

New Lab Start-up Tips

These are the opinions of Elizabeth Nance, based on a start date in September

Tips on making your start-up \$\$\$ work for you for equipment and supplies

Lab set up is so much fun! And a bit intense. I definitely recommend trying to get equipment quotes and purchases in before end of December [of your first year] and ask for both the new lab discount AND end of year deals. For most companies, you can get both applied on the same purchase. If there are pieces of equipment where you can demo them and test if the demo version is in great shape, see if you can buy the demo version. That's also discounted significantly!

I also worked with Fisher and VWR reps to do one initial bulk order from both vendors for all the basic supplies like Kimwipes and pipette tips and gloves and secondary containers and such. That was the equivalent of a Costco trip in savings.

Don't buy science equipment from a non-certified scientific equipment vendor (e.g. eBay) unless you can 100% guarantee quality!

If you buy equipment from a vendor who also provides consumables for the equipment, definitely worth seeing if you can get some consumables lumped in for free with the equipment purchase. Same with getting a one-year maintenance warranty included for no additional charge - usually with new lab deals, you can get both those things included with no additional cost.

What is the realistic timeline for getting a lab setup?

In fall quarter I focused on getting the main major equipment I thought we would use immediately, which basically was (1) confocal microscope (2) ultracentrifuge and (3) cryostat. I also got some of the smaller pieces, like table top centrifuges, a -80, incubator, weigh scales, a probe sonicator and stir plate, refrigerator, a -20, tissue chopper, vortex and pipettors. There were definitely a lot of things in winter quarter we were still purchasing, but I outlined the main experiments I wanted to train my first students to start doing in January/February and then built the equipment list around that. I didn't have a huge list of experiments; for example, they basically were PEGylate polystyrene nanoparticles, make biodegradable nanoparticles, learn how to prepare and culture brain slices and learn particle tracking.

So getting everything in place for months 1-6 (Dec -May) was focused on that experimental list and initial training, then we built out from there when I had more students to help me demo additional pieces of equipment we wanted, like an LC-MS, RT PCR, etc, and also identify things we needed that I had just forgotten, like glass stereological pipettes and a pH meter and things I felt dumb for forgetting but just overlooked.

New lab discounts apply for up to one year after your official start date, but many companies will extend this to 18 months. So for some things, I waited until the next end of year period to get, either consumables in bulk or smaller pieces of equipment.

I would say I was confident we had the majority of what we needed in place and were no longer hitting moments of "oh right, we should probably get that" by May 2016 (first PhD students joined the lab in January 2016); but I was still adding pieces of small equipment through the first few years.

Competing quotes and sole source

The time suck in Sept - Dec of year 1 was that it's really just you demoing stuff and working with the vendors. Not all equipment needs to be demo'ed - there might be similar pieces on campus a vendor

can help you get access to try out without you needing to arrange a demo. Other equipment you might just know what you want because it was something you had in your PhD or postdoc. But for any purchase that is a capital purchase, you need at least 3 quotes or a sole source justification. Sole source justification is not as restrictive as it sounds. For example, for my confocal - I got quotes from Nikon, Zeiss and Leica. I demo'd Nikon and Zeiss. I went with Nikon because their customer service team is awesome and I enjoy working with them, but there were many aspects of that purchase I was able to justify as sole source because there were very specific equipment specifications needed, even though the general gist of the equipment could be found from two other vendors.

[I have sample documents I provided for sole source and M&E tax exempt statements]

Vendor relationships – build them early

I've had really great experiences so far with our vendors even for the small stuff - my approach is to treat the vendor-PI relationship as a partnership rather than a service. With the Fischer and VWR and Sigma reps, they have a good idea of what labs need when starting if you meet with them to go over your research area and types of things you'll be doing. Many things I would have forgotten about they asked me about whether I needed or not, and that was helpful.

Facilities – Kameron is your best friend

If you know you need facilities work, get Kameron [*ChemE building manager*] to help you push on facilities and start as soon as you know what you need. Kameron is very savvy and will make your life much easier, but things always take longer than you would anticipate on that front, especially in an older campus building like Benson.

Note on maintenance/service warranties or contracts

Service contracts can be given for more than one year and are often discounted significantly if so. See if a vendor has a 3-year or 5-year warranty. It will save you thousands or more depending on the equipment. It's also good to keep in mind that if you have a break in a service contract (e.g. you have a contract for 3 years then don't renew for a year then revisit renewal) this will result in a more expensive contract.

Budget your service contracts into grants, especially for high end equipment. Get a quote on the service contract costs for a multi-year period (if possible), estimate your hours per year of equipment use and calculate an hourly rate. Use that hourly rate to include service contract budget money into grants, either for your own work/grants or for collaborators work/grants.