

Antioxidative CXXC peptide motif from mesencephalic astrocyte-derived neurotrophic factor antagonizes programmed cell death

Božok, Valentina; Yu, Li-Ying; **Palgi, Jaan; Arumäe, Urmas** *Frontiers in cell and developmental biology* 2018 / 15 p. : ill
<https://doi.org/10.3389/fcell.2018.00106> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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>

BAC-based cellular model for screening regulators of BDNF gene transcription

Jaanson, Kaur; Sepp, Mari; Aid-Pavlidis, Tamara; Timmusk, Tõnis *BMC neuroscience* 2014 / p. 1-12 : ill

Brain-derived neurotrophic factor expression in vivo is under the control of neuron-restrictive silencer element

Timmusk, Tõnis; Palm, Kaia; Lendahl, U.; Metsis, Madis *Journal of biological chemistry* 1999 / p. 1078-1084

Corticosterone actions on the hippocampal brain-derived neurotrophic factor expression are mediated by exon IV promoter

Hansson, Anita C.; Sommer, Wolfgang; Metsis, Madis; Stromberg, Ingrid; Agnati, Luigi Francesco; Fuxe, Kjell *Journal of neuroendocrinology* 2006 / 2, p. 104-114 <http://dx.doi.org/10.1111/j.1365-2826.2005.01390.x>

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](#)

CXXC peptide motif from mesencephalic astrocyte-derived neurotrophic factor (MANF) antagonizes apoptotic and necroptotic death and has anti-oxidant activity

Bozok, V.; Palgi, Jaan; Arumäe, Urmas *Neurodegenerative diseases* 2015 / p. 1829 <http://dx.doi.org/10.1159/000381736>

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 stiimulsõltnuva 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.eester.ee/record=b5567508*est

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
<http://dx.doi.org/10.1111/jnc.13124>

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 <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>

Electrochemical sensor based on molecularly imprinted polymers for label-free detection of neurotrophic factor protein [Online resource]

Kidakova, Anna; Sõritski, Vitali; Reut, Jekaterina; Öpik, Andres *Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [4.-5. veebr. 2019, Tartu : teesid]* 2019 / 1 p <http://fntdk.ut.ee/teesid-2019/>

Environmental enrichment results in higher levels of nerve growth factor mRNA in the rat visual cortex and hippocampus

Torassdotter, M.; Metsis, Madis; Henriksson, B.G.; Winblad, B.; Mohammed, A.H. *Behavioural brain research* 1998 / p. 83-90

GDNF - a stranger in the TGF-beta superfamily

Saarma, Mart *European journal of biochemistry* 2000 / p. 6968-6971 <https://pubmed.ncbi.nlm.nih.gov/11106404/>

GDNF family : new promising growth factors

Saarma, Mart; Arumäe, Urmas Neuroscience news 1999 / p. 26-34

GDNF family ligands activate multiple events during axonal growth in mature sensory neurons

Paveliev, Mikhail; Airaksinen, Matti S.; **Saarma, Mart** Molecular and cellular neuroscience 2004 / 3, p. 453-459
<https://www.sciencedirect.com/science/article/pii/S1044743103003646>

GDNF family ligands and receptors are differentially regulated after brain insults in the rat

Kokaia, Zaal; Airaksinen, Matti S.; Nanobashvili, A.; Larsson, E.; Kujamäki, E.; Lindvall, O.; **Saarma, Mart** European journal of neuroscience 1999 / p. 1202-1216

GDNF family neurotrophic factor signalling : four masters, one servant?

Airaksinen, Matti S.; Titievsky, A.; **Saarma, Mart** Molecular and cellular neurosciences 1999 / p. 313-325

GDNF triggers a novel Ret-independent Src-kinase family-coupled signaling via a GPI-linked GDNF receptor a[alfa]1

Poteriaev, D.; Titievsky, A.D.; Sun, Yun-Fu; Thomas-Crusells, J.; Lindahl, Maria; Billaud, M.; Arumäe, Urmas; **Saarma, Mart** FEBS letters 1999 / p. 63-66

Glial cell line-derived neurotrophic factor is expressed in penis of adult rat and retrogradely transported in penile parasympathetic and sensory nerves

