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LAB ETIQUETTE

The perils of pet peeves

Small transgressions can quickly breed resentment among labmates — so be sure to learn the unspoken rules of the lab.

BY AMBER DANCE

Virologist Alice Huang awoke in a cold sweat after a nightmare. Out sick at home, she dreamt that she'd returned to her laboratory to find that her lab members had committed her most vexing workplace pet peeve, and on a grand scale — all the equipment was broken, and no one would admit to breaking it.

Of course, when Huang returned in real life to her workplace at the California Institute of Technology in Pasadena, everything was fine. She had long ago drilled her top rule into everyone's head: 'Break something, say something'. At least then, she reasons, the equipment can be fixed and the experiments keep running.

Lab annoyances are not just bad dreams: they are common, exasperating and can impair morale. Some just go with the job, such as the stench of beta-mercaptoethanol, used as an antioxidant, or the roar of mechanical equipment. But the biggest gripe of many scientists is a labmate's annoying habit: leaving a mess on the bench, using the last box of pipette tips or stealing a colleague's precious Sharpie permanent markers.

"All these are little things, but they can add up," says Karen Peterson, scientific ombudsman at the Fred Hutchinson Cancer Research Center in Seattle, Washington. "It's seemingly a small thing, but it's a big deal to you."

There are often practical solutions to these woes. They could include adopting an agreement to delineate one researcher's space from that of a messy labmate. It might involve setting out a schedule of lab chores, or creating a lab calendar on which members can sign up for blocks of time on shared equipment. Most importantly, establishing mutual courtesy and good communication between labmates — as well as some ground rules — can help to keep labs running smoothly and minimize friction (see 'Lay of the lab'). "What it really comes down to is respect," says Peterson.

Some complaints, such as slovenly habits with shared equipment, come up repeatedly. Mess left on the lab's sensitive scale is a particular bugbear: no one wants to encounter or try to properly dispose of a dusting of powder whose origin or toxicity is a mystery. "You don't even know what it is — you certainly don't want to touch it without gloves," says Peterson. "You really don't know how to clean it up."

To keep her Earth-science lab tidy, Suzanne Hangx of Utrecht University in the Netherlands has instituted weekly and monthly cleanups. Every Friday evening, PhD students take turns checking the laboratory and prep rooms and cleaning up any minor messes. Once a month, all lab members spend an hour tidying the shared space.

SPEAK UP

Another common complaint is when somebody uses up the last bit of a key communal resource and stays mum. Lucie Etienne, a biologist at the International Center for Infectiology Research (CIRI) in Lyon, France, says that scientists in her lab frequently have this problem with the powdered milk they use to perform western blots for analysing proteins. One Friday night, faced with a depleted supply, a new student had to walk to a local shopping centre to buy powdered baby formula to complete his experiment. Everyone has been more careful about maintaining the dry-milk stock after that incident, Etienne says.

Stem-cell biologist Sophie Arthur hates it when reagents are used up and not replaced. "There's nothing worse than planning your whole week of experiments and you are stumped at the first hurdle because someone else has used the last bit of your running buffer," grouses Arthur, a PhD student at the University of Southampton, UK. "That puts you behind schedule for the day, as you have to make up more — or, worse, you can't do ▶

OLIVÉR SVÉD/ALAMY

Reagents have a tendency to go missing — if you use them, replace them.

the experiment, as you have to wait for a new reagent to arrive."

To stave off such frustration, members of Arthur's lab aim to keep two bottles of everything on hand. Whoever finishes the first one must make or order more. A similar system for supplies such as pipette tips or plastic microfuge test tubes was in place at the biochemistry lab Jaime Fox worked in during her PhD studies at the University of North Carolina at Chapel Hill. Lab members would mark the next-to-last box using red tape, which signalled to users that they needed to order more, says Fox, now team manager for editing in the American Journal Experts division of Research Square in Durham, North Carolina.

Etienne likes to teach by example. She assigns a role model at the bench to new lab members who can show them how they are expected to clean up after themselves or help others out.

