

Prof. Dr. Ebru Ercan Herbst

List of Publications

- 1) von der Bey M, **Ercan-Herbst E.** Advancing Towards Physiologically Relevant Models of the Brain: Three-Dimensional Human Induced Pluripotent Stem Cell (hiPSC)-Based Cell Culture Systems in Neuroscience. (Mini-review) *J Neurol Neuromedicine* (2023) 7(2): 9-13
- 2) von der Bey, M., De Cicco, S., Zach, S. Hengerer, B. **Ercan-Herbst, E.** Three-dimensional co-culture platform of human induced pluripotent stem cell-derived oligodendrocyte lineage cells and neurons for studying myelination. *Cell Press STAR Protoc.* 2023: 17;4(2):102164. doi: 10.1016/j.xpro.2023.102164.
- 3) Reinhardt, L., Musacchio, F., Bichmann, M., Behrendt, A., **Ercan-Herbst, E.** Stein, J., Becher, I., Haberkant, P., Mader, J., Schöndorf, DC., Pohl, C., Savitski, M., Klein, C., Gasparini, L., Fuhrmann, M., Ehrnhoefer, DE. Dual truncation of Tau by caspase-2 accelerates its CHIP-mediated degradation. *Neurobiol Dis.* 2023 Apr 20;182:106126. doi: 10.1016/j.nbd.2023.106126.
- 4) Barini, E., Plotzky, G., Mordashova, Y., Hoppe, J., Rodriguez-Correa, E., Julier, S., LePriault, F., Mairhofer, I., Mezler, M., Biesinger, S., Cik, M., Meinhardt, MW., **Ercan-Herbst E.**, Ehrnhoefer, DE., Striebinger, A., Bodie, K., Klein, C., Gasparini, L., Schlegel, K. Tau in the brain interstitial fluid is fragmented and seeding-competent. *Neurobiol. Aging*, 2022 Jan;109:64-77. doi:10.1016/j.neurobiolaging.2021.09.013.
- 5) Bichmann M, Prat Oriol N, **Ercan-Herbst E.**, Schöndorf DC, Gomez Ramos B, Schwärzler V, Neu M, Schlüter A, Wang X, Jin L, Hu C, Tian Y, Ried JS, Haberkant P, Gasparini L, Ehrnhoefer DE. SETD7-mediated monomethylation is enriched on soluble Tau in Alzheimer's disease. *Mol Neurodegener.*, 2021, 16(1):46. doi: 10.1186/s13024-021-00468-x.
- 6) Di Nardo A, Lenoël I, Winden KD, Rühmkorf A, Modi ME, Barrett L, **Ercan-Herbst E.**, Venugopal P, Behne R, Lopes CAM, Kleiman RJ, Bettencourt-Dias M, Sahin M. Phenotypic Screen with TSC-Deficient Neurons Reveals Heat-Shock Machinery as a Druggable Pathway for mTORC1 and Reduced Cilia. *Cell Rep.*, 2020, 31(12):107780. doi:10.1016/j.celrep.2020.107780.
- 7) García-Chamé MÁ, Gutiérrez-Sanz Ó, **Ercan-Herbst E.**, Haustein N, Filipiak MS, Ehrnhöfer DE, Tarasov A. A transistor-based label-free immunosensor for rapid detection of tau protein. *Biosens Bioelectron.*, 2020, 159:112129
- 8) Bhardwaj R, Augustynek BS, **Ercan-Herbst E.**, Kandasamy P, Seedorf M, Peinelt C, Hediger MA. Ca²⁺/Calmodulin Binding to STIM1 Hydrophobic Residues Facilitates Slow Ca²⁺-Dependent Inactivation of the Orai1 Channel. *Cell Physiol Biochem.*, 2020,54(2):252-270. doi: 10.33594/000000218.
- 9) **Ercan-Herbst E.**, Schoendorf, D., Behrendt, A., Klaus, B., Ramos Gomez, B., Weber, C., Ehrnhoefer, DE. A post-translational modification signature defines early changes in soluble tau correlating with oligomerization in Alzheimer's disease brain. *Acta Neuropathol Commun.*, 2019, 7(1):192. doi: 10.1186/s40478-019-0823-2.

- 10) Behrendt, A., Bichmann, M., **Ercan-Herbst E.**, Haberkant, P., Schoendorf, D., Wolf, M., Fahim, SA., Murolo, E., Ehrnhoefer, DE. Asparagine endopeptidase cleaves tau at N167 after uptake into microglia. *Neurobiol Dis.*, 2019, 130:104518. doi: 10.1016/j.nbd.2019.104518.
- 11) Schoendorf, D., Elschami, M., Schieck, M., **Ercan-Herbst E.**, Weber C., Riesenger, Y., Kalman S., Steinemann D., Ehrnhoefer DE. Generation of an induced pluripotent stem cell cohort suitable to investigate sporadic Alzheimer's Disease. *Stem Cell Research*, 2018 Dec;34:101351
- 12) **Ercan E.**, Eid S., Weber C., Kowalski A., Bichmann M., Behrendt A., Matthes F., Krauss S., Reinhardt P., Fulle S., Ehrnhoefer DE. A validated antibody panel for characterization of Tau Posttranslational Modifications. *Molecular Neurodegeneration*, 2017 Nov; 12(1):87
- 13) **Ercan E.**, Han JM., Di Nardo A., Winden K., Han MJ., Hoyo L., Saffari A., Leask A., Geschwind DH., Sahin M. Neuronal CTGF/CCN2 Negatively Regulates Myelination in a Mouse Model of Tuberous Sclerosis Complex. *Journal of Experimental Medicine*, 2017 Mar; 214(3):681-697
- 14) Wertz MH, Winden K, Neveu P, Ng SY, **Ercan E.**, Sahin M. Cell-type-specific miR-431 dysregulation in a motor neuron model of spinal muscular atrophy. *Hum Mol Genet*, 2016 Jun; 25(11):2168-2181
- 15) **Ercan E.***, Chung SH*, Bhardwaj R, Seedorf M. Di-Arginine Signals and the K-Rich Domain Retain the Ca(2+) Sensor STIM1 in the Endoplasmic Reticulum. *Traffic*, 2012 Jul; 13(7): 992-1003. (*equal contribution)
- 16) Gloor Y, Schöne M, Habermann B, **Ercan E.**, Beck M, Weselek G, Müller-Reichert T, Walch-Solimena C. Interaction between Sec7p and Pik1p: the first clue for the regulation of a coincidence detection signal. *Eur J Cell Biol.* , 2010 Aug; 89(8): 575-83
- 17) **Ercan E.**, Momburg F, Engel U, Temmerman K, Nickel W, Seedorf M. A conserved, lipid-mediated sorting mechanism of yeast Ist2 and mammalian STIM proteins to the peripheral ER. *Traffic*, 2009 Dec; 10(12):1802-18.
- 18) Fischer MA, Temmerman K, **Ercan E.**, Nickel W, Seedorf M. Binding of plasma membrane lipids recruits the yeast integral membrane protein Ist2 to the cortical ER. *Traffic*, 2009 Aug; 10(8):1084-97.
- 19) Demmel L, Gravert M, **Ercan E.**, Habermann B, Müller-Reichert T, Kukhtina V, Haucke V, Baust T, Sohrmann M, Kalaidzidis Y, Klose C, Beck M, Peter M, Walch-Solimena C. The clathrin adaptor Gga2p is a phosphatidylinositol 4-phosphate effector at the Golgi exit. *Mol Biol Cell*, 2008 May; 19(5):1991-2002.