

From stem cells to oocytes and sperm (Ali Brivanlou)

The earliest aspects of human embryogenesis remain a complete mystery. Using human embryonic stem cells (hESCs), we have recently developed an in vitro platform that provides, for the first time, a window into early human development. We use this platform to study the physical and molecular mechanisms underlying human gastrulation. We integrate this information to develop a quantitative model of human fate determination.