LSCs: Seek and Destroy

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Molecular and cytotoxic therapies in leukemia can often induce remission without achieving complete disease eradication, potentially resulting in relapse. A better understanding of cell-to-cell heterogeneity is crucial for the rational design of therapeutic strategies accounting for myeloid leukemia complexity. One aspect of this heterogeneity is its hierarchical structure, with leukemic stem cells (LSCs) being the only cells capable of sustaining and propagating the tumor. My group's research revolves around understanding the biological mechanisms that make LSCs unresponsive to conventional therapies and identifying novel therapeutic targets allowing for their selective immunotherapeutic targeting. By combining single-cell genomics and proteomics with stem cell functional assays, we aim to develop novel strategies to prevent and treat leukemia progression. The COVID-19 pandemic had a tremendous impact on many aspects of our lives, including our research dynamics. Beyond inevitable experimental delays due to labs closure, my biggest concern as a new PI was the weakening of group cohesion and collaborative networks, vital to a young lab. I am proud that everyone in the lab impressively and quickly adjusted to these unprecedented times by shifting their focus to data analysis and creatively finding alternative ways to progress with their projects. A bumpy start in our group's journey may have turned us into more experienced drivers, well equipped to achieve our next goals.