You’ve accepted the offer, signed the contract, and will be taking a new job at an institution somewhere in another country. As your excitement builds about the opportunity to launch a new life in a new culture, you suddenly realize that you have to ship your lab over there too. By Alaina G. Levine

Let’s suppose you’re an entomologist. Your lab includes an enormous walk-in growth chamber, stuffed floor to ceiling with cages filled with tens of thousands of insects. You have to feed those bugs too, so you’ve also got hundreds of plants you are growing. Now you get a job in another country. What do you do with your stuff?

This was exactly the question Sean Prager had to address when he was recruited from the University of California, Riverside, to the University of Saskatchewan, in Canada. He joined the Department of Plant Sciences as an assistant professor in 2017, but before he could pull his parka from storage, he had to figure out how to get his bugs across the border.

Moving his lab was simple at first. Equipment was not a problem—he didn’t need to ship any apparatus, because his new institution was providing it for him as part of the startup package he negotiated. But if he had needed to bring a specialized piece of equipment, he says, he could have easily driven it across the land border.

But transferring insects was more intricate. As Prager describes, his laboratory specimens contained a pathogen that is not found in Canada, one which had the potential to infect key crops. If you want to bring live insects from the United States, Canadian federal officials will only grant a permit if you have a facility already set up to take custody of your specimens without the possibility of an outbreak. “We do not have such a facility,” says Prager. “So before I can accept these insects [into my new lab], I have to get grant money, develop engineering plans, and build a facility. All roads lead to having a facility, and without it, I can’t ship. It might be a couple of years before I can get them. I am in the process of doing this.”

Prager was lucky to have learned some of the minutiae of moving a lab across international boundaries from his mentors, and mostly from doing a postdoc in a quarantined facility. But it still didn’t ease any of the permitting complications he encountered. While he waits for his insects, he has begun new projects focused on different species. This flexibility is certainly something he encourages other researchers to embrace, especially as they endeavor to move their labs across the globe. “As a biologist you can shift, for example, to work on a new plant or a new bug in the new place,” he says. “We have shifted to using different insects to ask the same biology questions or solve more local problems here.”

Moving your research enterprise to any institution has exciting potential, and it can be even more so when moving it across nations. If you are a scientist who chooses to take a new job internationally, there are opportunities to start new projects, engage in new research arenas, collaborate with new colleagues, and immerse yourself in a new culture. But before you start work, there are challenges you’ll have to contend with.

Planning, negotiating, and shipping

One key factor in planning your international move is determining how you will physically relocate your objet de recherche. A good launch point for this series of critical decisions is during negotiations with your new place cont.>

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moving with him to Australia. As a molecular biophysicist
Antoine van Oijen, specifically requested money for shipment and for personnel
positions as a researcher and eventually assistant professor
at the University of Queensland, Australia. In 2018, she
moved back to the States. In thinking about her initial move
to Australia, Dray emphasizes that discussing your relocation
strategy with your teammates at the new institution is essential.
“The university often has a preferred carrier or provider of any
service,” she says. And it’s vital to talk to both universities so
you won’t be stuck because of bureaucratic concerns, such as
having the right permits filed on both sides of the border for
samples you intend to take with you. “There are certain
chemicals and reagents you are not allowed to have if you
don’t have permits,” she says.

Choosing the right people
Indeed, the carrier is important, but only part of
the equation. Once you pack up your devices and your flora, fauna,
or fungi samples, you have to have someone receive them. This
is where hiring a talented lab manager or technician can make
a huge difference. When Chen Dong, professor and director
of the Institute for Immunology and dean of the School of
Medicine at Tsinghua University in China, shipped strains of
mice to Asia from his old post at MD Anderson Cancer Center
in Houston, Texas, he ensured that a technician was hired for
his new lab. To safeguard his enterprise, he made certain the
staff member knew the rules for receiving and managing the
shipment, the local customs enforcement and regulations, and
university procedures. Having an experienced team member
in China was especially critical given that he was dealing with
live animals. But in addition to hiring his new colleague, Dong
did something especially strategic in preparing his move: He
shipped the same strain twice in case something went awry
with the first shipment. “I already knew to do this because we
ship mice all the time to collaborators. Ship everything multiple
times, at least twice,” he urges.

Dong, like Connolly, negotiated to get access to his startup
funds before he went to China, to accelerate activation of his
research activities. “It takes a long time to get a lab off the
ground, and you want to be productive during that time,”
echoes Connolly. “So it’s important to have people who have
experience as a research officer or a purchasing manager, so

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of employment. When John Connolly, director of the Program
in Translational Immunology at the Institute of Molecular and
Cell Biology (IMCB), an autonomous research institute of
the Agency for Science, Technology and Research (A*STAR)
in Singapore, negotiated his compensation package, he
specifically requested money for shipment and for personnel
who would already be in place to receive and potentially
accelerate the launch of his new lab.

