



# Voices of the new generation: science in a state of benign confusion

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Building a research group in China (when you have not mastered the language) means you face the same problems as elsewhere, with an extra bit of confusion.

Credit: Image courtesy of Una Zhu



My computational biology research group at Fudan University, which I started in September 2018, works on the global microbiome. We endeavour to understand the ecological processes behind the microbial ecology of the whole of the Earth, trying to answer questions such as how genes and species emerge, how they evolve and what they do. We approach this issue computationally, by analysing large datasets of metagenomes.

My job interview at Fudan University, in Shanghai, was my first visit to China. Moving here was not my first international experience: I have studied and worked in Portugal, the USA and Germany, and I can speak and write in several European languages. However, in China I have become familiar with a quotidian feeling of benign confusion.

As my Mandarin can generously be described as rudimentary, and few people, outside of the university environment, speak fluent English, communication is often a mystifying dumb-show. I get by with gestures, automated translation, my mispronounced Mandarin and copious smiles. Confusion is inevitable. However, if you display humility rather than entitlement, people are very friendly and understanding of your ignorance. Hence, benign confusion.

To a surprising degree, my job is very similar to what it would be elsewhere. A typical pre-COVID-19 day involved picking up a flat white at the hip campus café on the way in to the office, answering emails, working on grants and manuscripts, meeting with trainees and, if time permits, reading papers. I do it in English, submitting to the same journals and conferences as my international colleagues. Twitter and Slack groups are invaluable for keeping up with the scientific conversation.

Grants are available from a variety of Chinese sources: national grants, city grants and I have even received some funding from our neighbourhood. (For perspective, with over one million inhabitants, our neighbourhood is larger than some of the smaller

European countries.) Like everywhere, to apply for a grant you write a proposal arguing for the scientific importance of your ideas and your ability to test them. Although grants can be submitted in English, much of the information about them is only available in Chinese. Therefore, I must rely on my department and colleagues to share this information.

When there are calls for international collaboration, my contacts outside of China provide me with extra opportunities. For example, we are currently part of a JPIAMR-funded collaboration to work on antimicrobial resistance, with partners in Europe and Pakistan. As part of these consortia, I often have to deal with impedance mismatches between administrative systems. We naturally have to translate contracts and documents, which increases paperwork. The real problems start, however, when one partner requires a document that has no equivalent in China, or vice versa. Although some of these issues would exist even within Europe, they are much greater between such different administrative systems.

Nevertheless, many of the problems I face here are the same as those faced by junior group leaders everywhere. For example, once funding is secured, how to attract postdocs and students, when you are competing with more established researchers for talent. Indeed, for the first six months on the job, my 'group' consisted of just myself, working alone at my computer. At times, it felt like an anticlimatic continuation of my postdoc.

Eventually, I was lucky to have a few talented students and one extraordinary postdoc join my group. Slowly, the texture of the job changed. Then, one day, I took a break and went to the departmental lounge to get myself a cup of coffee. As I walked in, I saw that 'my' students and postdoc were sitting together with a visiting speaker, discussing science. At that moment, I realized that I had finally established a research group.

#### Competing interests

The author declares no competing interests.

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