

Cortico-motor Assembloids: A Human 3D Multi-cellular Platform to Study Spinal Cord Development and Disease

January 24

Tuesday, 12:30 pm

Billings Building—Rosedale Room

SPEAKER:



Jimena Andersen, Ph.D.

Assistant Professor

Department of Human Genetics

Emory University School of Medicine

Atlanta, GA

Hosts: Vibhu Sahni, Ph.D.

Katie Rees, Ph.D.

For more information contact

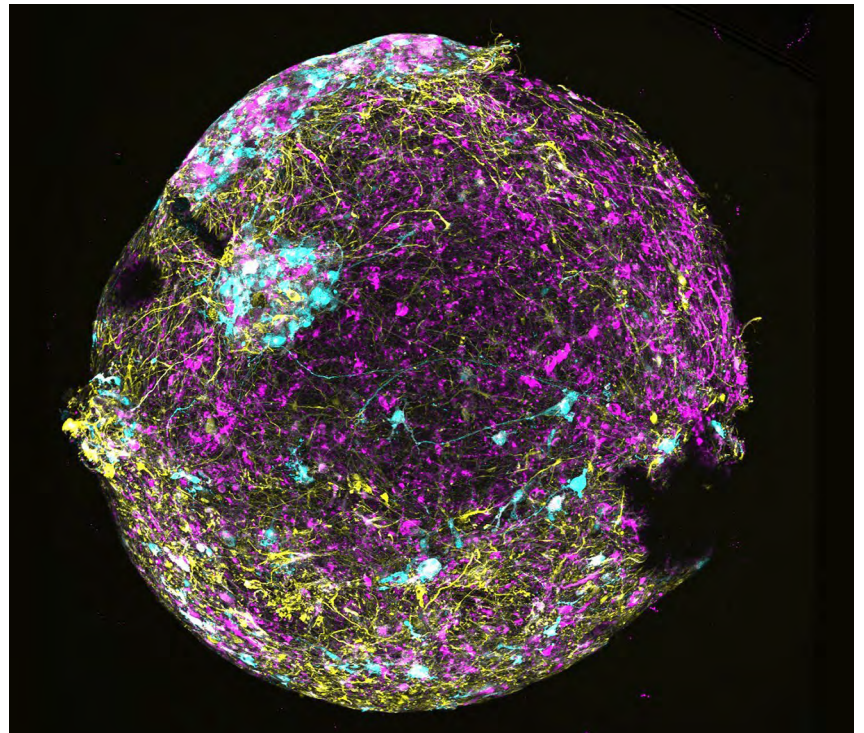
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Abstract

Research in the Andersen lab leverages the use of region-specific organoids and assembloids as windows into unique aspects of human biology.

Specifically, we are interested in understanding cell-cell interactions underlying the development and degeneration of motor neurons in the spinal cord.



Publications

1. Mapelli L, Di Domenico D, Sciacca G, Mainardi F, Ottaviani A, Monteverdi A, Tedesco M, Battaglia CR, Tritto S, Gandolfo M, Imfeld K, Kiderlen S, Krainer L, Cervetto C, Marcoli M, Sing A, Andersen J, Birey F, Sloan SA, Maccione A, D'Angelo E. *Enhanced electrophysiological recordings in acute brain slices, spheroids, and organoids using 3D high-density multielectrode arrays.* PLOS ONE, 20(9):e0328903, 2025.
2. Kim JI*, Miura Y*, Li MY, Revah O, Selvaraj S, Birey F, Xiangling Meng, Thete MV, Pavlov SD, Andersen J, Paşca A, Porteus MH, Huguenard JR & Paşca SP. *Human assembloids reveal the consequences of CACNA1G gene variants in the thalamocortical pathway.* Neuron 112, 4048-4059, 2024. *equal contribution. (31 citations).
3. Andersen J*, Thom N*, Shadrach JL, Chen X, Onesto MM, Amin ND, Yoon SJ, Li L, Greenleaf WJ, Müller F, Paşca A, Kaltschmidt JA, Paşca SP. *Single-cell transcriptomic landscape of the developing human spinal cord.* Nature Neuroscience, 26, 902-914, 2023. *equal contribution. (43 citations).