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Deconstructing Blood Cell Research
Building the Hematology Community

Lab Spotlight: The Van Galen Lab

- October 14, 2021

Each month, Simply Blood spotlights a lab focused on the research of basic hematology, immunology, stem cell research, cell and gene therapy, and other related aspects. Get to know these different labs around the world! This month, we are featuring the Van Galen Lab at the Division of Hematology, Brigham and Women's Hospital and Harvard Medical School located in Boston, MA, USA!

How long have you had your lab?

We started in August 2019.

How many members make up your lab? Students/postdocs?

There are currently six trainees. We have two postdocs, two technicians, a visiting PhD student and a part-time undergraduate student.

What is the major research theme of your lab?

In the broadest sense we focus on normal and malignant hematopoiesis. We develop and apply new technologies to study the process of hematopoietic stem cell (HSC) differentiation in human cells. A molecular understanding of changes that occur during aging and transformation of the blood system will inspire new therapies that allow people to live longer and healthier lives.

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

Complete freedom to pursue my interests. I have been given the resources and trust by the Division of Hematology to pursue any line of investigation that excites me. There are few jobs with such broad intellectual freedom. I was recently contemplating how there is nothing I am asked to do that I don't want to do.

What is the most exciting project in your lab right now?

Broadly the integration of multiple modalities from single-cell genomics is an approach I am most excited about. We recently analyzed single-cell transcriptomes, somatic driver mutations, mitochondrial variants and T-cell receptor clonotypes from the same single cells. Adding on chromatin accessibility is imminent. The ability to analyze heterogeneity in primary human cells so comprehensively is a part of all projects in the lab.

What is your lab's most recent accomplishment?

The resubmission of our paper describing the use of mitochondrial DNA variants to resolve clonal relationships between single-cell transcriptomes was an effort that relied on hard work by many people. It came together really nicely. Hopefully reviewers will feel the same way.

What is your approach to mentoring students in this lab?

I have had the privilege of outstanding mentors to learn from. I aspire to create an environment that is supportive of growth and discovery as I experienced with John Dick, combined with the fast-paced

innovation that Bradley Bernstein encouraged. I regularly think of John's plant analogy as described in his excellent piece (https://doi.org/10.1016/j.stem.2018.09.014). It is important to me that each lab member is successful and able to move on to a position that is line with their career goals.

What is the key to running a successful lab?

For me, it is collaborating with many of the incredible scientists and physicians that are in the community. The unquestioned willingness of trainees and investigators in Boston and Cambridge to help out is remarkable, and in turn I try to advise when people come to me with reasonable requests.

How do members of your lab celebrate accomplishments?

We get champagne for papers and get together, whether or not there is a special reason to celebrate. There are a couple spots close by where we can get together and have pizza with other labs in the Division, or head to the Time Out Market / beer garden.

What advice would you have for new investigators just opening their lab?

Determine your priorities AND work towards their completion (limit distractions). Create a culture where people want to contribute to success of the lab as a whole. Also set up an infrastructure that will streamline the work you want to do in the long-term.

What is the most beneficial aspect of ISEH membership for your lab?

ISEH is unparalleled in the opportunities it provides for trainees by organizing educational webinars about science as well as career development. Arguably the most important aspect is getting to know people in the field, which is easier at ISEH meetings than any other meeting I've been to. I hope the in-person meetings will return soon. The subject matter that is presented at the ISEH annual meeting is also completely in line with the lab's focus.

Does your lab have any fun traditions?

We only have one alumnus so far, but I plan to give everyone a plant propagated in my office and keep track of their next career stage on a world map on the lab website (https://vangalenlab.bwh.harvard.edu/forest/). This will be a fun visualization especially with more alumni. The idea is based on the band Cake that gives out trees to fans at concerts and maps them around the world.

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Blogpost contributed by Dr. Alba Rodriguez-Meira, a member of the ISEH Publications Committee.

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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 ⋯

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