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# LETTERS TO YOUNG SCIENTISTS



## Three keys to launching your own lab

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By [Leah H. Somerville](#), [William A. Cunningham](#), [June Gruber](#), [Jay J. Van Bavel](#), [Neil A. Lewis, Jr.](#) | Aug. 14, 2019, 1:20 PM

Launching your own laboratory marks the beginning of a new and exciting phase of your career. But it can also be overwhelming. Few of us have any training in the management skills necessary to build and run an effective lab. Here, we offer three important tips to keep in mind.

### Play to your affordances

As you're getting started, one of the most important things to consider is how you can get the most out of what's available to you. Each person who launches a laboratory does so under very different circumstances. Research can be cheap or expensive, require fancy equipment or a simple pencil and paper, and be conducted by beginning undergraduates or highly trained postdoctoral fellows. Likewise, university departments vary wildly in what they provide to new lab heads. Some new faculty members get a generous startup funding package of hundreds of thousands of dollars to jump-start their research programs; others receive little or no funding. Some departments provide shared resources, equipment, or staff; others do not. Critically, your new environment can be quite different than the one you experienced in graduate school or as a postdoc. Sometimes there are

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For example, it may take time before you can recruit graduate students and postdoctoral fellows, but you may find a ready group of talented undergraduates who are excited to work with you.

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Having a mindset of looking for solutions can help when you encounter unexpected disruptions. When Wil was a new assistant professor (and Jay was his new graduate student), there were major delays in building his new lab space and the release of startup funds. There was no space or money to start a new lab, nor was there access to certain research equipment. Rather than delaying research projects, Wil and Jay borrowed space and built a single testing computer (named Scooter) out of several broken ones. Jay brought in his personal digital camera. They traveled to a university several hours away to conduct some of their neuroimaging research. Using equipment that was lying around, they managed to collect data that turned out to be a crucial part of Jay's dissertation. They also learned new techniques, found out where they could borrow equipment from, and built valuable new collaborations.

The key is moving forward with the resources at your immediate disposal. You may not have the same tools as the well-oiled lab you left, but look around you and assess the potential opportunities for doing your work and ensuring your students are able to move forward with their own projects. (Remember, they are on a clock too!)

If you are not sure where to begin, reach out to your friends in the field and new colleagues to get advice and support. (Faculty mentoring programs can help equalize access to this advice and support.) Reaching out can also be a helpful way to start building new relationships and cultivating a set of mentors who will help you navigate the challenges that new faculty members face. Remember, your colleagues usually want you to succeed.

## Do something

One jarring aspect of starting a lab is the sheer number of decisions that need to be made. From first

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of important decisions can be paralyzing, especially when combined with perfectionistic tendencies that are so common among academics.

To avoid getting stuck in decision paralysis, it can help to just start *doing something*. The first project of a lab is often filled with detours and bumps in the road. Things that seem like they should be easy turn out to be really hard! These bumps and detours often arise in unexpected ways. Doing something is really the only way for you and your trainees to get moving.

Doing something (and experiencing its associated bumps and detours) can also help you establish more realistic expectations about what's possible to do in that first semester, year, or 2 years. It is extremely common to have a lag in research output when launching a new lab, even though people often think it won't happen to them. If you're reading this, trust us: It will happen to you. And that's OK! Doing something also builds confidence in your ability to lead and get things done, even in the midst of slower than usual progress. But keep your expectations in check and remember Hofstadter's Law: "It always takes longer than you expect, even when you take into account Hofstadter's Law."

## Be deliberate about setting your lab culture

The true horsepower of any lab is the smart minds who populate it. That's why even more important than wrangling purchase orders, key requests, and administrative approvals is the need to be deliberate about how your new lab is going to become an environment that will breed positive training experiences and productivity. In the absence of clear leadership, lab cultures will emerge organically—but that carries risk. Accidentally neglected lab cultures can turn sour because they become subject to impact by others who may not share your values.

In our experience, productive labs tend to be places where lab members are made to feel that they belong, that their work is valued, that they have a sense of autonomy, and that they know how to succeed. Creating that doesn't happen by itself—you have to take the time and effort to build the ecosystem your lab members will grow and thrive within.

Some important elements of lab culture pertain to the work itself, ranging from the day-to-day to the big picture. Is this a lab where collaboration is rewarded? What are the shared academic values of the lab? Is the lab head more hands-on or more hands-off? What is the primary mode of communication: Slack? Emails? Meetings? What are the expectations around working styles? Do lab members work at whatever hours and locations they wish, or is there an expectation that people be physically present in structured ways? How should lab members expect to receive feedback on their

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group discusses the lab's culture. It's important to be open to feedback and allow the lab culture to adapt over time. Lab heads can solicit feedback in all sorts of ways, ranging from **anonymous submissions** to group discussions. Incorporate the input from your lab members to ensure that you are fostering an environment where they can flourish.

Other important elements of lab culture pertain to the more intangible aspects of labs, including interpersonal dynamics and institutional values. It is important to recognize that there are now power differences between you and the people who could have been your peers just a few days earlier. And, because these power differentials get larger with time, it is important to consider your own evolving identity as you position yourself within the culture of the lab. What kind of socializing is typical within the lab and among lab members outside of working hours? Are there clear procedures about what to do in the event of a conflict—scientific or otherwise—within the lab group? Is this a lab that prioritizes fostering a sense of inclusion and belonging among its members, and how does that manifest in daily actions? What kind of boundaries should lab members expect one another to adhere to?

Set the tone in a deliberate way. Draw on your own experiences, values, and role models to decide what lab culture you want to aspire to. Make your aspirations clear to lab members, and embody them in your daily actions. At the same time, be aware that you will likely stumble or have blind spots in your mentoring style. As you collect more data about what is working and what isn't, you can revise and resubmit your lab manual and adjust your culture the same way you would handle a manuscript.

Finally, even though launching a lab is challenging even under the best of circumstances, we hope you can retain a healthy dose of pride and enjoyment. Leading a team of scientists is an enormous challenge, and also an honor. Pause and appreciate the opportunity you have earned, but also understand the responsibility you have for creating a healthy and productive environment for the next generation of scientists.

*Send your thoughts, questions, and suggestions for future column topics to [letterstoyoungscientists@aaas.org](mailto:letterstoyoungscientists@aaas.org) and [engage with us on Twitter](#).*

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