

Stem & Progenitor Cell Interest Group

Wednesday, October 18, 2017

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"A CRISPR Screen to Identify Mechanisms of Density Control in Mammary Epithelia"

Epithelial cell proliferation control is critical for both normal embryonic development as well as maintenance of tissue integrity. Tissues must discern when an appropriate cell density has been achieved and halt proliferation to prevent overgrowth. Nevertheless, the mechanisms that modulate epithelial cell density remain poorly understood. To identify novel genes required for density-dependent cell cycle arrest in epithelial cells, I performed a CRISPR-Cas9 whole-genome loss-of-function screen. This screen revealed a list of candidate genes that are required for proliferation control. I am currently trying to identify a mechanistic relationship between these candidate genes and cell density. This study identifies novel regulators of homeostatic cell density establishment, which deepens our understanding of epithelial cell density control and provides insights for potential cancer prevention strategies.



9:00 am – 9455 MRB IV

Refreshments provided