

## FIRST PERSON

# First person – Ahmed Elbediwy

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. Ahmed Elbediwy is the first author on 'Enigma proteins regulate YAP mechanotransduction', published in Journal of Cell Science. Ahmed is a postdoctoral fellow in the lab of Barry Thompson at The Francis Crick Institute, London, UK, investigating the cytoskeleton, RhoGTPases and the regulation of YAP/TAZ oncoproteins.

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

When cells are mechanically stretched, a protein named YAP, which acts in the Hippo signalling pathway, is able to move from the cytoplasm to the nucleus. In our research, we identified a key set of proteins belonging to the Enigma protein family, PDLIM5 and PDLIM7, that appear to form a molecular link between YAP and cellular adhesions, enabling YAP to sense forces acting at adhesions and consequently move into the nucleus.

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

Two big challenges encountered during this project were making LATS1/2 double conditional knockout fibroblasts from mice, as well as cloning the PDLIM overexpression constructs, but my co-authors Hannah Vanyai and Maria-del-Carmen Diaz-de-la-Loza were patient enough to go through this tedious process, while I focused on other areas of the mechanism. Big thanks to them.

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

I think the finding that YAP nuclear localisation is affected by SRC tyrosine kinase inhibition, even in LATS1/2 knockout cells, was quite a eureka moment as there has been some literature suggesting otherwise.

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

Being a cell biologist, JCS is the natural choice if you want to be published in a prestigious journal and would like to reach a broad audience. I also like that JCS is run by scientists and gives back to the scientific community.

### Have you had any significant mentors who have helped you beyond supervision in the lab?

As well as my supervisor Barry, who has supported me throughout my postdoc and was amazing as a boss and mentor, I have a fantastic relationship with my PhD supervisor Karl Matter, he gives me advice whenever I need it. The Francis Crick Institute is also a wonderful place for mentoring and I always have advice from both Dr Nic Tapon and Professor Peter Parker.

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Ahmed Elbediwy

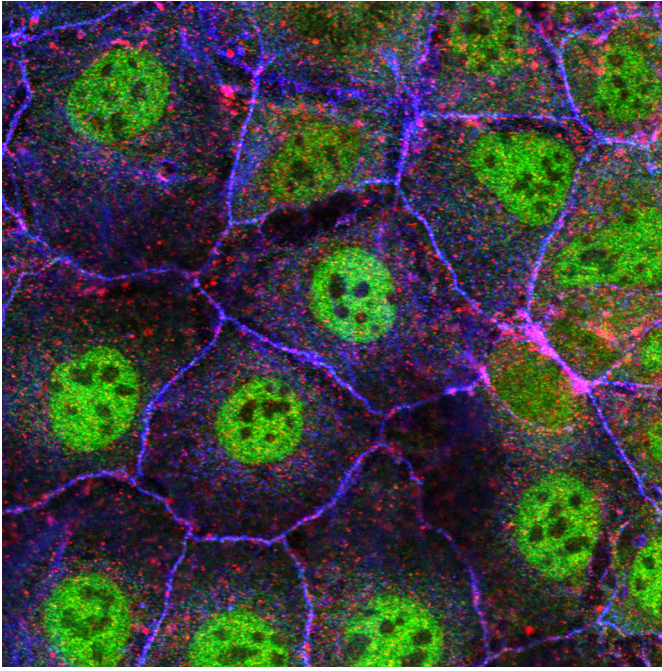
**“[In my] first western blot... I actually performed the transfer on the nitrocellulose backing paper instead of the actual membrane!”**

### 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?

I have always been intrigued by how things work from a young age and coming from a family of doctors has fed my curiosity about biomedicine throughout my life. When I first started my PhD, I had not been in a research lab before so was quite nervous. I ended up performing my first western blot, which surprisingly went perfectly; the only issue was I actually performed the transfer on the nitrocellulose backing paper instead of the actual membrane!

### Who are your role models in science? Why?

I have always looked up to many famous Rho GTPase scientists, such as the late great duo Professor Alan Hall and Professor Chris Marshall. Their work formed the basis for my research interests



Caco-2 cells have strong nuclear YAP staining (green) when cells are actively proliferating.

during my PhD. I was fascinated how they made such ground-breaking discoveries and enjoyed themselves in the process.

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**“I hope I can give back to the students all that I have learned along my research career.”**

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**What's next for you?**

I am currently finishing off my Postdoc in the Francis Crick Institute and will be taking up a lectureship at Kingston University. I hope I can give back to the students all that I have learned along my research career.

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

I coach my son's little league football team; they are actually doing quite well and are currently top of their league.

**Reference**

Elbediwy, A., Vanyai, H., Diaz-de-la-Loza, M.-d.-C, Frith, D., Snijders, A. P. and Thompson, B. J. (2018). Enigma proteins regulate YAP mechanotransduction. *J. Cell Sci.* **131**, jcs221788.