

Lab Spotlight: Gazit Lab

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ISEH Headquarters

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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 Gazit Lab at the Shraga Segal dept. of Microbiology, Immunology, and Genetics.

How long have you had your lab?



Six years

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

The lab roster currently consists of 2 undergrads, 1 Master, 4 PhD and 1 Postdoc, as well as many good friend and colleagues.

What is the major research theme of your lab?

Hematopoietic Stem Cells Immunology. We have several projects that are all about HSC regulation, especially by transcription-factors that are the stronghold of the cell's identity.

Transcription factors allow us to study direct-reprogramming into HSCs, and to generate novel Leukemia Models in immune-competent mice. We are highly interested in Alternative Splicing, which brings a new dimension to the complexity of transcriptome in normal and malignant stem cells. We like to understand why and how immune stimulation affects HSCs.

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

Unfair question! We love all projects alike, direct-reprogramming, Leukemia-Models, Alternative-splicing, and Immune-stimulation are all exciting for us.

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

To find the correct level of intervention. Usually, the starting point requires more intensive one-on-one mentoring, while each student needs and gets own freedom with time. There is no "one-size-fit-all", mentoring is best when personally fit to each student.

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

Identification of HSC-activation markers {Bujanover et al., 2018}. Nir accomplished improved identification of HSCs that are immune-activated and leveraged findings to further discover HSC-activation markers. He demonstrated that virtually all HSCs in the bone marrow respond rapidly to stimulation, but some gain further activation. These markers will be useful for many studies, as they allow viable-sorting of the cells.

What is the key to running a successful lab?

I am not sure. You can find many successful labs having totally different "keys". For me it is to "infect" everyone around with the passion for science, but one must also make sure to have all other ingredients (funding, management and a good portion of luck).

What facilities or equipment does your lab absolutely depend on?

FACS.

What has been your greatest challenge in managing your lab?

Managing. The transition from PostDoc into PI require a major mental shift – taking overall responsibility for everything is a challenge, and managing myself and everybody around is an ongoing challenge I enjoy.

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

Take 2 or 3 good mentors. Usually Senior Prof. of your department make the best mentor. Then have another mentor who is not related with your University and may have advice for your own good. If you can gain a third mentor – you will not suffer a tie among the first two. That a luxury – having one good mentor is the essential. There is no "one size fits all"... finding your mentor(s) is not about quantity, but rather quality: some may have a daily-advice, some may have the best word once a year. You get to know exactly what type of mentor you desperately needed only once realizing the missing, but then again you may fix the situation.

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

Working with smart students. It is most exciting for me when a student take an idea and make it even better. That, and the freedom to pursue my own ideas, especially when they turn real.

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

Conferences, and the online-materials: ISEH makes a very special club of sincere scientists that share thoughts regarding future directions of the field.

How do members of your lab celebrate accomplishments?

Beer, and good spirit(vibes?).

Does your lab have any fun traditions?

Party at Nir's house is a major tradition. Trying to beat Leonid in Ping-Pong is an emerging one.

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