

Alexandra Magold

Good morning. Today's Free Friday. My name is Alexandra Magold, and it is a great pleasure to be talking to Noelia Weisstaub out today. She's an independent investigator at the Argentinean Council for Science and Technology, and her team examines the role of serotonin receptors in cognition. In fact, questions she asked have implications to understanding the massive side effects of some of the drugs, that schizophrenic patients have to take. These side effects impact their quality of life and at some point affect their ability to function. However, while this is really cool, and I can't wait for Noelia to tell us about the work she and her team do. She is facing a whole extra challenge. Her lab happens to be in Argentina, which means the grant money she had already secured for her research actually got devaluated. And this is where the Ben Barres award that's awarded by eLife magazine, had a much bigger impact than apparently it was intended to. In the beginning, it was thought these awards would actually allow scientists to participate in conferences worldwide that were supposed to foster communication and scientific research as a whole. However, in this particular case, it made all the difference between being able to do the experiments that had already been planned or not. Noelia, please do tell us more about your work and also how the Ben Barres award came into play.

Noelia Weisstaub

So I would say that the main conductor of our research is to try to better understand how serotonin and one in particular one of the receptors the serotonin 2A receptor, is involved in cognition. And over the years, we've been asking questions regarding its role in memory retrieval and memory formation.

Noelia Weisstaub

And we found that when you block these receptors in the prefrontal cortex, you affect the ability of the animals to discriminate between the two similar memories. So it is involved in the control of memory interference. When you block the receptor, you also affect the capacity, the reconsolidation of episodic memories in mice.

Noelia Weisstaub

We put all that work together and we sell it as a publication for e-Life, and the next question we have with that was since we found that it was that way the prefrontal cortex, the one that was involved in controlling memory interference, we wanted to take a step back and try to see if other how the serotonin system, in a broader sense and serotonergic cells were modulating this phenomenon. But for that, we need to get these tools in our hands that we don't have we didn't have at the moment, and we applied for a grant in order to get these tools.

Noelia Weisstaub

And but the moment by the time we were planning to buy them, we have in in my country like economic crisis and the money that we have lost a lot of of their value. So we didn't have enough money to buy

these tools. And at that time, we got a letter from e-Life from which we published a year before this paper that I told you about, saying that we could apply for these awards and that we could apply for that.

Noelia Weisstaub

The money that they were offered wasn't that much that basically but we could decide how we wanted to use it. If you want to use it to go to a conference and tell the results of our work or if we find other way to use the money. And at that time, I decided that it would be the perfect I could use it to go to the conference and tell what we have already done. But it would be make a bigger impact in our scientific career, mine and the people who work with me.

Noelia Weisstaub

If we could buy these these these tools and be able to do this, finally do this experiment that we really wanted to do. I'm interested in understanding how serotonin and modulates cognition and particularly memory, because it has value in itself, but also because it's a process that is affected in many different psychiatric disorders. And in many cases, the medication that people receive, they bind, they they touch a lot of serotonergic receptors in including 5HT2A receptor.

Noelia Weisstaub

And it is important to show and to understand that sometimes, even if it helps a lot some deficit that the people may have, it can have some side effects at the level of cognition. It's important to then to be able to design better drugs that might help them their main condition, but without showing or affecting these other functions that are also important for the daily life.

Alexandra Magold

Thank you, Noelia. What a project and what a journey. So if you're interested in the Ben Barres award, of course, you can find a link to eLife on our website. If you're interested in investing in Noelia and her group, because God knows you deserve it. You can also find a contact form on our website. Have a great day, everybody, bye.