

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; Esveld, 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](#)

BAC transgenic mice reveal distal cis-regulatory elements governing BDNF gene expression

Koppel, Indrek; Aid-Pavlidis, Tamara; Jaanson, Kaur; Sepp, Mari; Palm, Kaia; Timmusk, Tõnis Genesis 2010 / 4, p. 214-219

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2978326/>

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

<https://doi.org/10.1186/1471-2202-15-75> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

BDNF-induced TrkB activation down-regulates the K+-Cl- cotransporter KCC2 and impairs neuronal Cl-extrusion

Rivera, Claudio; Saarma, Mart Journal of cell biology 2002 / 5, p. 747-752 <https://portal.research.lu.se/en/publications/bdnf-induced-trkb-activation-down-regulates-the-k-cl-cotransporte>

Biology and signalling of GDNF

Saarma, Mart Finnish Endocrinology Society Meeting : Helsinki, 1999 1999

Biotehnoloogilisi lähenemisi neurodegeneratiivsete haiguste raviks

Saarma, Mart Eesti Arst 2010 / 9, lk. 536-544 : ill https://artiklid.elnet.ee/record=b2161127*est

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

Characterization of symmetric complexes of nerve growth factor and the ectodomain of the pan-neurotrophin receptor, p75NTR

Aurikko, J.P.; Ruotolo, B.T.; Grossmann, J.G.; Moncrieffe, M.C.; Stephens, E.; Leppänen, V.M.; Robinson, C.V.; **Saarma, Mart**; Bradshaw, R.A.; Blundell, T.L. Journal of biological chemistry 2005 / 39, p. 33453-33460 <https://pubmed.ncbi.nlm.nih.gov/16009712/>

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

Esveld, 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

Esveld, 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 stiimulsõltuva transkriptsiooni uuringud

Esveld, Eli-Eelika 2023 <https://doi.org/10.23658/taltech.32/2023> <https://digikogu.taltech.ee/et/item/6222c009-c82d-4efb-98c2-51bf2f148b52>
https://www.estet.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

<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; Timmus, 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; Timmus, 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*

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://fmtdk.ut.ee/teesid-2019/>

Environmental enrichment results in higher levels of nerve growth factor mRNA in the rat visual cortex and hippocampus
Torasdotter, M.; Metsis, Madis; Henriksson, B.G.; Winblad, B.; Mohammed, A.H. *Behavioural brain research* 1998 / p. 83-90

Expression and sequence homology of GDNF family receptors suggest roles in cell-cell interactions

Airaksinen, Matti S.; Suvanto, P.; Moshnyakov, M.; Saarma, Mart The Third International Meeting : Hirschsprung Disease and Related Neurochristopathies, Evian, February 5-8, 1998 1998 / p. 7

Expression of neurotrophin receptors in rat testis. Upregulation of TrkA mRNA with hCG treatment

Schultz, R.; Metsis, Madis; Hokfelt, T.; Parvinen, M.; Pelto-Huikko, M. *Molecular and cellular endocrinology* 2001 / p. 121-127 <https://pubmed.ncbi.nlm.nih.gov/11500245/>

Expression of NGF and GDNF family members and their receptors during peripheral nerve development and differentiation of Schwann cells in vitro

Piirsoo, Marko; Kaljas, Anne; Tamm, Karin; Timmus, Tõnis *Neuroscience letters* 2010 / 1, p. 135-140 : ill <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2808476/>

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 promotes tubulogenesis of GFRalpha1-expressing MDCK cells by Src-mediated phosphorylation of Met receptor tyrosine kinase

Popsujeva, A.; Saarma, Mart *Journal of cell biology* 2003 / 1, p. 119-129 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2172872/>

GDNF receptors as a drug target for neural repair

Bespakov, Maxim M.; Hetenyi, C.; Karelson, Mati; Saarma, Mart *Cell transplantation* 2007 / 3, p. 313-314 https://www.researchgate.net/publication/295730047_GDNF_receptors_as_a_drug_target_for_neural_repair

GDNF signalling

Saarma, Mart Annual Endocrinology Society Meeting : Paris, 1999 1999

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

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

GDNF-deprived sympathetic neurons die via a novel nonmitochondrial pathway

Yu, Li-Ying; Jokitalo, E.; Sun, Yun-Fu; Mehlen, P.; Lindholm, Dan; Saarma, Mart; Arumäe, Urmas *Journal of cell biology* 2003 / 5, p. 987-997 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2173604/>

