

INcitate knowledge

Beatriz Almolda Ardid, 32 years

Postdoctoral Researcher

BBG- Glial research team- Dr. Bernardo Castellano

1.- What research are you currently developing?

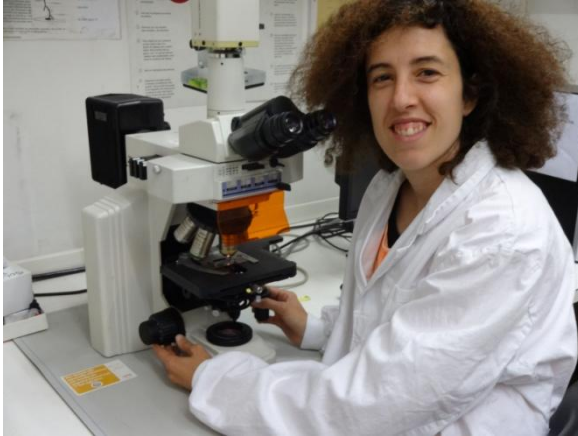
Nowadays, we are analyzing the role of microglial cells in the control of the immune responses associated to different types of lesions in the central nervous system. Specifically we use three different lesions with different participation of the immune system: 1) facial nerve axotomy, a model of retrograde lesion associated with an innate immune response; 2) perforant pathway transection, a model of anterograde lesion also associated with an innate immune response and 3) experimental autoimmune encephalomyelitis induction (EAE), a model of multiple sclerosis with an adaptive immune component.

Our research group is also interested in determine the influence that a pro- or anti-inflammatory microenvironment may have on these glial and immune responses. For this purpose, we use two different transgenic animals: one that produce the pro-inflammatory cytokine IL-6 and other that produce the anti-inflammatory cytokine IL-10 specifically in the CNS.

2.- How is the day-to-day inside your laboratory?

My day-to-day in the laboratory is very variable depending on the experiments.

The first part of the experiment is always to obtain and process samples, using different methodologies such as flow cytometry, immunohistochemistry, molecular biology techniques, etc... Afterwards, we have to analyze the results obtained using the microscope and specific software for quantification and data analysis. Finally, the last part of the experiments is based in the results interpretation, discussion and scientific paper writing, where we describe the results and we discuss them in front of the published literature. Based on the results obtained in an experiment, we define new experiments to resolve the new questions. This implies, that sometimes our work is principally to read the literature about a specific field and plan the new experiments. In addition, as a post-doctoral student, I have under my supervision different PhD students, so I need also to dedicate time to them for analyzing and discussing their results.



3.- What therapeutic applications do you think can your research have?

To understand the interactions between glial and immune cells in the CNS responses after lesions, can help to develop new therapeutic strategies in the resolution of some diseases like multiple sclerosis, nowadays without effective therapies.

4.- How you encourage future scientists to be part of neuroscience research?

When someone ask me about why to become a scientist, I always say the same response: research is a life stile, more than a job. I think it is important to have this in mind, because to be a scientist imply a lot of dedication and sometimes some sacrifices. But, above all, scientists have our commitment that makes us not even consider the sacrifices; making curiosity, get an unexpected result, seeing that you had designed an experiment that works ... is much more important than the schedule. In addition to this, research work is always changing, there are periods with data analysis, experimental design periods, but also periods of pleasure to go to congresses, to present your results with the colleagues... which is never 'comes to the monotony, there is always something that makes it different from the day before.

How to encourage future scientists to devote to neuroscience So simply saying that if you feel this inside, if they feel the scientific curiosity, if you think that research is a part of his life ... engaged in it! Will have a great time!