

Lab Spotlight: Trowbridge Lab

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ISEH Headquarters

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Deconstructing Blood Cell Research
Building the Hematology Community

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 Trowbridge Lab at the Jackson Laboratory in Bar Harbor, ME.



How long have you had your lab?

7 years

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

We currently have 2 postdocs, 1 Ph.D. student, 1 intern and 2 research assistants.

What is the major research theme of your lab?

My lab focuses on the biology of hematopoietic stem cell aging and understanding why aging is the major risk factor for developing clonal hematopoiesis and hematologic malignancy, specifically focusing on myelodysplastic syndrome (MDS) and acute myeloid leukemia (AML).

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

This is like asking which of my children is my favorite! Of course, they are all exciting! In my lab, we regularly re-evaluate ongoing projects in the lab to critically ask whether we are still excited about them and why. If there is a lack of enthusiasm, we either phase out that project or pivot to focus on the most exciting and impactful science.

What's your best approach to mentoring students in the lab?

Treating everyone as an individual is critical. Different people have different needs based on their experience, independence, personality and career goals. There is no “one size fits all” approach.

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

A postdoctoral fellow in my lab, Dr. Jennifer Myers SanMiguel, recently gave a plenary talk at the ASH annual meeting. We were very excited to have the opportunity to showcase our science at such a high level and were extremely proud of her – she did a fantastic job!

What is the key to running a successful lab?

Persistence, resilience, optimism, strategic planning, critical thinking.

What facilities or equipment does your lab absolutely depend on?

We are fortunate at The Jackson Laboratory to have easy access to extraordinary core facilities. We absolutely depend on flow cytometry for sure. We are sorting or analyzing samples literally every day. Also, we have a fantastic “genome technologies” facility that does all of our library preps and sequencing for RNA, DNA and epigenetic modifications. We rely on a fantastic collaboration with our computational biology core service to process and analyze all of our next-generation sequencing data as well.

What has been your greatest challenge in managing your lab?



Learning how to not project my own career aspirations and goals on to everyone in my lab. Since the very beginning, I have wanted to one day have my own laboratory and research program, and that passion has fueled my drive towards that goal and to make certain decisions and sacrifices along the way. Now, as a mentor, I want to create an environment where everyone in my lab can make their own choices and define what success means to them on their own terms.

Does your lab attend the ISEH annual meeting?

I have attended the ISEH annual meeting now for several years. As my lab grows and we have more trainees, I will certainly encourage them all to attend. It is one of the best meetings I've attended with respect to trainee networking opportunities.

How do members of your lab celebrate accomplishments?

I have a collection of champagne bottles in my office for each the lab's major accomplishments with the achievement and date signed by those involved. This is a tradition that I carry from my Ph.D. lab. My lab also keeps a collection of balloons and streamers on standby and are known to spontaneously decorate office spaces, doors, hallways and desks when there has been a major achievement in the lab. I came to lab a few weeks ago to find that the lab was not going to let a certain significant birthday of mine go by unnoticed!