Genes for neurotrophic factors and their receptors : structure and regulation

Metsis, Madis Cellular and molecular life sciences 2001 / p. 1014-1020 <https://pubmed.ncbi.nlm.nih.gov/11529494/>

Gliaal cell line-derived neurotrophic factor rescues target-deprived sympathetic spinal cord neurons but requires transforming growth factor-beta as co-factor in vivo

Schober, A.; Hertel, R.; Arumäe, Urmas; Farkas, L.; Jaszai, J.; Kriegstein, K.; **Saarma, Mart**; Unsicker, K. Journal of neuroscience 1999 / p. 2008-2015 <https://www.jneurosci.org/content/19/6/2008.abstract>

Gliaal 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; Timmus, 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>

Identification of cis-elements and transcription factors regulating neuronal activity-dependent transcription of human BDNF gene

Pruunsild, Priit; Sepp, Mari; Orav, Ester; Koppel, Indrek; Timmus, Tõnis The journal of neuroscience 2011 / p. 3295-3308 : ill <https://pubmed.ncbi.nlm.nih.gov/21368041/>

Identification of the receptors for GDNF

Saarma, Mart; Titievsky, A.; Arumäe, Urmas; Airaksinen, Matti S. Princess Lilian Symposium "Kidney Development has Clinical Impacts", Brussels, October 26-27, 1998 / p. 9

Increased extracellular dopamine concentrations and FosB/DeltaFosB expression in striatal brain areas of heterozygous GDNF knockout mice

Airavaara, Mikko; Planken, Anu; Gäddnäs, Helena; Piepponen, Timo Petteri; **Saarma, Mart**; Ahtee, Liisa European journal of neuroscience 2004 / 9, p. 2336-2344 : ill <https://pubmed.ncbi.nlm.nih.gov/15525275/>

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

Tuvikene, Jürgen; **Esveld, Eli-Elika; Rähni, Annika; Uustalu, Kaie**; Zhuravskaya, Anna; **Avarlaid, Annela**; Makeyev, Eugene V.; **Timmus, 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](#)

MANF is widely expressed in mammalian tissues and differently regulated after ischemic and epileptic insults in rodent brain

Lindholm, Päivi; Peränen, Johan; Andressoo, Jaan-Olle; Kalkkinen, Nisse; Kokaia, Zaal; Lindvall, Olle; **Timmus, Tõnis; Saarma, Mart** Molecular and cellular neuroscience 2008 / p. 356-371 : ill <https://pubmed.ncbi.nlm.nih.gov/18718866/>

Mechanism of activity-dependent downregulation of the neuron-specific K-Cl cotransporter KCC2

Rivera, Claudio; Voipio, Juha; **Saarma, Mart** Journal of neuroscience 2004 / 19, p. 4683-4691 <https://www.jneurosci.org/content/24/19/4683>

Meta-coexpression conservation analysis of microarray data: a "subset" approach provides insight into brain-derived neurotrophic factor regulation

Aid-Pavlidis, Tamara; Pavlidis, Pavlos; **Timmus, Tõnis** BMC genomics 2009 / p. 420 : ill <https://bmcbioinformatics.biomedcentral.com/articles/10.1186/1471-2164-10-420>

Molecular diversity of snake venom nerve growth factors

Trummal, Katrin; Tönlismägi, Külli; **Paalme, Viiu; Järvekülg, Lilian**; Siigur, Jüri; Siigur, Ene Toxicon 2011 / p. 363-368 : ill <https://www.sciencedirect.com/science/article/pii/S0041010111002236>

Mouse and rat BDNF gene structure and expression revisited

Aid-Pavlidis, Tamara; Kazantseva, Anna; Piirsoo, Marko; Palm, Kaia; Timmus, Tõnis Journal of neuroscience research 2007 / 3, p. 525-535 <https://onlinelibrary.wiley.com/doi/full/10.1002/jnr.21139>

Nerve growth factor and brain-derived neurotrophic factor mRNAs are regulated in distinct cell populations of rat heart after ischaemia and reperfusion

Hiltunen, J.O.; Laurikainen, A.; Väkeva, A.; Meri, S.; **Saarma, Mart** Journal of pathology 2001 / p. 247-253 <https://pubmed.ncbi.nlm.nih.gov/11400155/>

Nerve growth factor from Vipera lebetina venom

Paalme, Viiu; 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 = Närvitallusest sõltuvad transkriptsioonifaktorid ja inimese BDNF geeni avaldumise regulatsioon

