


Lab Spotlight: Butler lab

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ISEH Headquarters

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About the PI: Jason Butler is an Associate Professor at the Center for Discovery and Innovation (CDI), Hackensack University Medical Center. He earned his Ph.D. at the University of Florida (2001-2005), under the supervision of Edward Scott. He then moved to New York as a postdoctoral fellow in the lab of Shahin Rafii, at Weill Cornell, where he primarily studied the role of bone marrow endothelial cells in hematopoiesis (2006-2010). In 2011 he started his own research group at Weill Cornell, to further investigate how to modulate hematopoietic vascular niches in the context of embryonic development, aging and blood malignancies. He relocated his lab at the Hackensack University Medical Center in 2018.

How long have you had your lab?

8 years.

How many members make up your lab?

2 post-docs, 1 graduate student, 1 lab manager, 2 senior research techs, and 1 research assistant professor.

What is the major research theme of your lab?

We study the role of endothelial cells in regulating normal hematopoietic stem cells and leukemic progression in the context of aging.

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

We have many exciting projects in the lab right now. We discovered pro-rejuvenation and pro-aging factors that we are currently targeting to modulate the hematopoietic and vascular system in hope to improve hematopoietic regeneration. This is important especially for elderly patients that are undergoing induction chemotherapy for leukemia. We have also identified new markers to distinguish sinusoid and arteriole endothelial cells in the bone marrow that we are exploring in our mouse models.

What is the key to running a successful lab?

That's a great question. You need to surround yourself with good people, take your time to hire the right people, especially your first post-doc and technician. This is also very important for young investigators. You should have fun, because it makes a lot easier to do good science. Stay true to yourself, good ideas will lead to funding and publications. And of course, work hard!

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

Well, our cancer center (John Theurer Cancer Center) has recently obtained NCI designation in partnership with the Georgetown Lombardi Comprehensive Cancer Center, which is pretty great. For us as a lab, I think a major accomplishment is that we successfully moved, and that we are up and running now. We relocated to a relatively unknown research institute, but our Director has the kind of big vision and plans that really made the move a shot worth taking.

What was the most exciting part of starting your own lab?

Being able to do what I wanted to do. You build up all these ideas while being a post-doc, and finally you have the leash taken off, so to speak, to do what you really want. When you recruit new people, train them, and see everything take off is awesome.

Does your lab attend the ISEH annual meeting?

Yes, we try to make it the meeting the entire lab goes to, also for boosting the lab morale.

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

Being able to see all of my closest colleagues every year, and establishing fruitful collaborations.

How do members of your lab celebrate accomplishments?

We...drink.

Does your lab have any fun traditions?

We drink for Christmas! We have a long-standing tradition of going out for a colossal dinner, before the holiday break. We eat delicious BBQ, drink rum punch and reminisce about our year. We have also taken up bowling!

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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 Butler lab at the Center for Discovery and Innovation, Hackensack University Medical Center, in New Jersey.