Sometimes you can take your equipment with you to the
new university. As Antoine van Oijen, a molecular biophysicist
and distinguished professor and director of the Molecular
Horizons research facility at the University of Wollongong in
Australia, was preparing for his move from The Netherlands,
he discovered that it was permissible to keep the microscopy
tools and optical tables he had purchased for his laboratory.
“They were bought by a personal grant, not an institutional
or government grant,” he notes. “The institution pointed out
that it was my right to take the equipment, which is indicative
of how supportive they were of my move.” And because he
was migrating on good terms, he was inclined to leave some
of his equipment behind to allow his graduate students and
postdocs to continue work on ongoing projects, which helped
create a smooth transition for those proteges who were not
moving with him to Australia.

Melike Lakadamyali, assistant professor in the Departments
of Cell and Developmental Biology and of Physiology in the
Perelman School of Medicine, University of Pennsylvania, did
the same thing—she strategically negotiated with her former
employer, the Institute of Photonic Sciences (ICFO) outside
Barcelona, for a grace period in which her old lab could be
utilized by grad students and postdocs staying in Spain. She
continued supervising her charges, heading back to ICFO
several times during the first year she was stateside. Her
research excelled in both locations, with both employers’
blessings.

Lakadamyali’s experience was part of a “back-and-forth
negotiation” with both institutions, she says. In particular, she
ensured that her startup package at Penn included funds for
her to buy her equipment from ICFO at a depreciated value.
This was less expensive than purchasing new equipment once
she got to the States. ICFO had specific guidelines for this,
including rules regarding the depreciation value of her items.
She advises other scientists to investigate whether this is a
feasible and favorable solution when it comes to planning a
lab move.

It’s also recommended to start communicating about the
moving plan with your new colleagues early. Eloise Dray,
research assistant professor at the University of Texas Health
Science Center in San Antonio, has had a number of cross-
globe migrations. She went from being a postdoc at Yale
Medical School in New Haven, Connecticut, to holding
positions as a researcher and eventually assistant professor
at the University of Queensland, Australia. In 2018, she
moved back to the States. In thinking about her initial move
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cont.>
that you can use the startup funds immediately. If you can get someone who is an excellent tech with years of experience as a lab manager, they are worth their weight in gold. Spend time finding the right person.”

Leaving graciously and gracefully

With all the details of your move meticulously plotted and executed, there is still one major area that you should not fail to take care of: leaving your current institution as graciously and gracefully as possible. Maintaining the connections that you carefully crafted at your soon-to-be-former employer should be a specific and solidified step in your moving strategy.

Moreover, you want to ensure that any grant funding you currently have through your old institution is managed and finalized appropriately and that your proteges are cared for. Van Oijen learned he could take certain funds with him. He helped plan a scenario where the grad students who would accompany him to Wollongong would be able to get two degrees, one from the Dutch institution he was leaving behind and one from the Australian university to which he was headed. “You really have to talk to the program officers at the granting agencies and in the grad schools of the universities, because in those informal conversations, that’s where the creative solutions happen,” he says. “Grant guidelines seem like a complicated landscape to navigate but if you talk to the granting agencies and in the grad schools of the universities, headed. “You really have to talk to the program officers at the granting agencies and in the grad schools of the universities, because in those informal conversations, that’s where the creative solutions happen,” he says. “Grant guidelines seem like a complicated landscape to navigate but if you talk to the granting officers, they will come up with solutions that make sense. They want to see you and your students be successful … They will work with you to make this as easy as possible for everyone involved.”

Of course, start with making sure you know the policies of your university. “My advice is to follow the standard procedures at your old institution, because you don’t want to create a situation where both sides are unhappy,” says Dong. “Fortunately for me, my past chair was very supportive, and ownership in your heart, but in a year or two, you’ll look back on it and realize that the relationships are more important.”

In Connolly’s case, he feels that he didn’t need as many of the projects he ended up taking with him. “If you move out of the U.S. and start something new, it’s really what’s in front of you, not what’s behind,” he says. “Once you set up a new lab with new people, you start new projects. So be willing to let go. Close off studies. Be realistic that in the next six months, you’ll be starting some very new things, so holding on to old samples makes no sense.”

Moving on to move forward

Be flexible, open, communicative, pleasant, focused, gracious, and polite. Expect the unexpected. Expect labs to take time to be completely operational and make contingency plans so that you remain productive during this tenuous period. There may be other professionals you have to collaborate with to move your lab for whom you did not plan. For example, as Dray explains, “You can’t just ship stem cells anywhere you decide to. You have to go through certain ethics committees at universities. You can synchronize with them to help you learn how to pack them, as well as your reagents and viruses … And look into quarantine laws and restricted import before you pack and move internationally.”

With these challenges, complications, and surprises come the pleasure and privilege of traveling to new lands to do science. “If you want to create something new, you have to break out of your comfort zone and try new areas,” says Connolly. “Moving internationally will allow you to do that.”

Alaina G. Levine is a STEM careers consultant, a professional speaker, and the author of Networking for Nerds (Wiley, 2015).