Laurikainen, A.; Hiltunen, J.O.; Vanhatalo, S.; Klinge, E.; **Saarma, Mart** Cell and tissue research 2000 / p. 321-329
<https://pubmed.ncbi.nlm.nih.gov/11151444/>

Human glial cell line-derived neurotrophic factor receptor alpha4 is the receptor for persephin, and is predominantly expressed in normal and malignant thyroid medullary cells

Lindahl, Maria; Poteryaev, Dimitry; Yu, Liying; Arumäe, Urmas; Timmusk, Tõnis; Bongarzone, Italia; Aiello, Antonella; Pierotti, Marco A.; Airaksinen, Matti S.; **Saarma, Mart** Journal of biological chemistry 2001 / 12, p. 9344-9351 : ill
<https://doi.org/10.1074/jbc.M008279200>

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](#)

Nerve growth factor from Vipera lebetina venom

Paalme, Viu; Trummal, Katrin; Samel, Mari; Tõnismägi, Külli; Järvekülg, Lilian; Vija, Heiki; Subbi, Juhan; Siigur, Jüri; Siigur, Ene Toxicon 2009 / 3, p. 329-336 : ill <https://www.sciencedirect.com/science/article/pii/S0041010109002438>

Neuronal activity-dependent transcription factors and regulation of human BDNF gene = Närvitalitlusest sõltuvad transkriptsioonifaktorid ja inimese BDNF geeni avaldumise regulatsioon

Pruunsild, Priit 2010 https://www.ester.ee/record=b2653637*est

Neurotroopsed tegurid

Timmusk, Tõnis; Koppel, Indrek; Pruunsild, Priit; Sepp, Mari; Tamme, Richard Eesti Arst 2007 / 9, lk. 614-621
<https://eestiartst.ee/neurotroopsed-tegurid/>

Neurotrophic factors - a key to understanding neuronal life and death - and memory and thinking : what are the neurotrophic factors and how do they regulate neurons?

Saarma, Mart; Arumäe, Urmas Estonia : member state of NATO and the EU : international business handbook 2007-2008 2007 / p. 191-207 : ill., portr https://www.ester.ee/record=b2288232*est

Neurotrophic factors in development and disease

Saarma, Mart The First Joint Conference of Scandinavian Neuropaediatric Society and Baltic Child Neurology Assotiation. The 7th International Conference of Baltic Neurology Association in cooperation with 4th Conference of Estonian Society of Human Genetics : May 27-31, 2003, Tallinn, Estonia : program and abstract book 2003 / p. 13-14

Neurotrophins : transcription and translation

West, A. E.; **Pruunsild, Priit**; Timmusk, Tõnis Neurotrophic factors 2014 / p. 67-100

Neurturin mRNA expression suggests roles in trigeminal innervation of the first branchial arch in tooth formation

Luukko, K.; **Saarma, Mart**; Thesleff, I. Developmental dynamics 1998 / p. 207-219

Novel transcripts reveal a complex structure of the human TRKA gene and imply the presence of multiple protein isoforms

Luberg, Kristi; Park, Rahel; Aleksejeva, Elina; Timmusk, Tõnis BMC neuroscience 2015 / p. 1-21 : ill
<http://dx.doi.org/10.1186/s12868-015-0215-x>

Novel transgenic models based on bacterial artificial chromosomes for studying BDNF gene regulation = Bakteriaalsetel kunstlikel kromosoomidel põhinevad transgeensed mudelid BDNF geeni regulatsiooni uurimiseks
Jaanson, Kaur 2015

Other neurotrophic factors : Glial cell line-derived neurotrophic factor
Saarma, Mart; Sariola, H. Microscopy research and technique 1999 / p. 292-302

Photo- and electropolymerization approaches for molecular imprinting of a neurotrophic factor protein
Kidakova, Anna; Boroznjak, Roman; Reut, Jekaterina; Öpik, Andres; Söritski, Vitali GSFMT Scientific Conference 2020 : Tallinn, February 4-5, 2020 : abstracts 2020 / p. 43 <http://fmtdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

Photo- and Electropolymerization Approaches for Molecular Imprinting of a Neurotrophic Factor Protein = Foto- ja elektropolümeerisatsiooni meetodid neurotroofsete tegurite molekulaarseks jäljendamiseks
Kidakova, Anna 2020 <https://digikogu.taltech.ee/et/Item/2ca7105c-05df-4af9-91cc-0e85d3840dc2>

