Curriculum Vitae Dr. Marta Garcia-Miralles

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Personal Data

Title:	Dr.
Name:	Marta
Family Name:	Garcia-Miralles
Postion:	Postdoctoral Fellow
ORCID:	0000-0001-7250-5778

Qualifications and Career

Degree programme	2002-2007, Biology, MSc, BSc, University Pompeu Fabra, Barcelona, Spain
Doctorate	2007-2013, PhD Neuroscience, LRRK2 and Parkinson's disease, supervisor: Dr. Dr. S. Biskup, mentor: Prof. T. Gasser, Dept of Neurodegenerative Diseases, Hertie Institute for Clinical Brain Research, University of Tübingen, Germany
Further stages	2021-Present, Postdoctoral fellow, supervisor: Prof. Dr. T. Vogel, Developmental Neuroepigenetics Lab, Institute of Anatomy and Cell Biology, Department of Molecular Embryology, Faculty of Medicine, Albert-Ludwigs-University Freiburg, Germany 2019-2021, Postdoctoral fellow, Supervisor Dr. Ibañez, Department of Physiology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore 2013-2019, Postdoctoral fellow, supervisor: Dr. Pouladi, Translational Laboratory in Genetic Medicine, Agency for Science, Technology and Research, Singapore

Engagement in the Research System

2013-Present	Trainer of PhD students and co-supervisor of undergraduate and master students
2022	Lecturer at the seminar "Epigenetics – from basics to clinics", Albert-Ludwigs-University Freiburg
2021	Teacher Assistant at the "Makroskopischen Anatomie Präpkurs", Albert-Ludwigs-University Freiburg
2019-2021	Laboratory teacher of Neuropharmacology (Module LSM3219), National University of Singapore, Singapore
2017-2018	Team member of Pint of Science, Singapore
2016-2018	Judge at the Singapore Science & Engineering Fair (SSEF)

Scientific Results

Ziaei A, **Garcia-Miralles M**, Radulescu CI, Sidik H, Silvin A, Bae HG, Bonnard C, Yusof NABM, Ferrari Bardile C, Ng AYJ, Tohari S, Dehghani L, Henry L, Yeo XY, Lee S, Venkatesh B, Langley SR, Shaygannejad V, Reversade B, Jung S, Ginhoux F, Pouladi MA (2022) Ermin deficiency leads to compromised myelin, inflammatory milieu, and susceptibility to demyelinating insult. Brain Pathol. 32(5):e13064. doi: 10.1111/bpa.13064.

Ferrari Bardile C, Sidik H, Quek R, Yusof NABM, **Garcia-Miralles M**, Pouladi MA (2021) Abnormal spinal cord myelination due to oligodendrocyte dysfunction in a model of Huntington disease. **J Huntingtons Dis.** 10(3):377-384.doi: 10.3233/JHD-210495.

Utami KH, Skotte N, Colaço AR, Yusof NABM, Sim B, Yeo XY, Bae HG, **Garcia-Miralles M**, Radulescu CI, Chen Q, Chaldaioupolou G, Liany H, Nama S, Peteri UA, Sampath P, Castrén ML, Jung S, Mann M, Pouladi MA (2020) Integrative analysis identifies key molecular signature underlying neurodevelopmental deficits in Fragile X Syndrome. **Biol Psychiatry.** 15;88(6):500-511. doi: https://doi.org/10.1016/j.biopsych.2020.05.005.

Laroche M, Lessard-Beaudoin M, **Garcia-Miralles M**, Kreidy C, Peachey E, Leavitt BR, Pouladi MA, Graham RK (2020) Early deficits in olfaction are associated with structural and molecular alterations in the olfactory system of a Huntington disease mouse model. **Hum Mol Genet.** 29(13):2134-2147. doi: 10.1093/hmg/ddaa099.

Radulescu CI, **Garcia-Miralles M**, Sidik H, Bardile CF, Yusof NABM, Lee HU, Ho EXP, Chu CW, Layton E, Low D, De Sessions PF, Pettersson S, Ginhoux F, Pouladi MA (2019) Manipulation of microbiota reveals altered callosal myelination and white matter plasticity in a model of Huntington disease. Neurobiol Dis. Neurobiol Dis. 2019 Jul;127:65-75. doi: 10.1016/j.nbd.2019.02.011.

Ferrari Bardile C, **Garcia-Miralles M**, Caron N, Rayan NA, Langley S, Harmston N, Rondelli AM, Teo RTY, Waltl S, Anderson L, Bae HG, Jung SY, Williams A, Prabhakar S, Petretto E, Hayden MR, Pouladi MA (2019) Intrinsic mutant HTT-mediated defects in oligodendroglial cells cause myelination thinning and behavioural abnormalities in Huntington disease. Proc Natl Acad Sci USA. 116(19):9622-9627. doi: 10.1073/pnas.1818042116.

