Dr. Asha Shekaran

The Collaborative Dance of Science

It is a myth that researchers only work within the confines of their laboratories. A*STAR researchers are often seconded to organisations where they test their mettle and work on real-world industry projects. Dr. Asha Shekaran, Research Fellow, Bioprocessing Technology Institute (BTI) and ballroom dancing enthusiast, reflects on her secondment with a local SME.

Ballroom dancing teaches you about communication. In dance, one person leads and the other follows. Through a physical connection, you speak with your partner to spin, turn and hop across the dance floor together.

Much like ballroom dancing, biomedical research is a team activity. Team members have to both lead and follow, especially when working in a start-up. We communicate with one another using the languages of science, business and medicine.

Right Steps to Success

The stereotype of a scientist is often a solitary genius whose destined discovery appears in a dramatic

Dr. Asha Shekaran
Lead Biological Scientist,
Engine Biosciences

"The idea that we could engineer replacement tissues out of cells and materials really captured my imagination. It sparked my long-standing interest in improving healthcare."

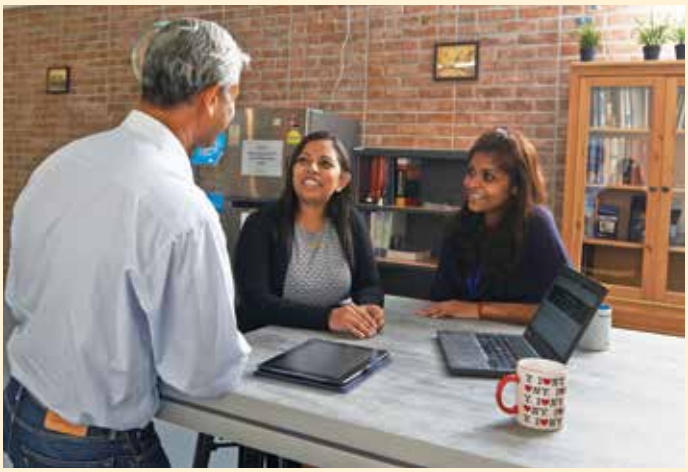
- Dr. Asha Shekaran

Eureka moment. But in my experience, scientists are inspired, not born. Success takes a village, or more aptly, a laboratory.

My love for research bloomed when I was at Northwestern University, Evanston, USA. The opportunity to further my studies at the prestigious university came after I received the A*STAR National Science Scholarship (BS-PhD). There, I engineered artificial blood vessels.

Today, I hold the position of Lead Biological Scientist at Engine Biosciences, a local start-up. Its brainchild is CombiGEM, a powerful tool for rapidly discovering combination drugs for complex diseases. With it, we can study innumerable combinations of genetic elements such as CRISPR guides or miRNAs in large populations of cells.

From there, we investigate which specific combination has a desired effect, such as increasing cancer cells' sensitivity to chemotherapy. This could potentially help patients who do not respond to chemotherapy and lack other treatment options.



The Start-up Culture

Life in a new start-up is dynamic, fast-paced and exciting, much like ballroom dancing. There are risks in joining a start-up, but there are also pluses. You have more control and ownership of your projects. In a small team, it's easy to build strong relationships.

I am very fortunate to work with a talented team of research officers and scientists. It's a terrific experience working with our scientific founder Prof. Tim Lu and CEO Jeff Lu, who have immense scientific, entrepreneurial and business acumen. From them, I am learning how to apply cutting-edge science to create real-world impact.

Dr. Asha's Survival Guide to LIFE IN A START-UP

"If I have 6 hours to cut down a tree, I'll spend the first 4 sharpening my axe."

Prepare well for deadlines and you'll achieve more.

"It's not the mountain ahead that wears you out, but the pebble in your shoe."

Take care of petty annoyances early so that you don't have to drag your blistered feet up a mountain.

"Go with the flow."

Priorities may shift quickly. Be nimble and respond to changes as they come.