

FIRST PERSON

First person – Giulia Corbet

First Person is a series of interviews with the first authors of a selection of papers published in Journal of Cell Science, helping early-career researchers promote themselves alongside their papers. Giulia Corbet is first author on 'ADAR1 limits stress granule formation through both translation-dependent and translation-independent mechanisms', published in JCS. Giulia is a PhD student in the lab of Roy Parker at the University of Colorado Boulder, CO, USA, investigating how ribonucleoprotein granules form, function and are regulated.

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

Cells respond to stress, such as viral infection or oxidative stress, through a common mechanism known as the integrated stress response. One facet of the integrated stress response is the repression of protein synthesis and the subsequent formation in the cell of RNA and protein assemblies known as stress granules. These stress granules may serve as storage sites for RNAs and proteins while the cell prioritizes the production of stress-specific proteins. In our paper, we investigate how the protein ADAR1 functions to limit stress granule assembly. We find that ADAR1 does this via two routes: one that involves preventing the repression of protein synthesis that leads to stress granule formation, and one that is independent of protein synthesis. This finding may help us further understand the role of stress granules during viral infection, given that ADAR1 levels increase during infection.

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

There was no particular eureka moment with this project, but rather a summation of small observations that, when combined, led us to the greater understanding presented in the paper.

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

We chose Journal of Cell Science for this paper because we hoped to reach a wide cell biology audience with this story, and Journal of Cell Science is a great journal to achieve that with.

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

The Parker lab manager Denise Muhlrad was a mentor and a friend to me, and she shaped my entire graduate school experience. Denise sadly passed away in October 2020, but she was the embodiment of an excellent and rigorous scientist who cared about the people in the lab above all else. Denise was always ready to drop whatever she was doing to help others, and she made sure everyone in the lab felt like they belonged.

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Giulia Corbet

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 mother encouraged me to develop an interest in science from a very young age. She always pushed me to be curious about the world and how things worked, and that has always stuck with me. Additionally, upon entering college at Western Washington University, I was given the opportunity to participate in a two-week intensive marine biology course in the Puget Sound. This was my first real experience performing fieldwork, collecting data and being in the lab, and it cemented my desire to pursue a career in science.

Who are your role models in science? Why?

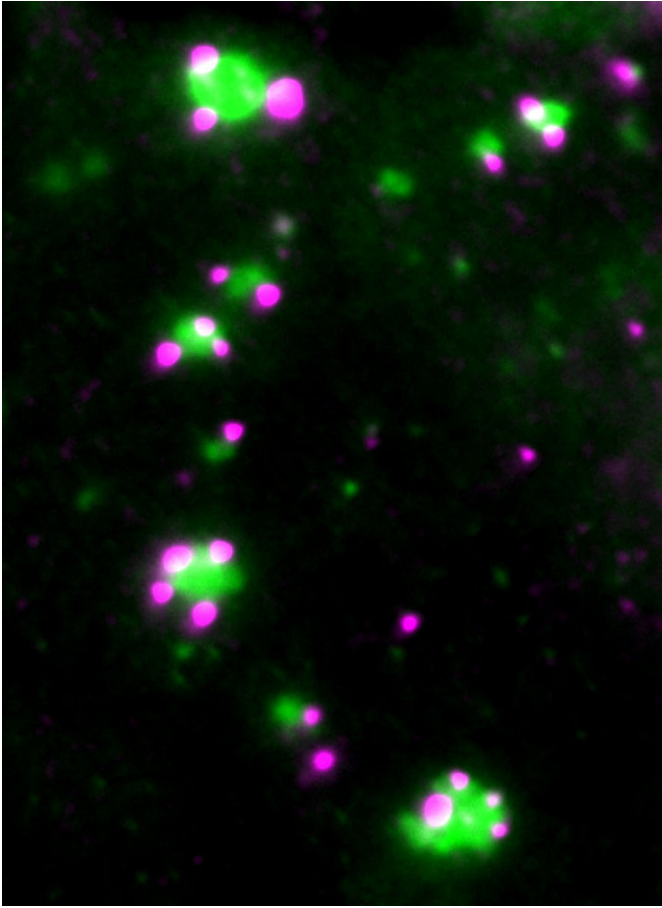
My role models in science are the older graduate students and postdocs who have I have looked up to throughout graduate school. They have shown me the victories and struggles that make up the day-to-day in the lab and helped me try to move past my imposter syndrome.

What's next for you?

I plan to pursue research in an industry setting after finishing my PhD. I don't envision myself being a PI, but I love science, so I hope to find a position working for a company doing research that excites me.

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

In my free time I love to play disc golf.



Docking between two ribonucleoprotein granules. P-bodies (magenta) and stress granules (green) in U-2 OS cells stressed with sodium arsenite.

Reference

Corbet, G. A., Burke, J. M. and Parker, R. (2021). ADAR1 limits stress granule formation through both translation-dependent and translation-independent mechanisms. *J. Cell Sci.* **134**, jcs258783. doi:10.1242/jcs.258783