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

Neuronal-activity regulated gene expression: emphasis on BDNF

Timmusk, Tõnis SpringerPlus 2015 / 32 p <https://doi.org/10.1186/2193-1801-4-S1-L38> Journal metrics at Scopus Article at Scopus
[Journal metrics at WOS Article at WOS](#)

Neurotrofsed tegurid

Timmusk, Tõnis; Koppel, Indrek; Pruunsild, Priit; Sepp, Mari; Tamme, Richard Eesti Arst 2007 / 9, lk. 614-621
<https://eestiarst.ee/neurotrofsed-tegurid/> https://artiklid.elnet.ee/record=b1059643*est

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.esther.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

Neurotrophin-3 is a target-derived neurotrophic factor for penile erection-inducing neurons

Hiltunen, J.O.; Laurikainen, A.; Klinge, E.; Saarma, Mart Neuroscience 2005 / 1, p. 51-58
<https://www.sciencedirect.com/science/article/pii/S0306452205000965>

Neurotrophins : transcription and translation

West, A. E.; Pruunsild, Priit; Timmus, Tõnis Neurotrophic factors 2014 / p. 67-100 https://doi.org/10.1007/978-3-642-45106-5_4
[Article collection metrics at Scopus Article at Scopus](#)

Neurturin is a neurotrophic factor for penile parasympathetic neurons in adult rat

Laurikainen, A.; Hiltunen, J.O.; Thomas-Crusells, J.; Vanhatalo, S.; Arumäe, Urmas; Airaksinen, Matti S.; Klinge, E.; Saarma, Mart Journal of neurobiology 2000 / p. 198-205 <https://pubmed.ncbi.nlm.nih.gov/10770848/>

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

New family of neurotrophic factors with great therapeutic potential

Saarma, Mart; Arumäe, Urmas Estonia : member state of NATO and the EU : international business handbook 2011-2012 2011 / p. 192-207 : ill

NF- κ B-dependent regulation of brain-derived neurotrophic factor in hippocampal neurons by X-linked inhibitor of apoptosis protein

Kairisalo, Minna; Korhonen, Laura; Sepp, Mari; Pruunsild, Priit; Kukkonen, Jyrki; Kivinen, Jenni; Timmus, Tõnis; Blomgren, Klas; Lindholm, Dan European journal of neuroscience 2009 / 6, p. 958-966 : ill <https://pubmed.ncbi.nlm.nih.gov/19735291/>

Novel functions and signalling pathways for GDNF

Sariola, H.; Saarma, Mart Journal of cell science 2003 / 19, p. 3855-3862 <https://pubmed.ncbi.nlm.nih.gov/12953054/>

Novel neurotrophic factor CDNF protects and rescues midbrain dopamine neurons in vivo

Lindholm, Päivi; Timmus, Tõnis; Saarma, Mart Nature 2007 / p. 73-77 <https://doi.org/10.1038/nature05957>

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; Timmus, Tõnis BMC neuroscience 2015 / p. 1-21 : ill
<https://doi.org/10.1186/s12868-015-0215-x> [Journal metrics at Scopus Article at Scopus](#) [Journal metrics at WOS Article at WOS](#)

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 https://www.esther.ee/record=b4494705*est

Nuclear factor of activated T-cells isoform c4 (NFATc4/NFAT3) as a mediator of anti-apoptotic transcription in NMDA

receptor-stimulated cortical neurons

Vashishta, Aruna; Habas, Agata; Pruunsild, Pirit; Zheng, Jing-Juan; Timmusk, Tõnis; Hetman, Michal Journal of neuroscience 2009 / 48, p. 15331-15340 <https://pubmed.ncbi.nlm.nih.gov/19955386/>

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; Sõritski, 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 elektropolümerisatsiooni meetodid neurotroofsete tegurite molekulaarseks jälgendamiseks

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; Sõritski, 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

Mätilik, 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 at 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/>

PSPN/GFR[alpha]4 has a significantly weaker capacity than GDNF/GFR[alpha]1 to recruit RET to rafts, but promotes neuronal survival and neurite outgrowth

Yang, Jianmin; Lindahl, Maria; Lindholm, Päivi; Virtanen, Heidi; Coffey, Eleanor; Runeberg-Roos, Pia; Saarma, Mart FEBS letters 2004 / 1/3, p. 267-271 : ill <https://pubmed.ncbi.nlm.nih.gov/15225646/>

Recent developments in the field of GDNF and its receptors

Saarma, Mart Forum of European Neuroscience, Berlin, June 27 - July 2, 1998 1998 / p. 12

