


Lab Spotlight: McKinney-Freeman Lab

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ISEH Headquarters

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1. How long have you had your lab?

Almost nine years.

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

Currently, my group consists of four postdoctoral fellows, two PhD students from the University of Tennessee Health Sciences Center, an international Master's student from Paris Diderot University, an undergraduate from Rhodes College here in Memphis and a technician. I am currently looking to recruit a lab manager and multiple additional postdoctoral fellows.

3. What is the major research theme of your lab?

The major overarching theme of my lab is the basic biology of hematopoietic stem cells (HSCs). We are currently focused on deciphering novel molecular regulators of HSC transplantation and HSC ontogeny. We work with both mouse and human HSCs in the lab.

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

A recent new direction for my group is investigating how chronic hematologic disease perturbs the clonal complexity and homeostasis of the hematopoietic system. Working with other investigators here at St. Jude, we are focusing on Sickle Cell Disease. Although we are just getting started on these efforts, I am super excited about this new direction as the potential for discoveries that can have a significant impact on our understanding of the pathology of this devastating disease is very high. I am also very excited to be working with patient samples for the first time in my career.

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

Securing our second R01 from the NIH! This has been a goal of mine for several years and to me it represents a significant milestone in the trajectory of my lab. It is a nice reflection of the great work the folks in the lab have been doing over the past couple years. The next major milestone will be renewing these grants!

6. What is the key to running a successful lab?

Recruiting great people and doing your best to create an environment that allows them to thrive as investigators. As I move farther and farther away from the bench myself, I realize that my main job has evolved into a 'facilitator' of Science rather than a 'doer' of Science. Most of my time is spent securing the resources my trainees need to move forward, whether it be funding, helping with manuscripts or collaborations to advance their Science.

7. What advice do you have for new investigators just opening their lab?

Hire well and trust your gut. The first few folks you bring into your new lab will have a tremendous impact on the future of the lab and your initial productivity. Be patient and wait for good people. If your gut is telling you that a person may not quite be the right fit, trust that instinct.

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

Having the freedom to do any experiment I wanted! Although I did my postdoctoral and graduate training in very supportive environments where I had a lot of freedom in my work, there was still something very exciting about stepping into my own lab and knowing that I could do any experiment I wanted - for better or for worse. This was a real thrill. Eventually though, that thrill fades a bit as reality sets in and you realize that you need to buckle down, get focused and strategic and ensure that the work you are doing will lead to something impactful that will allow you to continue doing Science for the long-term. Despite the ultimate pressures of reality, that initial feeling was pretty awesome.

9. Does your lab attend the ISEH annual meeting.

Yes! Each year, multiple members of the group attend the annual meeting.

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

I think the ISEH meeting is great for networking with colleagues and exposure to the latest discoveries in HSC biology. It is my favorite meeting of the year.

11. How do members of your lab celebrate accomplishments?

Well, my previous lab manager tried very hard to establish a tradition of having folks ring a bell she kept at her desk each time they had a paper accepted or another nice accomplishment. I love this gesture and I hope we keep it up even though she has recently left us for greener pastures.

12. Does your lab have any fun traditions?

We have a couple. Each time a member of the lab departs, we gift them with a book (usually a children's book) that everyone in the lab has signed. We select a book that we feel resonates with them in a personal and positive way. During the holidays, we also get together with Wilson Clements' and Esther Obeng's labs here at St. Jude (who we meet with regularly for joint lab meetings a couple times a month) and have a potluck/Yankee swap gift exchange. I love the Yankee swap gift exchange. It is always a good time.



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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 McKinney-Freeman Lab at St. Jude Children's Research Hospital.