

An occasional column, in which Mole and other characters share their views on various aspects of life-science research. Correspondence for Mole and his friends can be sent to [mole@biologists.com](mailto:mole@biologists.com), and may be published in forthcoming issues.



## Cast away

*Hola! Saludos desde La Habana!* Yes, here I am, in a lovely rooftop café near the Plaza Viejo, having, um, tea, with my friends Professors Dolphin and Chameleon (we're keeping Dolphin moisturized, of course, but we keep losing track of Chameleon). And our new friend Llama, who is not a scientist, but is providing us with a great deal of valuable insights into

Cuba (we asked Llama to give us an example of what she hears in all our science talk, and she dismissed us with "Cells!"). No, we are not talking only about science, of course, but then again, we are. ("Geeks," says Llama, but I think she likes us anyway.)

We have been attending a meeting, providing great opportunity to explore the science being done here and giving updates on our own. And we've all been struck by

the level of passion we've found – the students are more actively engaged in their endeavors than we've seen nearly anywhere else. And we do get around. We've been trying to figure out why.

The facts are that, although medical science is supported here, there are myriad challenges to the efforts, and frustration abounds. Many of the students we've met travel for hours each day to reach the institute, and they do this with the knowledge that, if they succeed, they aspire to a career that is not compensated beyond the level they would achieve without such efforts. They don't have the resources to outsource what they do; indeed, they don't have the resources to buy things that would make life in the lab (or at home) easier. There are clubs everywhere that they cannot afford to go to and, after work, they congregate in their homes for get-togethers. But when they do, they talk and, above all, *dance*.

Llama tells us that here, one becomes a scientist (or a doctor, or a teacher) because they have the passion and the ability. There is no other agenda. (And this flies in the face of some cynical 'wisdom' that says that people will only achieve if they are proportionally compensated.) Now, I'm not saying that this is why they have attained a level of success that is remarkable – indeed, I have seen this go quite the other way. Years ago, I visited Warsaw when it was still enthralled to the CCCP, and it was very different. Yes, I met some talented, world-class scientists there, but I also saw the opposite. When my friend, kind old Professor Lynx (one of the world class) showed me his lab, I saw it bustling with students, busy at their work. We left for lunch, but he realized he had forgotten his hat, and we went back inside, where, moments after we had left, the lab was completely deserted. He told me with a Slavic shrug that this was simply "how it was." No, limiting us to drudgery under supervision is not a prescription for passionate progress. (Things are *much* better now, of course.)

Chameleon had some insights into this (he just reappeared – he really blends in). He told us what he tells his trainees. When you choose a project, he suggested, you are a cast away at sea, looking for a landfall. There may be islands that are nearby and others in the distance, and you have to choose one, knowing that you may well be spending years on your destination. So when you do choose, make sure it is a

place you want to live, possibly for a very long time. Of course, he was talking about projects, not islands, but you see what he means.

And there's more. Some islands are very crowded places, with lots of castaways staking out their territories, and it may be difficult to find a spot to make your home. This is a great thing while you're training, because there is a lot of activity, and many get-togethers (meetings) where this activity is discussed. These islands can be exciting, but finding a way to live on them can be challenging, even if you think you're gaining some recognition among the throng. This sort of fame is fleeting, and you may find that the little patch you've staked out won't be getting much attention a few years from now.

Other islands are more deserted, with only a few fellow castaways, but so much to explore. It is harder on these islands, because we can't fall back on the progress of others, but if you can make a home here, you may well find others washing up on the shore to see what you're up to. If you can make a home on an island like this, and if you find a lot to explore, you may find that the rewards will last for decades, even an entire career. Yes, it's hard to find these islands, but when you do, consider setting up camp and looking around. It may be just the thing.

Here's the thing, I think. Each of the students we met had landed on an island they intended to live on for a long time, along with a few of their friends (or people who would become their friends). And on these islands they do what they do during their days what they do at night – despite the limited resources, frustrations and challenges, they dance. They dance to their data, and to the data they find in the literature. If they don't have a reagent, they use what they have, and when the opportunity arises, they grab it with both hands. Yes, expectations are lower for them than for many of our trainees, who often do not have the excuse that they cannot do what they want to.

But then I look at my own, wonderful lab, and yes, they are very committed and enthusiastic, but a bit dispirited at times, I think. The current climate is a harsh one for young scientists, worried about not only getting a job and securing funding, but also about the long-term prospects for developing a vibrant research program. The islands they have chosen are lush, with great questions under every rock they turn

over, but some of them are despairing of being rescued. They want a big ship on the horizon to land so they can be whisked away to what they hope will be even better places. Where, not only might the grass be greener, but there might actually be some grass. And how often have I heard that an experiment wasn't done because a particular reagent hadn't arrived and, therefore, nothing at all had been done. "Well, I didn't have the right antibody."

Okay, I'm not in Havana now. Since then I've visited folks in Long Island, in Barcelona and (at the moment) in Melbourne. I saw Dolphin again (we had a great time) and we got to explore a new island (okay, Long Island, but also an exciting, emerging area of research).

Oh, and there we met Red Fox, who is just setting up her lab. And yeah, she has definitely found her own island – one of the rare deserted ones, and she has courageous plans to forge a new area of research. Don't get me wrong, I think she's as nervous and excited as anyone about the challenges of being independent and competitive, but really, I have no doubt she'll succeed. (Dolphin agrees.) Why? Because she has the most important feature a successful scientist can have – a luminous curiosity that draws in others to share her excitement. I suspect that Fox's trainees and colleagues will love her island. Oh, and she's a really good dancer.

So what I can happily report is that science is alive and well and, yes, fun. There is a lot of excitement in the air – it's a great time to do the sort of science we do; fantastic things are happening on islands both crowded and more spare. And yeah, everyone complains but, despite that, somehow we're making incredible progress on all fronts. We can certainly do more, and things are far from perfect, but there is no need to despair and much reason to rejoice.

So maybe all I'm saying is that it might be a good thing to think about the lovely scientists of Havana and similar places, and consider how petty our concerns, our frustrations, our excuses, really are. And maybe, the next time that antibody doesn't come in time, turn up the music.

And *dance*.

## Mole

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