Meet a Scientist: Dr. Pawan Sinha

Meet Dr. Pawan Sinha. He is a **neuroscientist**.
Neuroscientists study the brain and the nervous system.

Pawan studies how the eyes and brain work together so we can see! He is an expert on both the brain and the **visual system.** The visual system is a name for the parts of the body that work together to give you vision.

Pawan asks: *"How is our brain able to recognize and identify objects?"*
Have you ever asked this question? It might seem "easy" to recognize your friend or an object you are viewing but in fact this is a very complex process for the brain!

In addition to his research, Pawan teaches as a professor. He also started and leads **Project Prakash**. Project Prakash works to restore eyesight to children in India who have conditions that damage their vision. You can see him working with children in the picture on this page.

Read the interview below to learn more about Pawan!

What was your childhood like? Did you like science?

I grew up in New Delhi, India, in a household that valued learning and education. My mother was a middle school teacher and my father was an administrator at a STEM-focused college.

My elder sister always excelled in her studies. I learned much from her, not just about how to study, but also about the value of service. She became a doctor.

Tragically she passed away at the age of 25, partly because she had neglected her own health while caring for her patients. This had a great impact on me, and I was inspired by the complete selflessness of her work.

Although I didn't go into medicine like my sister, I always felt the tug of life sciences. So while I studied engineering in college, I decided to study the brain for graduate school and became a neuroscientist. Luckily, I am able to use my engineering training in my current work.

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Describe a typical day at your job.

The life of a professor is a charmed one if you enjoy discovering new things!

A typical day involves multiple types of work. I use computers (or a paper and pencil) to think about how to solve problems in neuroscience and better understand the brain. I often write papers to share my research results with others. I write proposals to get my research funded, meet with colleagues and students to discuss projects, or teach a class.

It's a busy life, but in the best possible way. I don't resent having to work hard because it is something that I enjoy doing, and the results are likely to help humanity at some point.

Describe a time in your career when something did not go as planned.

Scientists often publish the results of their research in scientific journals. These research papers are the main way to get a job as a professor, so they are very important.

One of the first research papers I wrote was rejected by my first-choice journal. This journal is one of the most famous journals in the world. The very day I received the rejection, I sent the research paper to my second-choice journal and they accepted it. Then something very surprising happened. My first-choice journal changed their mind and said they would publish my paper after all!

I knew if I published in my first-choice journal it would help my career. But I had already said yes to the second-choice journal and it wouldn't be fair to pull the paper. What would you do in this situation?

I decided to do what seemed right, even if it slowed down my career. I published in the second journal. For a long time, I thought "what if. . .?" But now I am thankful for how things unfolded. Publishing in the second journal set off a chain of events that resulted in me doing the best research possible. I am happy I did the right thing.

What advice do you have for students today?

Do what makes you a bit anxious; you will grow as a person and gain confidence in your own abilities.