Photopolymerized molecularly imprinted polymer tailored for electrochemical detection of brain-derived neurotrophic factor on screen-printed electrodes
Kidakova, Anna; Boroznjak, Roman; Reut, Jekaterina; Öpik, Andres; Söritski, Vitali EUPOC 2018 : Biomimetic Polymers by Rational Design, Imprinting and Conjugation : 20 - 24 May 2018, Como, Social Como Theatre : abstract booklet & list of participants [p.o. participants] 2018 / P22, p. 76 : ill [EUPOC 2018](#)

Poststroke delivery of MANF promotes functional recovery in rats
Mätlik, Kert; Anttila, Jenni E.; Kuan-Yin, Kuan-Yin; Arumäe, Urmas Science advances 2018 / art. eaap8957 ; 8 p. : ill <https://doi.org/10.1126/sciadv.aap8957> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics art WOS](#) [Article at WOS](#)

Promotion of seminomatous tumors by targeted overexpression of glial cell line-derived neurotrophic factor in mouse testis
Meng, X.; Rooij, D.G. de; Westerdahl, K.; Saarma, Mart; Sariola, H. Cancer research 2001 / p. 3267-3271 <https://pubmed.ncbi.nlm.nih.gov/11309277/>

Role of two sequence motifs of mesencephalic astrocyte-derived neurotrophic factor in its survival-promoting activity
Mätlik, Kert; Yu, Li-Ying; Eesmaa, Ave; Arumäe, Urmas Cell death & disease 2015 / art. e2032, p. 1-8 : ill <http://dx.doi.org/10.1038/cddis.2015.371>

Stroke induces widespread changes of gene expression for glial cell line-derived neurotrophic factor family receptors in the adult rat brain
Arvidsson, A.; Kokaia, Zaal; Airaksinen, Matti S.; Saarma, Mart; Lindvall, O. Neuroscience 2001 / p. 27-41 <https://pubmed.ncbi.nlm.nih.gov/11564414/>

The GDNF family : from neurotrophic factors to oncogenesis
Poteriaev, D.A.; Saarma, Mart Molecular biology 2001 / p. 309-320 https://artiklid.elnet.ee/record=b2321076*est

Therapeutic potential of the endoplasmic reticulum located and secreted CDNF/MANF family of neurotrophic factors in Parkinson's disease
Voutilainen, Merja H.; Arumäe, Urmas; Airavaara, Mikko; Saarma, Mart FEBS letters 2015 / p. 3739-3748 : ill <http://dx.doi.org/10.1016/j.febslet.2015.09.031>

Tissue-specific and neural activity-regulated expression of human BDNF gene in BAC transgenic mice
Koppel, Indrek; Aid-Pavlidis, Tamara; Jaanson, Kaur; Sepp, Mari; Pruunsild, Priit; Palm, Kaia; Timmusk, Tõnis BMC neuroscience 2009 / p. 68 <https://psycnet.apa.org/record/2009-11273-001>

Transcriptional and translational regulation of brain-derived neurotrophic factor = Aju päritolu neurotroofse teguri transkriptsiooni ja translatsiooni regulatsioon
Tuvikene, Jürgen 2020 https://www.ester.ee/record=b5392533*est <https://digikogu.taltech.ee/et/Item/4f057c26-5150-4380-a9a9-dab1ce4dc384>

Transcriptional mechanisms of BDNF gene regulation = BDNF geeni avaldumise transkriptsioonilised mehhanismid
Koppel, Indrek 2013 https://www.ester.ee/record=b3046255*est

Transcriptional repression of neurotrophin receptor trkB by thyroid hormone in the developing rat brain
Pombo, P.M.; Baretino, D.; Espliguero, G.; Metsis, Madis; Iglesias, T.; Rodriguez-Pena, A. Journal of biological chemistry 2000 / p. 37510-37517 <https://pubmed.ncbi.nlm.nih.gov/10978336/>

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>

Uued neurotroofilised faktorid MANF ja CDFN ning nende uudne toimemehhanism
Arumäe, Urmas Tallinna Tehnikaülikooli aastaraamat 2013 2014 / lk. 257-263 : ill