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Dissertation

Human iPSC-Based Modeling of Late-Onset Disease Via Progerin-Induced Agingm (2014)

Mentor

Lorenz Studer, MD

End Year

2014

Education

Connecticut College

My interests include reprogramming, disease modeling and cell therapy. More specifically, I am interested in studying the aging of hiPSC-derived differentiated cells for their application in disease modeling and cell therapy of later-onset disorders. Currently, differentiation protocols generate cells with an immature phenotype. In order to promote the adult phenotype, stress-inducing agents have been employed in vitro in an attempt to mimic aging. These methods, however, have proven to be inefficient and met with limited success. I would like to further dissect the aging process in multiple cell lineages using an inducible model system of Hutchinson-Gilford Progeria Syndrome, a premature aging disorder.

Publications

Miller J, Studer L. (2014) Aging in iPS cells. *Aging (Albany NY)*, 6, 246-7. PMCID: PMC4032792.

Miller J, Ganat Y, Kishinevsky S, Bowman R, Liu B, Tu E, Mandal P, Vera E, Shim J, Kriks S, Taldone T, Fusaki N, Tomishima M, Krainc D, Milner T, Rossi D, Studer L. (2013) Human iPSC-Based Modeling of Late-Onset Disease via Progerin-Induced Again. *Cell Stem Cell*, 13, 691-705.

Cherry A, Gagne K, McLoughlin E, Baccei A, Gorman B, Hartung O, Miller J, Zhang J, Zon R, Ince T, Neufeld E, Lerou P, Fleming M, Daley G, Agarwal S. (2013) Induced pluripotent stem cells with a mitochondrial DNA deletion. *Stem Cells*, 31, 1287-1297. PMCID: PMC3692613

Miller J, Schlaeger T. (2011) Generation of induced pluripotent stem cell lines form human fibroblasts via retroviral gene transfer. *Methods Mol Biol*, 767 55-65.

View a full listing of Justine D. Miller's journal articles.