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Yosif Martin Ganat, PhD

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Postdoctoral Fellow - currently: Research Investigator, Arvinas,, New Haven, CT

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The focus of my work is to use transgenic human embryonic stem cells (hESCs) that express GFP under promoters that are specific to midbrain dopamine (mDA) neurons in order to purify, characterize, and graft these cells in a mouse model of Parkinson's disease. I am also working with the Rutishauser lab to overexpress polysialic acid neural cell adhesion molecule (PSA-NCAM) in grafted hESC-derived mDA neurons to increase their integration into the host CNS. Additionally, I am a co-host and producer of THE Stem Cell Podcast - the official podcast of the International Society for Stem Cell Research. Together with Dr. Christopher Fasano we interview stem cell scientists and discuss recent advances in the field.

Publications

- [Optogenetics enables functional analysis of human embryonic stem cell-derived grafts in a Parkinson's disease model. Steinbeck JA, Choi SJ, Mrejeru A, Ganat Y, Deisseroth K, Sulzer D, Mosharov EV, Studer L. Nat Biotechnol. 2015 Feb;33\(2\):204-9. doi: 10.1038/nbt.3124. Epub 2015 Jan 12.](#)
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- [Identification of embryonic stem cell-derived midbrain dopaminergic neurons for engraftment. Ganat YM, Kriks S, Calder E, Tu Y, Jia F, Harrison N, Tomishima MJ, Rutishauser U and Studer L. Journal of Clinical Investigation, 2012 Jul 2. pii: 58767.](#)
- [Dopamine neurons derived from human ES cells efficiently engraft in animal models of Parkinson's disease. Kriks S, Shim JW, Piao J, Ganat YM, Wakeman DR, Xie Z, Carrillo-Reid L, Auyeung G, Antonacci C, Buch A, Yang L, Beal ME, Surmeier DJ, Kordower JH, Tabar V, Studer L. Nature. 2011 Nov 6;480\(7378\):547-51. doi: 10.1038/nature10648.](#)
- [miR-371-3 expression predicts neural differentiation propensity in human pluripotent stem cells. Kim H, Lee G, Ganat Y, Papapetrou EP, Lipchina I, Socci ND, Sadelain M, Studer L. Cell Stem Cell. 2011 Jun 3;8\(6\):695-706.](#)
- [Astroglial cells in the external granular layer are precursors of cerebellar granule neurons in neonates. Silbereis J, Heintz T, Taylor MM, Ganat Y, Ment LR, Bordey A, Vaccarino F. Mol Cell Neurosci. 2010 Aug;44\(4\):362-73. Epub 2010 May 12.](#)
- [Modelling pathogenesis and treatment of familial dysautonomia using patient-specific iPSCs. Lee G, Papapetrou EP, Kim H, Chambers SM, Tomishima MJ, Fasano CA, Ganat YM, Menon J, Shimizu F, Viale A, Tabar V, Sadelain M, Studer L. Nature. 2009 Sep 17;461\(7262\):402-6. Epub 2009 Aug 19.](#)
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- [Fgfr1 is required for cortical regeneration and repair after perinatal hypoxia. Fagel DM, Ganat Y, Cheng E, Silbereis J, Ohkubo Y, Ment LR, Vaccarino FM. J Neurosci. 2009 Jan 28;29\(4\):1202-11.](#)
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- [Cortical neurogenesis enhanced by chronic perinatal hypoxia. Fagel DM, Ganat Y, Silbereis J, Ebbitt T, Stewart W, Zhang H, Ment LR, Vaccarino FM. Exp Neurol. 2006 May;199\(1\):77-91.](#)
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- [Stem cells in neurodevelopment and plasticity. Vaccarino FM, Ganat Y, Zhang Y, Zheng W. Neuropsychopharmacology. 25\(6\):805-15, 2001 Dec.](#)

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