

AP-1 transcription factors mediate BDNF-positive feedback loop in cortical neurons

Tuvikene, Jürgen; Pruunsild, Priit; Orav, Ester; Esvald, Eli-Eelika; Timmusk, Tõnis Journal of neuroscience 2016 / p. 1290-1305 : ill <https://doi.org/10.1523/JNEUROSCI.3360-15.2016> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Bioinformaatika pakub võimalust vähi ja ajuhaiguste seljatamiseks

Alvela, Ain novaator.err.ee 2023 [Bioinformaatika pakub võimalust vähi ja ajuhaiguste seljatamiseks](#)

Bioinformaatika püüab antikehi uurides leida uudseid ravimeetodeid

Alvela, Ain TööstusEST 2023 / lk. 24-26 : portr https://www.ester.ee/record=b4481084*est

CREB family transcription factors are major mediators of BDNF transcriptional autoregulation in cortical neurons

Esvald, Eli-Eelika; Tuvikene, Jürgen; Sirp, Alex; Patil, Sudarshan; Bramham, Clive; Timmusk, Tõnis Journal of neuroscience 2020 / p. 1405-1426 : ill <https://doi.org/10.1523/JNEUROSCI.0367-19.2019> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Daughterless, the Drosophila orthologue of TCF4, is required for associative learning and maintenance of the synaptic proteome

Tamberg, Laura; Jaago, Mariliis; Säälk, Kristi; Sirp, Alex; Tuvikene, Jürgen; Šubina, Anastassia; Kiir, Carl Alexander; Nurm, Kaja; Sepp, Mari; Timmusk, Tõnis; Palgi, Mari Disease Models & Mechanisms 2020 / art. dmm042747, 15 p. : ill <https://doi.org/10.1242/dmm.042747> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Differential patterns of cross-reactive antibody response against SARS-CoV-2 spike protein detected for chronically ill and healthy COVID-19 naïve individuals

Jaago, Mariliis; Rähni, Annika; Pupina, Nadezda; Sadam, Helle; Tuvikene, Jürgen; Avarlaid, Annela; Planken, Anu; Planken, Margus; Haring, Liina; Vasar, Eero; Bacevic, Miljana; Lambert, France; Kalso, Eija; Pussinen, Pirkko; Tienari, Pentti J.; Vaheri, Antti; Lindholm, Dan; Timmusk, Tõnis; Ghaemmaghami, Amir M.; Palm, Kaia Scientific reports 2022 / art. 16817 : ill <https://doi.org/10.1038/s41598-022-20849-6> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Differential regulation of the BDNF gene in cortical and hippocampal neurons

Esvald, Eli-Eelika; Tuvikene, Jürgen; Moistus, Andra; Rannaste, Käthy; Kõomägi, Susann; Timmusk, Tõnis Journal of neuroscience 2022 / p. 9110-9128 <https://doi.org/10.1523/JNEUROSCI.2535-21.2022> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Dissecting stimulus-dependent transcription of brain-derived neurotrophic factor = Aju-päritolu neurotroofse teguri stiimulsõltsuva transkriptsiooni uuringud

Esvald, Eli-Eelika 2023 <https://doi.org/10.23658/taltech.32/2023> <https://digikogu.taltech.ee/et/Item/6222c009-c82d-4efb-98c2-51bf2f148b52> https://www.ester.ee/record=b5567508*est

Dopamine crossreacts with adrenoreceptors in cortical astrocytes to induce BDNF expression, CREB signaling and morphological transformation

Koppel, Indrek; Jaanson, Kaur; Klasche, Airi; Tuvikene, Jürgen; Tiirik, Tõnis; Pärn, Angela; Timmusk, Tõnis GLIA 2018 / p. 206-216 : ill <https://doi.org/10.1002/glia.23238> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Efficient use of a translation start codon in BDNF exon I

Koppel, Indrek; Tuvikene, Jürgen; Lekk, Ingrid; Timmusk, Tõnis Journal of neurochemistry 2015 / p. 1015-1025 : ill <https://doi.org/10.1111/jnc.13124> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

An 840 kb distant upstream enhancer is a crucial regulator of catecholamine-dependent expression of the BDNF gene in astrocytes

Avarlaid, Annela; Esvald, Eli-Eelika; Koppel, Indrek; Parkman, Annabel; Zhuravskaya, Anna; Makeyev, Eugene V.; Tuvikene, Jürgen; Timmusk, Tõnis Glia 2023 / p. 90-110 : ill <https://doi.org/10.1002/glia.24463>

