



Where I work Clarice Aiello

Photographed for *Nature*
by Rocco Ceselin.

I work as a laboratory leader in the emerging field of quantum biology, which examines how the laws of quantum mechanics might mediate biological processes such as photosynthesis, respiration and vision. Migrating birds, for example, are thought to use proteins that act as sensors for detecting Earth's magnetic field, enabling them to navigate by it, and quantum mechanical effects might underlie metabolic regulation in cells.

In my lab, we are building powerful microscopes that will enable us to look at one human cell or one cell from a bird's retina, and eventually learn how to control the cells' physiological responses to magnetic fields.

I'm from Brazil, and came to the University of California, Los Angeles, as a principal investigator in 2019. The university's labs are mostly open again, but right now that means just one person per lab at any one time, fully masked. Two postdocs on my team are working in different labs, starting to put optics together, building lasers, aligning mirrors. I can go in only

at certain prearranged times.

When I realized that I would be working and teaching at home because of the pandemic, I bought an extra 50-inch computer screen. Since March, I've given Zoom lectures using two screens connected to two computers: I have one screen for Zoom, and one for graphics and slides. I also bought a Japanese-style chair so that I could work 'from the floor', as in this picture, because I wanted a physical marker that things are different. The chair does conjure the sense that I'm physically grounded.

I feel really enthusiastic about bridging the gap between biologists and physicists. And I'm grateful to my team members, who are working in an in-between field that brings these two groups together and are helping to build a new lab during a pandemic. The fearlessness of these people makes me eager to wake up every morning.

Clarice Aiello is a quantum engineer at the Quantum Biology Tech lab, known as QuBiT, at the University of California, Los Angeles.
Interview by Josie Glausiusz.