

Curriculum vitae

Mart Saarma

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Education and Training

- Tartu University, Estonia, MSc, biochemistry and molecular biology 1972
- Tartu University, Estonia, PhD, biochemistry and molecular biology 1975

Postdoctoral research

- Friedrich Miescher Institute, Basel, Switzerland, postdoctoral fellow 1982
- Institute of Molecular Biology, Russian Academy of Sci., Dr. Habil 1986

Current position: Research Director, director of the Lab.of Molecular Neurosci., Inst.of Biotechnology, HiLIFE, University of Helsinki

Positions and Employment

- *Research assistant & junior researcher*, Dept. Biological Chemistry, Tartu State University 1971-1977
- *Head of the Department of Molecular Genetics*, Institute of Chemical Physics and Biophysics, Estonian Academy of Sciences, Tallinn 1977-1990
- *Director; Professor*, Institute of Biotechnology, University of Helsinki 1990-2008
- *Director; Academy prof.* Centre of Excellence in Molec.Neuroscience 2008-2013
- *Professor of biotechnology*, Institute of Biotech, Uni. of Helsinki 2014-2019
- *Research Director*, Inst. Biotech., HiLIFE, University of Helsinki 2019-

Other Experience and Professional Memberships

- Estonian Prime Minister's Council for Science and Technology, member 2001-2022
- Journal Experimental Neurology-member of the editorial board, member 2003-
- Biocenter Finland, Director 2008-2009
- EMBO Council, member 2011-2016
- European Research Council (ERC) Sci. Council, member, vice-president 2011-2016
- DANDRITE, Danish node of the Nordic-EMBL partnership, SAB chair 2013-2020
- Journal of Biological Chemistry, Member of the editorial board 2014-
- Lundbeck Foundation, Chairman of the Talent Panel 2015-2021
- European Union Human Brain Project, member of SAB 2017-2021
- Cell and Tissue Research journal - Member of the editorial board 2020-
- Member of the HFSPO Council of Scientist 2021-

Honors

- *Academician*, Estonian Academy of Sciences 1990
- First order decoration of the Finnish White Rose Knighthood 1999
- Foreign Member of the Finnish Academy of Science 2000
- Second order decoration of the Estonian White Star 2001
- Member of the Finnish Technical Academy of Sciences 2003
- European Molecular Biology organization (EMBO) member 2005
- Member of the Academia Europea 2015
- Commander of the Order of the Lion of Finland 2015
- DANA Alliance for Brain Initiatives, member 2015
- Foreign member of the Royal Swedish Academy of Science 2021
- Doctor Honoris Causa, University of Tartu 2021

Awards and other Professional Activities

- Finnish Cultural Foundation Science Prize 2000
- Finnish Innovation Prize 2000, 2018
- Väino Tanner Prize 2001

- Runeberg Medical Science Prize 2003
- Karl Schlossmann Science Prize 2004
- Nordic Science Prize, Lundbeck Foundation 2009
- Tartu University Medical School Honorary Medal 2010
- Alfred Kordelin Foundation Science Prize 2013
- Biomedicum Helsinki medal and Lecture 2017

Teaching and Scientific Supervision

Saarma has supervised 40 PhD students and 21 of his former PhD students or post-docs have become group leaders and received professorships.

Contribution to Science, Seven selected/relevant publications:

- Rivera, C., Voipio, J., Payne, J.A., Ruusuvoori, E., Lahtinen, H., Lamsa, K., Pirvola, U., Saarma, M. & Kaila, K. (1999) A K⁺/Cl⁻ co-transporter KCC2 renders GABA hyperpolarizing during neuronal maturation. *Nature* 397, 251-255.
- Lindholm, P., Voutilainen, M. H., Laurén, J., Peränen, J., Leppänen, V-M., Andressoo, J-O., Lindahl, M., Janhunen, S., Kalkkinen, N., Timmusk, T., Tuominen, RK. and Saarma, M. (2007) Novel neurotrophic factor CDNF protects and rescues midbrain dopaminergic neurons in vivo. *Nature*, 448, 73-77.
- Lindahl M, Danilova T, Palm E, Pulkkila P, Voikar V, Hakonen E, Ustinov J, Andressoo J-O, Harvery B, Otonkoski T, Rossi J and Saarma M. (2014). MANF is indispensable for the proliferation and survival of pancreatic β -cells. *Cell Reports*, 7(2):366-75.
- Kopra J, Vilenius C, Grealish S, Härma A-M, Varendi K, Lindholm J, Castrén E, Vöikar V, Björklund A, Piepponen TP, Saarma M*, Andressoo J-O* (2015) GDNF is not required for catecholaminergic neuron survival in vivo. *Nature Neurosci.* 18(3):319-22. *Equal contrib.
- Mahato AK, Kopra J, Renko JM, Visnapuu T, Korhonen I, Pulkkinen N, Beshpalov MM, Domanskyi A, Ronken E, Piepponen TP, Voutilainen MH, Tuominen RK, Karelson M, Sidorova YA, Saarma M. (2020) Glial cell line-derived neurotrophic factor receptor RET agonist supports dopamine neurons in vitro and enhances dopamine release in vivo. *Mov Disord.*; 35(2):245-255.
- Kovaleva V, Yu L-Y, Ivanova L, Shpironok O, Nam J, Eesmaa A, Kumpula E-P, Sakson S, Toots U, Ustav M, Huiskonen JT, Voutilainen MH, Lindholm P, Karelson M, Saarma M. (2023) MANF regulates neuronal survival and UPR through its ER-located receptor IRE1 α . *Cell Reports*, 2023 Feb 3;42(2):112066. doi: 10.1016/j.celrep.2023.112066.
- De Lorenzo F, Lüningschrör P, Nam J, Beckett L, Pilotto F, Galli E, Lindholm P, Rüdert von Collenberg C, Tii Mungwa S, Jablonka S, Kauder J, Thau-Habermann N, Petri S, Lindholm D, Saxena S, Sendtner M, Saarma M*, Voutilainen MH* (2023). CDNF rescues motor neurons in models of amyotrophic lateral sclerosis by targeting endoplasmic reticulum stress. *Brain*. Sep 1;146(9):3783-3799. doi: 10.1093/brain/awad087. *Equal contribution

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1. Sigrid Jusélius Medical Research Foundation grant, 360,000 € for years 2022-2024.
2. Academy of Finland grant 498,000 € for years 2021-2025.
3. Jane and Aatos Erkkö Foundation grant, 800,000 € for years 2021-2024.
4. Cure Parkinson Trust Grant, UK, 245,000 £ for years 2022-2024.
5. Juvenile Diabetes Research Foundation, USA, 500,000 USD for years 2022-2024.