

A Computational Model of Interactions Between Neuronal and Astrocytic Networks: The Role of Astrocytes in the Stability of the Neuronal Firing Rate

Lenk, K., Satuvuori, E., Lallouette, J., Ladrón-de-Guevara, A., Berry, H. & Hyttinen, J. A. K., 22 Jan 2020, In : *Frontiers in Computational Neuroscience*. 13, 19 p., 92.

Research output: Contribution to journal › Article › Scientific › peer-review

Unique Features of Network Bursts Emerge From the Complex Interplay of Excitatory and Inhibitory Receptors in Rat Neocortical Networks

Teppola, H., Acimović, J. & Linne, M. L., 6 Sep 2019, In : *FRONTIERS IN CELLULAR NEUROSCIENCE*. 13, 377.

Research output: Contribution to journal › Article › Scientific › peer-review

Reduced level of docosahexaenoic acid shifts GPCR neuroreceptors to less ordered membrane regions

Javanainen, M., Enkavi, G., Guixà-González, R., Kulig, W., Martínez-Seara, H., Levental, I. & Vattulainen, I., 1 May 2019, In : *PLoS Computational Biology*. 15, 5, e1007033.

Research output: Contribution to journal › Article › Scientific › peer-review

Viability of Mouse Retinal Explant Cultures Assessed by Preservation of Functionality and Morphology

Alarautalahti, V., Ragauskas, S., Hakkarainen, J. J., Uusitalo-Järvinen, H., Uusitalo, H., Hyttinen, J., Kalesnykas, G. & Nymark, S., 1 May 2019, In : *Investigative ophthalmology & visual science*. 60, 6, p. 1914-1927 14 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Advances in Human Stem Cell-Derived Neuronal Cell Culturing and Analysis

Ylä-Outinen, L., Tanskanen, J. M. A., Kapucu, F. E., Hyysalo, A., Hyttinen, J. A. K. & Narkilahti, S., 2019, *In Vitro Neuronal Networks: From Culturing Methods to Neuro-Technological Applications*. Springer New York LLC, p. 299-329 31 p. (Advances in Neurobiology; vol. 22).

Research output: Chapter in Book/Report/Conference proceeding › Chapter › Scientific › peer-review

Astrocyte lineage cells are essential for functional neuronal differentiation and synapse maturation in human iPSC-derived neural networks

Klapper, S. D., Garg, P., Dagar, S., Lenk, K., Gottmann, K. & Nieweg, K., 2019, In : *Glia*. 67, 10, p. 1893-1909 17 p.

Research output: Contribution to journal › Article › Scientific › peer-review

Data-driven study of synchronous population activity in generic spiking neuronal networks: How much do we capture using the minimal model for the considered phenomena?

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Research output: Other conference contribution › Paper, poster or abstract › Scientific

Assessment of mutation probabilities of KRAS G12 missense mutants and their long-timescale dynamics by atomistic molecular simulations and Markov state modeling

Pantsar, T., Rissanen, S., Dauch, D., Laitinen, T., Vattulainen, I. & Poso, A., 10 Sep 2018, In : *PLoS Computational Biology*. 14, 9, e1006458.

Research output: Contribution to journal › Article › Scientific › peer-review

Concerted regulation of npc2 binding to endosomal/lysosomal membranes by bis(monoacylglycero)phosphate and sphingomyelin

Enkavi, G., Mikkolainen, H., Güngör, B., Ikonen, E. & Vattulainen, I., 1 Oct 2017, In : *PLoS Computational Biology*. 13, 10, e1005831.

Research output: Contribution to journal › Article › Scientific › peer-review

Atomistic fingerprint of hyaluronan-CD44 binding

Vuorio, J., Vattulainen, I. & Martínez-Seara, H., 1 Jul 2017, In : *PLoS Computational Biology*. 13, 7, e1005663.

Research output: Contribution to journal › Article › Scientific › peer-review

Network-wide adaptive burst detection depicts neuronal activity with improved accuracy

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Research output: Contribution to journal › Article › Scientific › peer-review

Morphological Differentiation Towards Neuronal Phenotype of SH-SY5Y Neuroblastoma Cells by Estradiol, Retinoic Acid and Cholesterol

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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Contribution to journal > Article > Scientific > peer-review

Podocyte apoptosis is prevented by blocking the Toll-like receptor pathway

Saurus, P., Kuusela, S., Lehtonen, E., Hyvönen, M. E., Ristola, M., Fogarty, C. L., Tienari, J., Lassenius, M. I., Forsblom, C., Lehto, M., Saleem, M. A., Groop, P. H., Holthöfer, H. & Lehtonen, S., 1 May 2015, In : *CELL DEATH AND DISEASE*. 6, 5, e1752.
Research output: Contribution to journal > Article > Scientific > peer-review

Effects of cytokine activation and oxidative stress on the function of the human embryonic stem cell-derived retinal pigment epithelial cells

Juuti-Uusitalo, K., Nieminen, M., Treumer, F., Ampuja, M., Kallioniemi, A., Klettner, A. & Skottman, H., 2015, In : *Investigative Ophthalmology and Visual Science*. 56, 11, p. 6265-6274 10 p.
Research output: Contribution to journal > Article > Scientific > peer-review

Patient-specific induced pluripotent stem cell-derived RPE cells: Understanding the pathogenesis of retinopathy in long-chain 3-hydroxyacyl-CoA dehydrogenase deficiency

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Research output: Contribution to journal > Article > Scientific > peer-review

In silico study on structure and dynamics in bursting neuronal networks

Mäki-Marttunen, T. M., Acimovic, J., Ruuhonen, K. P. & Linne, M-L., 13 Oct 2012, *Neuroscience 2012; 42nd Annual Meeting, New Orleans, USA, October 14-18, 2012*. Society for Neuroscience (SfN), 1 p. 300.26/DDD70
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Significance of graph theoretic measures in predicting neuronal network activity

Mäki-Marttunen, T. M., Acimovic, J., Ruuhonen, K. P. & Linne, M-L., 23 Feb 2012, *Proceedings of The 9th annual Computational and Systems Neuroscience meeting (COSYNE 2012)*. Salt Lake City, p. 55-55 1 p. I-15
Research output: Chapter in Book/Report/Conference proceeding > Conference contribution > Scientific > peer-review

Inhibition of Casein kinase-2 induces p53-dependent cell cycle arrest and sensitizes glioblastoma cells to tumor necrosis factor (TNF α)-induced apoptosis through SIRT1 inhibition

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Research output: Contribution to journal > Article > Scientific > peer-review

Cortical spreading depression in alpha-synuclein knockout mice

Pelkonen, A. & Yavich, L., Jan 2012, In : *SYNAPSE*. 66, 1, p. 81-84 4 p.
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Research output: Contribution to journal > Article > Scientific > peer-review

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

Pathway analysis of expression data: Deciphering functional building blocks of complex diseases

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Research output: Chapter in Book/Report/Conference proceeding › Conference contribution › Scientific › peer-review

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Research output: Other conference contribution › Paper, poster or abstract › Scientific

Influence of the neural network topology on the learning dynamics

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