STICKY FINGERS

Informal notification systems work well for reordering dwindling supplies, but they don't help with another widespread vexation: sticky-fingered colleagues. Experiments can be delayed when personal resources, such as permanent markers, pipettes and other crucial supplies or equipment go missing and can't be easily or immediately located. Hangx lost hours of work one day during her PhD programme because someone had taken the Allen wrench that was custom-fitted to her equipment. She needed the machine to crack pieces of rock to determine their strength. Without that specific wrench, she couldn't take out the old sample and put in a new one. It took her all day to find it — in the lab-coat pocket of a colleague who wasn't at work that day.

Now, Hangx's lab colour-codes the team's tools and toolboxes for each machine so that it's easy to keep track of which tools belong where. One of her current students came up with another solution by circulating a 'lost tools' list. Whoever has 'borrowed' something on the list has the chance to return it anonymously with no repercussions, says Hangx. It's also useful, Fox says, for scientists to label their personal items with their names to reduce the likelihood of petty theft, or so that they can identify a tool if it shows up at someone else's bench.

Communication always helps: when lab members know what their colleagues are working on, it's easier to share resources. For example, Arthur says that she might learn from talking briefly with a colleague that they just performed a lot of DNA-copying polymerase chain reactions. If she wants to do her own reactions the following week, she knows to make sure that the lab has a large supply of the probes required for the procedure.

Or if another lab member is rushing to finish western blots, she'll ask whether there's time for her to use the shared equipment for one or two of her own. "It sounds simple, but so many scientists work in their own little bubble without really thinking of the consequences for their labmates," says Arthur.

When problems arise, the simplest solution is to bring up concerns directly with a labmate. Peterson suggests something along the lines of, "This is one of my pet peeves, and our current system is not working. Can we work together to find a way to improve this?" Lab members can also discuss complaints at team meetings without naming names, and reach an agreement that is acceptable to the entire group.

If these methods don't work, lab heads might adopt more extreme measures. Researchers in Hangx's group know that if they regularly leave huge messes, they may be banned temporarily from the lab. (So far, in the ten months or so since she implemented the rule, she's not had to make good on the threat.)

Howard Young, an immunologist at the National Cancer Institute in Frederick, Maryland, and one of his lab technicians came up decades ago with the 'Food Offence', a system that's also been adopted by other labs. Young defines a food offence as any situation in which the actions of one lab member disrupt the work of another. For example, someone might start a gel for a colleague but plug the electrodes in backwards and ruin the experiment.

Once the offence has been recognized and the perpetrator identified, that person can seek employment elsewhere, or — the more popular choice by far — pay restitution by bringing in delicious food to share. "It makes people aware that they're part of a team, and that their actions affect others," says Young.

And it works, at least with most of his team. One lab member cheerfully brought in doughnuts when he committed a food offence — but usually ate half himself. (The lab forgave him.)

Indeed, simply maintaining an affable, collegial lab environment sets a solid foundation for keeping a lab running smoothly. Rolf Hut, an environmental engineer at Delft University of Technology in the Netherlands, encourages lab members to pursue friendly relationships by chatting to each other at the coffee machine and during other off-bench moments. "Just showing genuine interest in the people around you," he says, "goes a long way." ■

GOLDEN RULES

Lay of the lab

- When you're new to a lab, ask what the norms and procedures are.
- Clean up after yourself, and put items back where you found them.
- When you borrow something, give it back.
- If you use the last of a resource, make or order more.
- If you take too much of a solution, don't pour the leftovers into the stock bottle — you could be adding contaminants.
- Don't hide your mistakes. If you spill something dangerous or break equipment, speak up so the problem can be addressed.
- When you're wearing gloves, avoid touching other people, their equipment and their resources.
- Don't monopolize shared equipment.
- Don't interrupt someone when they are focused on a task, such as counting.
- If your phone rings, take the call outside.
- Follow the golden rule: do unto others (and their experiments) as you would have them do unto you. **A.D.**

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