Hey there, from inside a small box. I crawled in here a week ago (or was it two weeks? Three?) and I’m nice and comfy. I have some crackers, some Cheeze Whiz, and an old set of ‘Colorforms.’ The latter are vinyl shapes in bright colors that you stick on a black vinyl surface. I’m not sure they make them anymore. Oh, and a nice bottle of ‘tea.’ I might never come out.

No, wait – that was the dream I had last night. I think I put the box on wheels to roll around the room, but then things all got jumbled, and I was putting Cheeze Whiz on somebody’s forehead, I think it might have been Quokka’s. I know, TMI. Sorry.

Actually, I’m sitting outside, under a bright blue sky. Glorious day, really. Setting up meetings and working on a review chapter, and now I’m talking to you. Nice. I might have a Corona later. The beer, not the nasty virus, thank you.

I’ve been thinking about the disconnect we seem to have between the sort of thing I do, this biomedical discovery research thing, and the application of science to the art and practice of clinical medicine. You know, translation. We are experiencing translation in real time right now, and it’s interesting to watch. And the thing is, I don’t know how I feel about it. Some moments it’s frustrating and, maybe, even ridiculous, and at other times it’s thrilling. One moment I’m angry, and the next I’m elated. It could be a side effect of Cheeze Whiz. Who knows what’s in that stuff? Wait, that was the dream.

If you recall, I don’t call basic research, um, basic. I prefer ‘discovery.’ This is because I once spoke to someone with a lot of experience in advertising and public relations, and she told me that the term, ‘basic science,’ is terrible branding. It implied to her that it needs to happen if we are to get anywhere new. So, yes, discovery research. Only now I want cake. Focus, Mole.

Discovery researchers are frustrated. I saw this recently, when Professors Linx and Otter circulated a letter they wished to submit to a prominent newspaper (yes, there are still newspapers, and this one is one that I read). In essence, it called for dispensing with clinical testing of potential vaccines for this awful virus, and instead producing and distributing them to as many people as possible. The thinking was, if it works, it will be transformative, and if not, it was worth the try. And from the perspective of discovery research, this comfy box we live in, (‘comfy’ because we generally know what it takes to get an answer to a question, and this situation has a lot of questions), this might make sense.

This idea that we dispense with testing when things are dire is not new. In Sinclair Lewis’ novel, Arrowsmith, the eponymous protagonist abandoned his rigorous scientific principles and used an experimental phage to successfully treat a bubonic plague epidemic on his Caribbean island. This was lauded as heroic. Good that he didn’t kill everyone, but then again, it was fiction. But this has also occurred in real life. After the discovery of diphtheria toxin by the German bacteriologist Friedrich Loeffler, Shibasaburo Kitasato and Emil von Behring quickly made the first antitoxin in 1890. It was tried with some success in a couple of patients in Europe and, subsequently, in the United States. Then William H. Park, a bacteriologist with the New York City Board of Health, used antitoxin in an uncontrolled and sweeping way. He wrote, “...an epidemic...was raging in a large institution for children. It broke out in the fall of 1894, a few weeks before we received our first antitoxin from Europe...The danger to the children was so great that we decided to use the...antitoxin.”
People were desperate, and the discovery research was translated to practice in a very short time, without those pesky clinical trials. Yes, it had side effects, which could be lethal, and the antitoxin (now replaced with a vaccine) is no longer in widespread use.

But there is another side to all of this. Once, many years ago, I was hired to explain to a sales force at a major pharmaceutical company the mechanisms of action of some of their best-selling products. One of these was something that, based on solid evidence, simply has no effect at all (despite claims that it cured all sorts of diseases) but was being sold, for a great deal of money, in a country that, at the time, had rather lax rules about such things. Since it was harmless, the company (and sales force) were pretty enthusiastic about it. As long as it sold, they reasoned, why shouldn’t they make money on it? I’ve got a problem with that.

So, getting back to the letter, I said I couldn’t sign it. I do believe that many are working hard to come up with an effective vaccine, and I would like to see some carefully analyzed results before I can endorse widespread use. An ineffective vaccine might well cause a great deal of damage to people who think they are protected and are not. When such results are available and if they show benefit then, maybe, we can talk about another letter about sidestepping some of the extended trials. But that’s just me – I understand the need to get something effective out there as quickly as possible. Frustrating, I know.

However, there are things that are even more frustrating. As of now, there is no clinically approved serological test for this virus in the country I live in (the one with the lead cat in a red hat). This is despite the facts that a) such a test is very easy to make and validate, b) it is rapid and inexpensive, and c) it is very useful. Indeed, widespread serological testing is going on experimentally in many centers in my country and around the world. I just don’t get it. I acknowledge that we have to know a lot more (what does a positive result mean in terms of protection?) but how hard is it to approve the test? Clearly, I’m missing something.

A few weeks ago, I was schooled in the difference between what we do in the lab (by we, I mean, discovery researchers) and what happens in a clinical lab. Indeed, we can run the same test (say, a qPCR reaction) but it doesn’t count. No clinical decision can be made based on the result. “Okay,” I said, “but maybe we can run the tests with a clinical lab validating those results that might require a clinical decision? I mean, we could run 50 tests for every one run in the clinical lab.” I was told that the clinical lab runs controls. I said that we run controls every time we do an experiment. But, I was told, we don’t work in clinical labs. I said we are not taking advantage of extensive data on test pooling, extraction versus no extraction, and other ways testing is being extended. No, I was told, that’s all research, it isn’t clinical testing. And round and round we went. It took time, but now we are greatly facilitating the screening and it is going very well. Just took some time and a lot of frustration. I’m pretty happy about this (and yes, we are following the rules). I just had to get out of my comfy box.

Hang in there. I know this is all crazy right now. And the crazy isn’t going to end soon. We have to be fast, but we also have to be careful. And yes, we will get there. But right now, I have to get back to another project. Where did I put those Colorforms; I thought I had them in my comfy box?