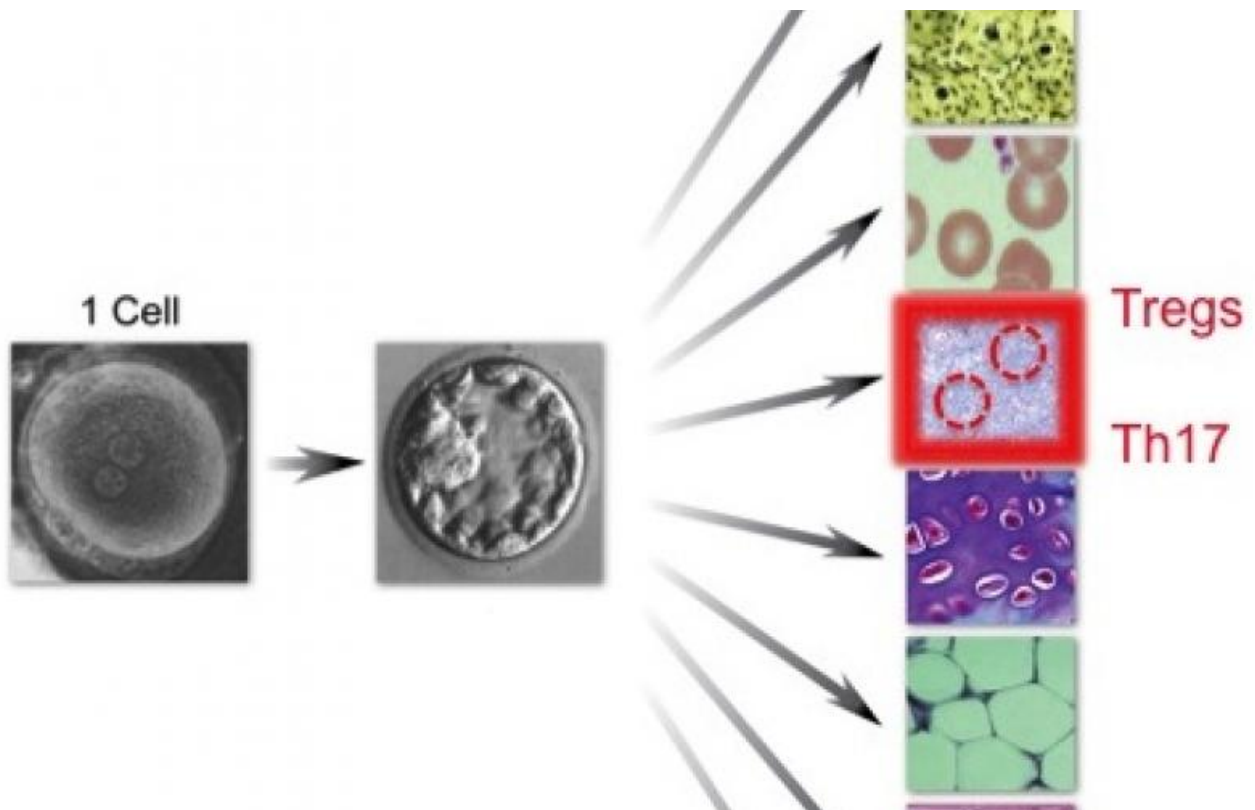


Welcome



Our goal is to understand the genetic circuits that control human immune cell function in health and disease. We have begun to identify how genetic risk variants for autoimmune diseases disrupt immune cell circuits (Farh and Marson et al., *Nature* 2015; Simeonov et al., *Nature*, 2017), and how pathogenic circuits may be targeted with novel therapeutics (Xiao et al., *Immunity* 2014). The Marson lab has developed new tools for efficient CRISPR genome engineering in primary human T cells (Schumann et al., *PNAS* 2015). Now we are pursuing a comprehensive strategy to test how coding and non-coding genetic variation control essential programs in the human immune system. Genome engineered human T cells hold great potential for the next generation of cell-based therapies for cancer, autoimmunity and infectious diseases.

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