Regulation of cell fate decision of undifferentiated spermatogonia by GDNF

Meng, X.; Saarma, Mart Science 2000 / p. 1489-1493 <https://pubmed.ncbi.nlm.nih.gov/10688798/>

Regulation of extracellular serotonin levels and brain-derived neurotrophic factor in rats with high and low exploratory activity

Mällo, Tanel; Köiv, Kadri; Koppel, Indrek; Raudkivi, Karita; Uustare, Ain; Rinken, Ago; Timmusk, Tõnis; Harro, Jaanus Brain research 2008 / p. 110-117 : ill <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2568862/>

Retarded growth and deficits in the enteric and parasympathetic nervous system in mice lacking GFRa2, a functional neurturin receptor

Rossi, J.; Luukko, K.; Poteriaev, D.; Laurikainen, A.; Sun, Yun-Fu; Laakso, T.; Eerikäinen, S.; Tuominen, R.; Lakso, M.; Rauvala, H.; Arumäe, Urmas; Pasternack, M.; Saarma, Mart Neuron 1999 / p. 243-252 <https://pubmed.ncbi.nlm.nih.gov/10069331/>

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.esther.ee/record=b5691778*est <https://digikogu.taltech.ee/et/item/108d17a6-795d-4bc3-8e2b-95ba9585e849> <https://doi.org/10.23658/taltech.34/2024>

Role of two sequence motifs of mesencephalic astrocyte-derived neurotrophic factor in its survival-promoting activity

Mätilik, Kert; Yu, Li-Ying; Eesmaa, Ave; Arumäe, Urmas Cell death & disease 2015 / art. e2032, p. 1-8 : ill <https://doi.org/10.1038/cddis.2015.371> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Stimulus-Dependent Expression of Bdnf Is Mediated by ATF2, MYT1L, and EGR1 Transcription Factors

Esveld, Eli-Eelika; Moistus, Andra; Lehe, Karin; Avarlaid, Annela; Subina, Anastassia; Kuusemets, Liis; Tuvikene, Jurgen; Timmusk, Tõnis Journal of Neuroscience 2025 / art. e0313242025 <https://doi.org/10.1523/JNEUROSCI.0313-24.2025>

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/>

Targeted expression of a multifunctional chimeric neurotrophin in the lesioned sciatic nerve accelerates regeneration of sensory and motor axons

Funakoshi, H.; Risling, M.; Carlstedt, T.; Lendahl, U.; Timmusk, Tõnis; **Metsis, Madis**; Yamamoto, Y.; Ibanez, C.F. Proceedings of the National Academy of Sciences of the United States of America 1998 / p. 5269-5274
https://www.researchgate.net/publication/235616922_Targeted_expression_of_a_multifunctional_chimeric_neurotrophin_in_the_lesioned_sciatic_nerve_accelerates_regeneration_of_sensory_and_motor_axons

The first cysteine-rich domain of the receptor GFR[alpha]1 stabilizes the binding of GDNF

Virtanen, Heidi; Yang, Jianmin; Bespalov, Maxim M.; Hiltunen, J.O.; Leppänen, V.M.; Kalkkinen, Nisse; Goldman, A.; **Saarma, Mart**; Runeberg-Roos, Pia Biochemical journal 2005 / 3, p. 817-824 <https://pubmed.ncbi.nlm.nih.gov/15610063/>

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

The GDNF family : signalling, biological functions and therapeutic value

Airaksinen, Matti S.; **Saarma, Mart** Nature reviews neuroscience 2002 / 5, p. 383-394 <https://pubmed.ncbi.nlm.nih.gov/11988777/>

The structure of GFR[alpha]1 domain 3 reveals new insights into GDNF binding and RET activation

Leppänen, V.M.; Bespalov, Maxim M.; Runeberg-Roos, Pia; Puurand, Ülo; **Merits, Andres**; **Saarma, Mart**; Goldman, A. EMBO journal 2004 / 7, p. 1452-1462 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC391078/>

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
<https://doi.org/10.1016/j.febslet.2015.09.031> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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 translatatsiooni regulatsioon

Tuvikene, Jürgen 2020 https://www.esther.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.esther.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; Esvold, Eli-Elikka; 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](#)

Uued neurotroofilised faktorid MANF ja CDNF ning nende uudne toimemehhanism

Arumäe, Urmas Tallinna Tehnikaülikooli aastaraamat 2013 2014 / lk. 257-263 : ill

Õiged toonid hävitavad vaenlase

Strandberg, Marek Inseneeria 2015 / lk. 9 : fot https://artiklid.elnet.ee/record=b2748893*est