Electrochemical sensor based on molecularly imprinted polymer for rapid quantitative detection of brain-derived neurotrophic factor

Ayankojo, Akinrinade George; Boroznjak, Roman; Reut, Jekaterina; Tuvikene, Jürgen; Timmusk, Tõnis; Sõritski, Vitali Sensors and Actuators B: Chemical 2023 / art. 134656 <https://doi.org/10.1016/j.snb.2023.134656> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Expression of alternative transcription factor 4 mRNAs and protein isoforms in the developing and adult rodent and human tissues

Sirp, Alex; Shubina, Anastassia; Tuvikene, Jürgen; Tamberg, Laura; Kiir, Carl Sander; Kranich, Laura; Timmusk, Tõnis Frontiers in Molecular Neuroscience 2022 / art. 1033224 <https://doi.org/10.3389/fnmol.2022.1033224> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The Fuchs corneal dystrophy-associated CTG repeat expansion in the TCF4 gene affects transcription from its

alternative promoters

Sirp, Alex; Leite, Kristian; Tuvikene, Jürgen; Nurm, Kaja; Sepp, Mari; Timmusk, Tõnis Scientific reports 2020 / art. 18424
<https://doi.org/10.1038/s41598-020-75437-3> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Functional consequences of TCF4 missense substitutions associated with Pitt-Hopkins syndrome, mild intellectual disability, and schizophrenia

Sirp, Alex; Roots, Kaisa; Nurm, Kaja; Tuvikene, Jürgen; Sepp, Mari; Timmusk, Tõnis The journal of biological chemistry 2021 / art. 101381 <https://doi.org/10.1016/j.jbc.2021.101381> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

High-intensity interval and moderate-intensity continuous training on cerebral energy metabolism in older rats.

Marcourt, Cecile; Rivera, Claudio; **Tuvikene, Jürgen**; Langeard, Antoine; **Esvald, Eli-Eelika; Cabrera-Cabrera, Florencia; Timmusk, Tõnis; Temprado, Jean-Jacques**; Laurin, Jerome GeroScience 2025 / 16 p <https://doi.org/10.1007/s11357-025-01820-5>

Immune response to a conserved enteroviral epitope of the major capsid VP1 protein is associated with lower risk of cardiovascular disease

Pupina, Nadežda; **Avarlaid, Annela; Sadam, Helle**; Pihlak, Arno; **Jaago, Mariliis; Tuvikene, Jürgen; Rähni, Annika**; Planken, Anu; Planken, Margus; Kalso, Eija; Tienari, Pentti J.; Nieminen, Janne K.; Seppänen, Mikko R.J.; Vaheri, Antti; Lindholm, Dan; Sinisalo, Juha; Pussinen, Pirkko; **Timmusk, Tõnis; Palm, Kaia** eBioMedicine 2022 / art. 103835, 14 p. : ill <https://doi.org/10.1016/j.ebiom.2022.103835> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Intronic enhancer region governs transcript-specific Bdnf expression in rodent neurons

Tuvikene, Jürgen; Esvald, Eli-Eelika; Rähni, Annika; Uustalu, Kaie; Zhuravskaya, Anna; **Avarlaid, Annela**; Makeyev, Eugene V.; **Timmusk, Tõnis** eLife 2021 / art. e65161 <https://doi.org/10.7554/eLife.65161> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Isoform-specific reduction of the basic helix-Loop-helix transcription factor TCF4 levels in Huntington's disease

Nurm, Kaja; Sepp, Mari; Castany-Pladevall, Carla; Creus-Muncunill, Jordi; **Tuvikene, Jürgen; Sirp, Alex; Vihma, Hanna**; Blake, Derek J.; Perez-Navarro, Esther; **Timmusk, Tõnis** eNeuro 2021 / 53 p. : ill <https://doi.org/10.1523/ENEURO.0197-21.2021> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Melanoma-specific antigen-associated antitumor antibody reactivity as an immune-related biomarker for targeted immunotherapies

Rähni, Annika; Jaago, Mariliis; Sadam, Helle; Pupina, Nadežda; Pihlak, Arno; **Tuvikene, Jürgen**; Annuk, Margus; Mägi, Andrus; **Timmusk, Tõnis**; Ghaemmaghani, Amir M.; **Palm, Kaia** Communications medicine 2022 / 11 p. : ill <https://doi.org/10.1038/s43856-022-00114-7>

Neuralized family member NEURL1 is a ubiquitin ligase for the cGMP-specific phosphodiesterase 9A

