

Stem & Progenitor Cell Interest Group

Wednesday, March 10, 2021 - 9:00 am

Trainee talks by:

**Lindsey Guerin and Tyler Hansen
Graduate Students (Hodges Lab)**

Lindsey Guerin

“Joint profiling of DNA methylation and chromatin accessibility captures epigenetic dynamics in stem cell differentiation”

Epigenetic modifications can act together to influence gene expression in many biological systems. We have applied ATAC-Me, a method that allows for joint profiling of DNA methylation and chromatin accessibility, to profile these features throughout an embryonic stem cell to neural progenitor cell differentiation. These findings inform our understanding of DNA methylation’s regulatory potential, particularly during cell fate transitions.

Tyler Hansen

“Investigating gene regulatory differences in primate immune cells with ATAC-STARR-seq”

ATAC-STARR-seq, a new method recently developed in the Hodges Lab, quantifies regulatory activity, chromatin accessibility, and transcription factor binding across the genome. We apply ATAC-STARR to both human and rhesus immortalized B cell lines in order to identify the gene regulatory differences between primate B lymphocytes. These studies hold the potential to explain why humans and rhesus immune systems respond differently to certain pathogens, like Hepatis C, despite high genetic similarity.”

Join Zoom Meeting

<https://vanderbilt.zoom.us/j/98029434149?pwd=SkdWTW11UVpCajRKYVk1TjI0QnRSUT09>

Meeting ID: 980 2943 4149

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