Garcia-Miralles M, Yusof NABM, Tan JY, Radulescu CI, Sidik H, Tan LJ, Belinson H, Zach N, Hayden MR, Pouladi MA (2018) Laquinimod treatment improves myelination deficits at the transcriptional and ultrastructural levels in the YAC128 mouse model of Huntington disease. Molecular Neurobiology. doi: 10.1007/s12035-018-1393-1.

Chang WT, Puspitasari F, **Garcia-Miralles M**, Yeow LY, Tay HC, Koh KB, Tan LJ, Pouladi MA, Chuang KH (2018) Connectomic imaging reveals Huntington-related pathological and pharmaceutical effects in a mouse model. NMR Biomed. 27:e4007. doi: 10.1002/nbm.4007.

Kusko R, Dreymann J, Ross J, Cha YJ, Escalante-Chong R, **Garcia-Miralles M**, Tan LJ, Burczynski M, Zeskind B, Laifenfeld D, Pouladi MA, Geva M, Grossman I, Hayden MR (2018) Large-scale transcriptomic analysis reveals that pridopidine reverses aberrant gene expression and activates neuroprotective pathways in the YAC128 HD mouse. Mol Neurodegener. 13(1):25. doi: 10.1186/s13024-018-0259-3.

Garcia-Miralles M, Geva M, Tan JY, Mohammad Yusof NAB, Cha YJ, Kusko R, Tan LJ, Xu X, Grossman I, Orbach A, Hayden MR, Pouladi MA (2017) Early pridopidine treatment improves behavioural and transcriptional deficits in YAC128 Huntington disease mice. JCI Insight. 2(23). pii: 95665. doi: 10.1172/jci.insight.95665.

Takata K, Kozaki T, Lee CZW, Thion MS, Otsuka M, Lim S, Utami KH, Fidan K, Park DS, Malleret B, Chakarov S, See P, Low D, Low G, **Garcia-Miralles M,** Zeng R4, Zhang J, Goh CC, Gul A, Hubert S, Lee B, Chen J, Low I, Shadan NB, Lum J, Wei TS, Mok E, Kawanishi S, Kitamura Y, Larbi A, Poidinger M, Renia L, Ng LG, Wolf Y, Jung S, Önder T, Newell E, Huber T, Ashihara E, Garel S, Pouladi MA, Ginhoux F (2017) Induced-pluripotent-stem-cell-derived primitive macrophages provide a platform for modeling tissue-resident macrophages differentiation and function. Immunity. 47(1):183-198.e6. doi: 10.1016/j.immuni.2017.06.017.

Julien SG, Kim SY, Brunmeir R, Sinnakannu JR, Ge X, Li H, Ma W, Yaligar J, Kn BP, Velan SS, Röder PV, Zhang Q, Sim CK, Wu J, **Garcia-Miralles M**, Pouladi MA, Xie W, McFarlane C, Han W, Xu F (2017) Narciclasine attenuates diet-induced obesity by promoting oxidative metabolism in skeletal muscle. PLoS Biol. 15(2):e1002597.doi: 10.1371/journal.pbio.1002597.

Garcia-Miralles M, Hong X, Caron NS, Tan LJ, Huang Y, Vin To X, Lin RY, Franciosi S, Papapetropoulos S, Hayardeny L, Hayden MR, Chuang KH, Pouladi MA (2016) Laquinimod rescues striatal and white matter pathology and results in modest behavioural improvements in the YAC128 model of Huntington disease. Sci Rep. 6:31652. doi: 10.1038/srep31652.

Garcia-Miralles M, Ooi J, Ferrari Bardile C, Tan LJ, George M, Drum CL, Lin RY, Hayden MR, Pouladi MA (2016) Treatment with the MAO-A inhibitor clorgyline elevates monoamine neurotransmitter levels and improves affective phenotypes in a mouse model of Huntington disease. Exp Neurol. 278:4-10. doi: 10.1016/j.expneurol.2016.01.019.

Garcia-Miralles M, Coomaraswamy J, Haebig K, Herzig MC, Funk N, Gillardon F, Maisel M, Jucker M, Gasser T, Galter D, Biskup S (2015) No dopamine cell loss or changes in cytoskeleton function in transgenic mice expressing physiological levels of wild type or G2019S mutant LRRK2 and in human fibroblasts. PLoS One 10(4):e0118947. doi: 10.1371/journal.pone.0118947.

Haebig K, Gloeckner CJ, **Miralles MG**, Gillardon F, Schulte C, Riess O, Ueffing M, Biskup S, Bonin M (2010) ARHGEF7 (Beta-PIX) acts as guanine nucleotide exchange factor for leucine-rich repeat kinase 2. PLoS One 5(10):e13762. doi: 10.1371/journal.pone.0013762.

Academic Distinctions

2007	Erasmus Fellowship
2015	Poster award, Gordon Conference on CAG Triplet Repeat Disorders, Italy