

FIRST PERSON

First person – Priyanka Ghosh

First Person is a series of interviews with the first authors of a selection of papers published in Journal of Cell Science, helping researchers promote themselves alongside their papers. Priyanka Ghosh is first author on 'Inflammatory macrophage to hepatocyte signals can be prevented by extracellular vesicle reprogramming', published in JCS. Priyanka is a Senior Scientist in the lab of Ann Wozniak at University of Kansas Medical Center, Kansas City, USA, investigating extracellular vesicle-mediated therapeutics in inflammatory liver disease.

How would you explain the main findings of your paper in lay terms?

The defensive cells in the liver, called macrophages, communicate with neighboring cells to both progress and resolve disease states. During inflammation, macrophages secrete extracellular vesicles containing disease-progressing cargoes that have the capacity to change the fate and function of neighboring cells. We find that we can reprogram the extracellular vesicle cargoes by modulating the cleavage of a trafficking protein called RILP. This promotes disease resolution and thus has the potential to be an effective therapeutic approach.

Were there any specific challenges associated with this project? If so, how did you overcome them?

It was difficult to optimally standardize the cell–cell crosstalk model. This technique was relatively new, and we had to standardize every cell line individually as cell–cell communication time varies between every cell type.

When doing the research, did you have a particular result or 'eureka' moment that has stuck with you?

A big eureka moment for us was when we found that the non-cleavable form of RILP (ncRILP) could profoundly change the cell–cell inflammatory communication in a protective manner.

Why did you choose Journal of Cell Science for your paper?

JCS is a well-established international peer-reviewed journal that offers high-quality scientific research. We believe our research fits well with JCS and will be beneficial with its broad readership and its promoting opportunities.

Have you had any significant mentors who have helped you beyond supervision in the lab? How was their guidance special?

Dr Wozniak not only supervised the project, but she was also a great mentor. Her confidence in me and my work during tough times ultimately helped me to publish this article. Another person is Dr Steven Weinman; his valuable suggestions always helped me to overcome tough situations.

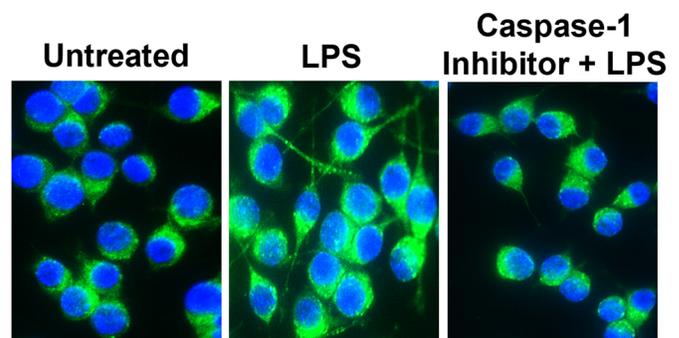


Priyanka Ghosh

What motivated you to pursue a career in science, and what have been the most interesting moments on the path that led you to where you are now?

My grandfather was a medical doctor, and he helped our society a lot; I want to be just like him. While I didn't go to medical school, I chose to become a scientist so I can help society with my research.

A particularly interesting moment in my path was my 10th grade result. In India, whether you can enter STEM subjects is based on your 10th grade result. I was confident that I would get a good score, but that was not the case. My result was so bad that I barely got a chance to take STEM in school. That was my turning point.



Rab7 distribution in a RAW 264.7 mouse macrophage cell.

What's next for you?

My next plan is to grow as a professional in academia with Dr Wozniak and our team.

Tell us something interesting about yourself that wouldn't be on your CV

I had a tough time from 2015–2018. I suffered with severe health issues that affected my career. This tough phase helped me to

understand myself more deeply and make me stronger and more stable. Finally, I bounced back in 2019, and now I'm a happy mom and wife with two kids and a loving husband.

Reference

Ghosh, P., Sasaki, K., Pulido Ruiz, I. A., King, K. E., Weinman, S. A. and Wozniak, A. L. (2023). Inflammatory macrophage to hepatocyte signals can be prevented by extracellular vesicle reprogramming. *J. Cell Sci.* **136**, jcs260691. doi:10.1242/jcs.260691