



Matheus Mattos, PhD student in the lab of Gustavo Menezes, Instituto de Ciências Biológicas, Department of Morphology, Universidade Federal de Minas Gerais, Brazil

Prolonged neutrophil survival at necrotic sites is a fundamental feature for tissue recovery and resolution of hepatic inflammation (<https://doi.org/10.1002/JLB.1MA0420-634R>)

Q: Where did your journey in science begin?

A: I decided to become a scientist when I was in high school after reading about the Griffith's experiment about bacteria transformation process. I was amazed with the simplicity and how genius that experiment was, and I knew, back then, that I wanted to do things like that. During my first year at university, I went into a lab and asked for an undergraduate trainee position. And this was how my journey in science began.

Q: How did you choose your current research topic?

A: Actually, I think I was chosen. I started researching neutrophils during my master's degree. At that time, the main line of research of my former lab was neutrophilic airway inflammation. Since then I fell in love with innate immunity and, mainly, neutrophils. I hope to keep researching neutrophils forever.

Q: Could you use a few lay sentences to summarize your findings in this paper?

A: Our knowledge about the functions of neutrophils is undergoing a renaissance. In this work we showed that neutrophils are not end-target cells, which reaches into the tissue and, in an attempt to cease the inflammatory stimulus, it degranulates, produces powerful oxidants and die. We showed that neutrophils stay alive during the entire course of liver injury, actively patrolling dead hepatocytes and change its gene expression profile from pro-inflammatory to pro-resolutive at later stages of inflammation and, after complete its mission, they do not die at the site of inflammation. Thus, neutrophils are active players to drive tissue repair.

Q: What was the most exciting moment during this research?

A: It was the first intravital microscopy that I performed. I could not believe that I was watching the inflammatory process happening in real time and in a physiological context. I still watch some of the intravital movies that I generated during this work. The feeling stays the same.

Q: What was the biggest challenge associated with this story?

A: In matter of fact, this is a work of cell biology in which we were investigating the behavior of neutrophils. In this sense, we never knew exactly the path that the results would take us. It is quite challenging because there is not much precedent in this subject, and anything can be a very important pattern of neutrophil behavior. This is also why I keep watching the intravital movies that I generated. It is likely that I missed something.

Q: Besides your PI is there anyone that significantly helped you in your path to become a scientist?

A: Being a scientist is to live on a roller coaster of emotions. At least at the beginning. So, my family and friends were (and still are) important in this journey. Having someone to talk (even though they do not understand a thing) is very important in the path of any scientist.

Q: What is next for you?

A: My next step will be towards a postdoctoral position abroad. It is very important to a scientist to learn how science is made within other realities.

Q: What would your advice be for junior or incoming Ph.D. Students who want to pursue a career in your field?

A: To be a scientist is to keep burning that flame of curiosity of childhood. But now you have the power to be a miner for truth. Science is not only a profession. It is a way of living. It changes the way you see everything around you and it is challenging to change. Despite everything, keep going for your dream.

Q: Tell us something interesting outside of being a scientist about yourself.

A: I am also a musician. Actually, to play an instrument is a great way to reset and clarify the mind. It is synergic with science, because the best insights arise when we are not really thinking about the problem.