



Where I work Kanta Subbarao

I'm in my research laboratory here, at the Peter Doherty Institute for Infection and Immunity in Melbourne, Australia. We work on respiratory viruses, mainly influenza and SARS-CoV-2, the virus that causes COVID-19. This is the part of the lab where we try to understand the human antibody response to moderate-risk viruses.

I've done a lot of work on flu and the coronaviruses that cause Middle East respiratory syndrome and severe acute respiratory syndrome, so we were able to quickly set up our containment areas to work with the high-risk live SARS-CoV-2 virus in February 2020. We helped to test plasma from people who had recovered from infection, as well as antibody treatments that were developed by drug companies, to see which antibodies best neutralized the virus.

We are also working with stem-cell biologists to turn human induced pluripotent stem cells – adult cells reprogrammed back to an embryonic-like state – into heart-muscle, placental, kidney and lung cells in culture. This helps us to

see what happens in specific human tissues during coronavirus infection. We can test antiviral drugs on these culture systems, too.

I also oversee a team that does global influenza surveillance. From July to October 2020, Australia had a severe lockdown, with permits required to leave home for anything other than an hour of exercise. Because we worked on the coronavirus, our institute was allowed 25% occupancy. We worked in shifts, and people handed off their experiments or samples to other team members.

It was a stressful time. But we have a great team, which has doubled in size because of all the work. During lockdown, I volunteered to read cell-culture plates to ease pressure on my team. I still offer to do it now: it keeps me connected with the demands of high-risk lab work, and I prefer it to sitting at my desk.

Kanta Subbarao is the director of the World Health Organization Collaborating Centre for Reference and Research on Influenza at the Peter Doherty Institute for Infection and Immunity in Melbourne, Australia. **Interview by Kendall Powell.**

Photographed for *Nature* by Daniel Mahon.