

Early Career Immunologist in the Spotlight

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The obtained funding/prize

ERC starting grant: a 1.5M award to fund 5 years of high risk, high gain research.

[Starting Grants 2024: Examples of projects | ERC \(europa.eu\)](#)

Research for which the funding/prize was received

IgG4 is one of the least abundant antibodies in humans and has limited inflammatory capacity. In spite of this, IgG4 can cause serious pathology, for example in a group of autoimmune diseases hallmarked by predominant pathogenic IgG4 autoantibodies. In this ERC project I am going to investigate why certain autoimmune diseases are characterized by predominant IgG4 autoantibodies, what the “recipe” is for inducing an IgG4 response, and how we can specifically manipulate (antigen-specific) IgG4 responses. Since IgG4 also plays an important role in blocking immune responses in cancer, parasitic infections and allergy I hope the knowledge generated with this project will allow us to manipulate IgG4 responses in these disease settings as well.

What makes your proposal unique?

It is always hard to interpret this for others, but what I think my application can be considered unique because it involves a part of the immune system, IgG4, that has been less studied than the other antibody isotypes. Additionally, there is a very fundamental aspect to the proposal: what is the recipe for a specific IgG4 antibody response? Textbook knowledge that is simply still missing. We know of some involved cytokines, but this is definitely not all. Finally, I think I have brought together some very unique puzzle pieces in the hypothesis on how an IgG4 autoimmune disease can arise. On the methodological side we will use an exciting mix of AI, animal and wet lab experiments. I think the combination of all these factors might have been decisive.

How does this funding/prize contribute to your future?

This ERC grant allows me to further build and consolidate my IgG4 autoimmune diseases research line. It gives me the opportunity to dive into one of these questions that has been bugging me for years: Why do IgG4 responses occur in certain autoimmune diseases and not in others? I have a passion for translational science. This project allows me to combine fundamental immunology research questions and connect them to clinical observations and hopefully treatment development in the future.

What do you see as the biggest challenge in Immunology?

The complexity of the system. In my opinion, immune responses seem to be dependent on exposure frequency, timing, location, tissue environment, genetic predisposition, serendipity etc. It is hard to study such a complex system and capture it in models that can only include some of these elements. In autoimmunity we suffer from the fact that we often miss the initial “hit” and only follow patients once the disease symptoms become overt. This is often many years before the onset of disease. In addition, the mixed terminology used in the field with CD markers and gene names, makes communication and interpretation unnecessarily hard.

What is your most important advice to young immunology researchers?

Have fun! Learn how to get things done and remember that scientific integrity can only be lost once, so always produce high quality trustworthy data (even if it is negative!).

How do you take care of a good work-home balance?

I prioritize, have clear communication with my team, delegate, try to surround myself with good team members on whom I can rely, accept that this job is never done, accept that “good” is good enough and “better” is the enemy sometimes, limit working at home (no push messages for emails on my phone for example) and know that this will be a continuous struggle. This is an incredibly flexible job, so in a sense we are also very lucky. I would recommend making use of this flexibility and enjoy the ride! Ps. our kids are also a nice way to balance out the demand from work and keep me grounded.