simply blood
Deconstructing Blood Cell Research
Building the Hematology Community

Lab Spotlight: Tikhonova Lab

- December 02, 2022

Each month, Simply Blood spotlights a lab contributing to the fields of hematology, immunology, stem cell research, cell and gene therapies, and more. Get to know groups doing cutting edge research from around the world! This month, we are featuring the Tikhonova Lab which is based out of the University of Toronto and Princess Margaret Cancer Centre in Canada (https://tikhonovalab.com).

How long have you had your lab and who is currently in your group?

We started in August 2020 and have been growing ever since. Our diverse and multidisciplinary team has two postdoctoral fellows, two Ph.D. students, an animal technician, part-time computational scientific associate, and a lab manager.

What made you interested in pursuing a career as an academic researcher?

I always valued academic research as it affords me the freedom to pursue my own ideas. You are only limited by your imagination and, at times, technology.

What is the major research theme of your lab and how did you choose your lab's focal point?

The focus of our group is to understand how microenvironmental factors regulate the process of blood and immune cell production or hematopoiesis in different contexts. For instance, how does this process change with infection or in cancer? I did my graduate training in Immunology, where it is all about connecting the dots and gaining clarity. So, working on microenvironment – a mix of immune, endothelial, and stromal ingredients – is a natural choice for me.

What is the most exciting story developing in your lab right now?

Honestly, I think all the projects we are pursuing are exciting and impactful. The overarching theme in our lab is microenvironment in the context of stress such as inflammation, leukemogenesis, or regeneration. One story that has been rapidly yielding exciting results is focused on delineating the immune microenvironment in high-risk leukemias. We hope to understand exactly how certain immune actors promote or impair cancer and ultimately redirect the immune responses against these devastating malignancies.

What's the biggest accomplishment your lab has had recently?

I would say our biggest accomplishment to date is setting a solid foundation. Every trainee in the lab has a well-defined project, all the key infrastructure is set up, and collaborations are defined. Everyone knows where they want to be and what they need to do to get there. I believe that with a foundation like that, discoveries are quick to follow.

What is the key to running a successful research group?

Team culture is critical to the success of an initiative. While people in the lab come from all over the world and have different backgrounds, we are united by our love for scientific discovery. We think deeply, we prep, we follow-up, we check and triple check. We leave no stone unturned. We share a vision and strive

for excellence.

What was the most exciting part about starting your new lab? What was the most challenging?

Doing out of the box experiments and getting unexpected insights into biology. Witnessing my graduate students discussing where to do their postdocs. Getting consistent results. Seeing a new hot paper posted in Slack-chat bright and early Thursday morning. I love it all. I think that clearly defining lab standards and enforcing accountability can be challenging at times, but that is how we move ahead.

What advice do you have for new scientists who are thinking about starting their own labs?

Focus on the big picture. No. Bring together a stellar team of motivated and creative individuals who you can learn from and grow with. Then, focus on the big picture.

Does your lab have any fun traditions? How do you celebrate accomplishments?

Toronto is a beautiful city with great restaurants and lovely parks. So we eat out and organize picnics. During the pandemic it was hard to feel upbeat, so now we take every opportunity to celebrate. We are definitely celebrating this blog post with rosé!

Blog post contributed by: ***Alyssa Cull****, ISEH Publications Committee*

Career Development | ISEH | Lab Spotlight | Life as Scientist | New Investigators | Research

Enter Comment

Popular posts from this blog

ISEH 2025 Society Award Winners

- *March 11, 2025*

On behalf of the Awards Committee, ISEH would like to congratulate the recipients of the 2025 ISEH Society Awards which will be presented at the ISEH 54th Annual Scientific Meeting . Donald Metcalf Award Winner - Constanze Bonifer The recipient of the 2025 Donald Metcalf Award is Dr. Constanze ⋯

READ MORE

Message from the President: 2021 Society Updates

- *March 25, 2021*

Dear Friends and Colleagues, I write this message reflecting upon what was an unprecedented time for hematology and hematology researchers. Looking back on last year, I am truly amazed by how our ⋯

READ MORE

Lab Spotlight: Vanuytsel Lab

- *November 14, 2024*

Each month, Simply Blood spotlights a lab contributing to the fields of hematology, immunology, stem cell research, cell and gene therapies, and more. Get to know groups doing cutting edge research from around the world! This month, we are featuring the Vanuytsel Lab which is based out of the Center for …

READ MORE