

Photo: Image of iPSC-derived microglia
By Marie-France Dorion

"The great tragedy of science - the slaying of a beautiful hypothesis by an ugly fact."

Thomas Huxley (1825 - 1895) was an English biologist and anthropologist who specialized in comparative anatomy.

New partnership

The Neuro's EDDU will now be working with Simmunome.

The goal of the partnership is to understand the population subgroups within given neurological and psychiatric diseases at the molecular level and make the causal link to clinical outcomes.

The disease profile of each subgroup can then be studied, guiding us towards biomarker discovery, development of more personalized therapies, and targeted clinical trials.

This project is part of the Neuro-CERVO Alliance for Drug Discovery (NCADD) and is funded by CQDM.

Click [here](#) to learn more.

Outreach & Training Corner

Videos:

- Check out Michael and Zhipeng's video about their work using CRISPR to generate cell lines .

Click [here](#) to watch it on YouTube



- In the following video, Andrea and Wolfgang talk about our high-content and automation facility.

Click [here](#) to watch it on YouTube



- Watch Nicolas and Taylor's video to learn more about the work we are doing with the C-BIG to generate iPSC lines to study neurological disorders.

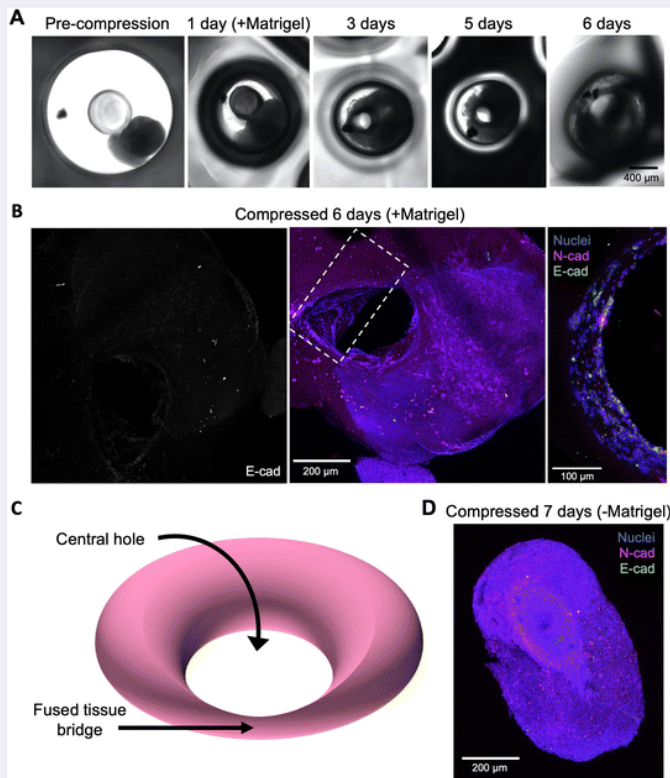
Click [here](#) to watch it in English

Click [here](#) to watch it in French



What's New - Publications

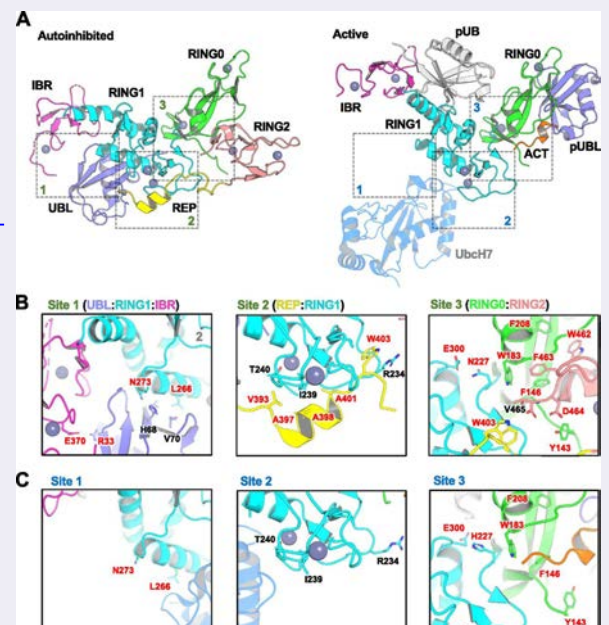
- Cassel de Camps C, Mok S, Ashby E, Li C, Lépine P, Durcan TM, Moraes C.



[Compressive molding of engineered tissues via thermoresponsive hydrogel devices.](#)
is now published in Lab Chip!

- Stevens MU, Croteau N, Eldeeb MA, Antico O, Zeng ZW, Toth R, Durcan TM, Springer W, Fon EA, Muqit MM, Trempe JF.

[Structure-based design and characterization of Parkin-activating mutations.](#)
is now published in Life Sci Alliance!



- **Durcan TM**, Axtman AD.