Taal, Kati; Tuvikene, Jürgen; Rullinkov, Grete; Piirsoo, Marko; Sepp, Mari; Neuman, Toomas; Tamme, Richard; Timmusk, Tõnis Scientific reports 2019 / art. 7104, 12 p. : ill <https://doi.org/10.1038/s41598-019-43069-x> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

PCSK9 deficiency alters brain lipid composition without affecting brain development and function

Pärm, Angela; Olsen, Ditte; **Tuvikene, Jürgen**; Kaas, Mathias; Borisova, Ekaterina; Bilgin, Mesut; Elhauge, Mie; Vilstrup, Joachim; Madsen, Peder; Ambrozkiwicz, Mateusz C.; Goz, Roman U.; **Timmusk, Tõnis**; Tarabykin, Victor; Gustafsen, Camilla; Glerup, Simon Frontiers in molecular neuroscience 2023 / art. 1084633 <https://doi.org/10.3389/fnmol.2022.1084633> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Rat NEURL1 3'UTR is alternatively spliced and targets mRNA to dendrites

Jaagura, Madis; Taal, Kati; Koppel, Indrek; Tuvikene, Jürgen; Timmusk, Tõnis; Tamme, Richard Neuroscience letters 2016 / p. 71-76 : ill <https://doi.org/10.1016/j.neulet.2016.10.041> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Revisiting the expression of BDNF and its receptors in mammalian development

Esvald, Eli-Eelika; Tuvikene, Jürgen; Kiir, Carl Sander; Avarlaid, Annela; Tamberg, Laura; Sirp, Alex; Shubina, Anastassia; Cabrera-Cabrera, Florencia; Pihlak, Arno; **Koppel, Indrek**; Palm, Kaia; **Timmusk, Tõnis** Frontiers in Molecular Neuroscience 2023 / art. 1182499 <https://doi.org/10.3389/fnmol.2023.1182499> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The role of Enhancers in the regulation of brain-derived neurotrophic factor transcription = Enhanseralade roll aju-päritolu neurotroofse teguri transkriptsiooni regulatsioonis

Avarlaid, Annela 2024 https://www.ester.ee/record=b5691778*est <https://digikogu.taltech.ee/et/Item/108d17a6-795d-4bc3-8e2b-95ba9585e849> <https://doi.org/10.23658/taltech.34/2024>

Transcriptional and translational regulation of brain-derived neurotrophic factor = Aju päritolu neurotroofse teguri transkriptsiooni ja translatsiooni regulatsioon

Tuvikene, Jürgen 2020 https://www.eester.ee/record=b5392533*est <https://digikogu.taltech.ee/et/Item/4f057c26-5150-4380-a9a9-dab1ce4dc384>

2-Deoxyglucose drives plasticity via an adaptive ER stress-ATF4 pathway and elicits stroke recovery and Alzheimer's resilience

Kumar, Amit; Karuppagounder, Saravanan S.; Chen, Yingxin; Corona, Carlo; Kawaguchi, Riki; Chen, Yuyan; Balkaya, Mustafa; Sagdullaev, Botir T.; Wen, Zhexing; Stuart, Charles; Cho, Sunghee; Ming, Guo-li; **Tuvikene, Jürgen; Timmusk, Tõnis**; Geschwind, Daniel H.; Ratan, Rajiv R. Neuron 2023 / p. 2831-2846 : ill <https://doi.org/10.1016/j.neuron.2023.06.013> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Untranslated regions of brain-derived neurotrophic factor (Bdnf) mRNA control its translatability and subcellular localization

Lekk, Ingrid; Cabrera-Cabrera, Florencia; Turconi, Giorgio; **Tuvikene, Jürgen; Esvald, Eli-Eelika; Rähni, Annika**; Casserly, Laoise; Garton, Daniel R.; Andressoo, Jaan-Olle; **Timmusk, Tõnis; Koppel, Indrek** The journal of biological chemistry 2023 / art. 102897 <https://doi.org/10.1016/j.jbc.2023.102897> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

An upstream enhancer and MEF2 transcription factors fine-tune the regulation of the Bdnf gene in cortical and hippocampal neurons

Avarlaid, Annela; Falkenberg, Kaisa; Lehe, Karin; Mudo, Giuseppa; Belluardo, Natale; Di Liberto, Valentina; Frinchi, Monica; **Tuvikene, Jürgen; Timmusk, Tõnis** Journal of biological chemistry 2024 / art. 107411, 12 p. : ill <https://doi.org/10.1016/j.jbc.2024.107411> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)