependent on their supervisors to determine their fate," she says.

As with other institutions in the United Kingdom and mainland Europe, EMBL requires graduate students to finish their degree within four years, a rule that puts pressure on everyone to keep student-mentor relationships intact. If a student has to change labs more than halfway through

their training, it will be nearly impossible for them to finish in the allotted time, Hillebrand says. After putting so much investment in a student, the institution is highly motivated to mediate any disputes between students and their PIs. "Students are a precious resource for research, so this protects the PI as well as the student," she says.

Geneticist Koen Venken has parted ways with three lab members since starting his lab in 2014 at the Baylor College of Medicine in Houston. When he first began to notice lax attitudes and poor production, he gathered the team for a PowerPoint presentation that spelled out his expectations. After seeing little progress, he repeated the presentation six months later. "They had plenty of time to identify their weaknesses and work on them," he says. He told the team that there wouldn't be a third PowerPoint warning. "I also indicated that I was more than happy to work with them to change for the better."

In retrospect, he sees that he might have avoided the dismissals had he been more up front about his standards before bringing anyone into the lab (see 'How to fireproof your lab'). He is now working on a formal agreement letter, complete with clearly stated expectations, that future lab members will have to sign before starting work.

When a PI does have to let a lab member go, it's important to keep the drama at a minimum by using a professional, straightforward approach, says Christopher Edwards, a science-career coach at Still Point Coaching and Consulting in Boston, Massachusetts, and the co-founder and former editor-in-chief of *Nature Biotechnology*. "There's a risk of having someone very angry with you after leaving your lab," he says. "One of my clients had to get a restraining order against a former grad student." He also knows of a case in which a disgruntled lab worker sued a former PI for plagiarism because the PI published a paper without including his name.

In Caffera's experience, messy break-ups can often be traced to a lack of clarity early on. "Scientists tend to be so respectful of each other that they're not clear in their communication," she says. "They speak obliquely. I would encourage them to be much more direct. People tend to assume they're doing a good job unless you tell them otherwise."

Laboratory lay-offs are likely to be far from the minds of most junior researchers — until they find themselves in a lab that isn't working. The silence around the issue makes it hard for PIs to anticipate or react to strife in their own labs. Venken hopes that other PIs can take something away from his experience. "It's very sensitive," he says. "But if no one is willing to talk about it, no one can learn from it." ■

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PUBLICATION

Preprints pondered

A trio of commentaries explores whether it makes sense for early-career scientists to post public copies of articles before they are accepted by journals — or even submitted to them (see G. McDowell *F1000Research* 5, 294; 2016). The authors, who include elite scientists, junior faculty members and postdoctoral researchers, examine whether depositing work on preprint servers is an opportunity or a vulnerability for young researchers. Early-career scientists harbour concerns about persuading colleagues to agree to a preprint, being ignored or receiving criticism on social media or from senior members of the field. But preprints also allow them to demonstrate their research productivity independently of unpredictable publishing timelines. It is unclear how preprints are taken into account by grant reviewers or hiring and promotion committees, and many researchers worry that the data could be used by rivals who might then beat them to publication. But early disclosure can also spark fruitful collaborations, says one author, who credits his preprint for initiating connections that accelerated his follow-up work. The commentaries are linked to last month's Accelerating Science and Publication in Biology meeting in Chevy Chase, Maryland.

TRAINING

Postdocs to learn online

A group of prominent US scientists from the academic, government, industry and non-profit sectors aims to create an online training centre to collect career-development resources for postdoctoral researchers. Most postdocs end up in jobs away from the laboratory, but career-development training for them is patchy across institutions. The centre would be a repository for lesson plans, materials (including the individual development plan tool, a career-development workbook that is available online or through host institutions) and resources (such as a list of certified training advisers) to help universities to create career-development programmes. All such content on the website would be peer-reviewed and checked, and a steering committee will address specific issues, such as the target audience for lesson plans and how materials and career advisers will be vetted. The American Society for Biochemistry and Molecular Biology in Rockville, Maryland, has pledged to support the development of the centre with funding and staff time.

SCOTT COLLUM



Molecular biologist Darren Boehning works with graduate student M. Iveth Garcia.