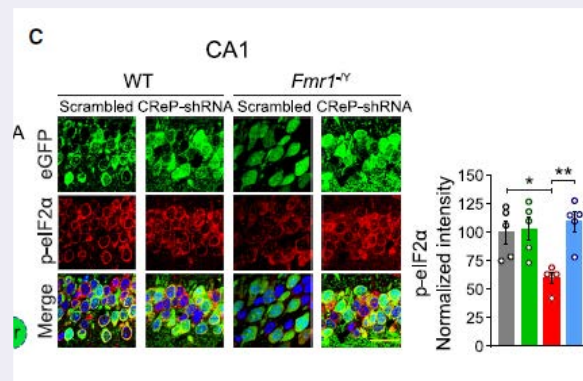
[The next generation of tools and technologies for studying human neurons in a dish.](#)

is now published in
Frontiers in Cellular Neuroscience!

-
- Mehdi Hooshmandi, Vijendra Sharma, Carolina Thörn Perez, Rapita Sood, Konstanze Simbriger, Calvin Wong, Kevin C. Lister, Alba Ureña Guzmán, Trevor D. Bartley, **Cecilia Rocha**, **Gilles Maussion**, Emma Nadler, Patricia Margarita Roque, Ilse Gantois, Jelena Popic, Maxime Lévesque, Randal J. Kaufman, Massimo Avoli, Elisenda Sanz, Karim Nader, Randi Jenssen Hagerman, **Thomas M. Durcan**, Mauro Costa-Mattioli, Jean-Claude Lacaille, Veronica Martinez-Cerdeno, Jay R. Gibson, Kimberly Huber, Nahum Sonenberg, Christos G. Gkogkas, Arkady Khoutorsky.

[Excitatory neuron-specific suppression of the integrated stress response pathway contributes to autism-related phenotypes in a mouse model of fragile X syndrome.](#)

is now published in
Neuron

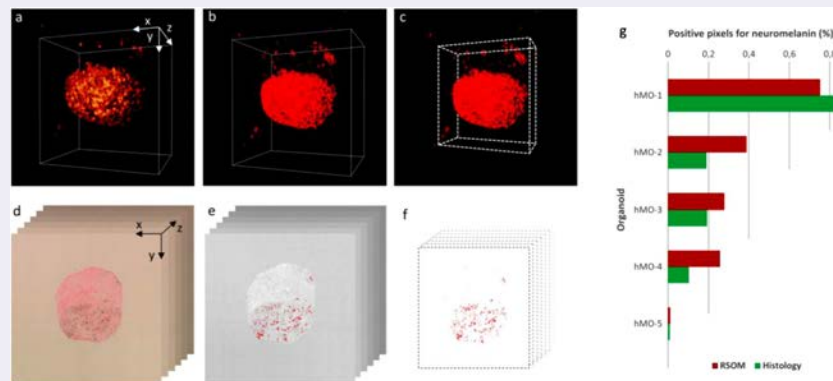


● Englert L*, Lacalle-Aurioles M*, Mohamed N-V, **Lépine P**, Mathur M, Ntziachristos V, **Durcan TM**, Aguirre J.

* equal contribution

[Fast 3D Optoacoustic Mesoscopy of Neuromelanin Through Entire Human Midbrain Organoids at Single-Cell Resolution.](#)

is now published in
Laser & Photonics Reviews!



Here are two recent preprints in which team members participated.

● Armin Bayati, Riham Ayoubi, Cornelia E. Zorca, Adriana Aguila, Chanshuai Han, Emily Banks, **Emmanuelle Nguyen-Renou**, **Wen Luo**, **Irina Shlaifer**, Esther Del Cid-Pellitero, Moein Yaqubi, Edward A. Fon, Jo Anne Stratton, **Thomas M. Durcan**, Patrick Nahirney, Peter S. McPherson. A dual hit of alpha-synuclein internalization and immune challenge lead to formation and maintenance of Lewy body-like inclusions in human dopaminergic neurons. bioRxiv 2023.05.29.542776; doi: <https://doi.org/10.1101/2023.05.29.542776>

● Riham Ayoubi, Joel Ryan, Maryam Fotouhi, Walaa Alshafie, Sara Gonzalez Bolivar, Vera Ruiz Moleon, Wolfgang Reintsch, Peter Eckmann, Donovan Worrall, Ian McDowell, Kathleen Southern, **Thomas M. Durcan**, Claire M. Brown, Anita Bandrowski, Harvinder S. Virk, Aled M Edwards, Peter S McPherson, Carl Laflamme. Assessing the performance of commercial reagent antibodies. bioRxiv 2023.06.01.543292; doi: <https://doi.org/10.1101/2023.06.01.543292>

Events

SEPTEMBER

- **iPSC seminar:**

Thursday, September 28th at 4 pm

“From Patient Stem Cells to Neural Organoids to Decoding Molecular Mechanisms underlying AUTS2 Syndrome” with Mark Hester from The Ohio State University.

More details to be announced [here](#) at the end of August.

Follow us!

- [Instagram](#)
 - [LinkedIn](#)
-

- **AUGUST IS [SPINAL MUSCULAR ATROPHY AWARENESS MONTH](#)**



- **SEPTEMBER IS [WORLD ALZHEIMER'S MONTH](#)**



- **OCTOBER IS [RETT SYNDROME AWARENESS MONTH](#)**



Happy Summer!
Next issue will come in November!



Early Drug Discovery Unit, The NEURO, 3801 University, North Wing B150, Montreal, QC H3A 2B4 | 514-398-7298 | neuroeddu@mcgill.ca