© 2022. Published by The Company of Biologists Ltd | Biology Open (2022) 11, bio059713. doi:10.1242/bio.059713

FIRST PERSON

First person – Marjan Abbasi

First Person is a series of interviews with the first authors of a selection of papers published in Biology Open, helping researchers promote themselves alongside their papers. Marjan Abbasi is first author on 'Phosphosites of the yeast centrosome component Spc110 contribute to cell cycle progression and mitotic exit', published in BiO. Marjan is a PhD student in the lab of Victoria Menendez-Benito at the Karolinska Institutet, Bionut departement, Stockholm, Sweden, exploring the proteins involved in mitotic spindle regulation.

Marjan Abbasi

Describe your scientific journey and your current research focus

I am a biochemist who has experience in working at different labs with a variety of research models (mouse, human cells and yeast). I wanted to broaden my knowledge in proteomics and that is the reason I moved to the Menendez-Benito lab at the Karolinska institute. Currently, I am finalizing my PhD journey with main focus on exploring the proteins involved in microtubule organisation at mitosis.

Who or what inspired you to become a scientist?

When I started my university, I became passionate about science. The biology classes were my favourite subject to study. I remember when I read biological discoveries, I had the feeling of "Yeah: this is what I want".

How would you explain the main finding of your paper?

Once a cell divides, genetic information should be transferred from the old cell to the newly generated cell. A centrosome is an intracellular structure that is important for proper transfer of genetic materials. A distinct structure called microtubules emanated from centrosomes, bind to genetic materials and push them to different poles of the dividing cell. This process leads the movement of one copy of genetic information to the newly generated cell. Notably, a centrosome divides once per cell cycle, and at the end of each cell division there are two centrosomes that are different in age, old and new centrosomes.

In our study, we used budding yeast as a model organism, and have developed a method to first separate the old and the new centrosomes (SPB in yeast) to investigate the differences in their protein properties, for instance acquired posttranslational modification (PTMs). Our main finding suggested the old and new centrosomal proteins have different PTMs. The determined PTMs (in this case, phosphorylation) are involved in timely cell cycle progression.

What are the potential implications of this finding for your field of research?

Previous studies have reported that yeast centrosome (spindle pole body, SPB) duplication is not a conservative process in which new SPB is incorporated into old SPB. Hence, the interaction between the old and new SPB was a challenge to dig into their features individually. In the current study, we introduced a method to be able to dissociate the interaction between two SPBs. This method application could shed more light on our understanding about each individual SPB. Furthermore, our finding revealed distinct phosphorylation on SPBs according to their age.

Moreover, phosphorylation of SPB components mostly implicated in SPB duplication or spindle nucleation. Here, we show age-dependent SPB phosphorylation involved in appropriate cell cycle progression.

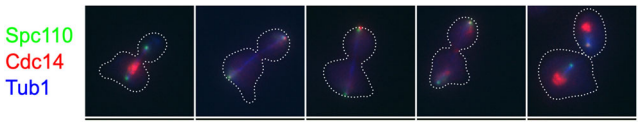
"… we show age-dependent SPB phosphorylation involved in appropriate cell cycle progression."

Which part of this research project was the most rewarding?

I believe the developed method is the most rewarding part. This method might be used for other SPB subunits, to monitor not only phosphorylation but also another PTMs.

Marjan Abbasi contact details: Karolinska Institutet, Bionut departement, Stockholm, Sweden.
E-mail: marjanabbasi04@gmail.com

Biology Open (2022) 11, bio059713. doi:10.1242/bio.059713



The involvement of Spc110 phosphorylation residues on cell cycle progression.

What do you enjoy most about being an early-career researcher?

I really appreciate the freedom as an early-career researcher. I can test my hypothesis, try new protocols, new methods and learn from my mistakes. Also, I enjoy collaborations with friendly people.

What piece of advice would you give to the next generation of researchers?

Try to read the literature and understand the concepts. You have to optimize many protocols in the lab and the best way to succeed is reading before rushing into wet lab. Also, never give up. Patience is a virtue in research.

> **"… the best way to succeed is reading before rushing into wet lab."**

What's next for you?

My PhD defence is soon. If everything goes well, I would like to continue my career in the research field.

References

Abbasi, M., Julner, A., Lim, Y. T., Zhao, T., Sobota, R. M. and Menéndez-Benito, V. (2022). Phosphosites of the yeast centrosome component Spc110 contribute to cell cycle progression and mitotic exit. *Biol. Open* **11** bio.059565.

Menendez Benito, V., Van Deventer, S. J., Jimenez-Garcia, V., Roy-Luzarraga, M., Van Leeuwen, F. and Neefjes, J. (2012). Spatiotemporal analysis of organelle and macromolecular complex in inheritance. *Proc. Natl. Acad. Sci. USA* **110**, 175-180. doi:10.1073/pnas.1207424110