

Advanced sensing materials based on molecularly imprinted polymers towards developing point-of-care diagnostics devices

Kidakova, Anna; Reut, Jekaterina; Boroznjak, Roman; Öpik, Andres; Sõritski, Vitali Proceedings of the Estonian Academy of Sciences 2019 / p. 158–167 : ill <https://doi.org/10.3176/proc.2019.2.07> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Amyloid-beta PET and CSF in an autopsy-confirmed cohort

Reimand, Juhan; Boon, Baayla D.C.; Collij, Lyduine E.; Teunissen, Charlotte E.; Rozemuller, Annemieke J.M.; Van Berckel, Bart N.M.; Scheltens, Philip; Ossenkoppele, Rik; Bouwman, Femke Annals of clinical and translational neurology 2020 / p. 2150–2160 <https://doi.org/10.1002/acn3.51195> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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](#)

Biotehnoloogilisi lähenemisi neurodegeneratiivsete haiguste raviks

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

The CB₁ cannabinoid receptor signals striatal neuroprotection via a PI3K/Akt/mTORC1/BDNF pathway

Blazquez, C.; Chiarlone, A.; Pruunsild, Priit; Timmusk, Tõnis Cell death and differentiation 2015 / p. 1618-1629 : ill <https://doi.org/10.1038/cdd.2015.11> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Characterization of Uranyl (UO₂²⁺) ion binding to Amyloid Beta (Aβ) peptides : effects on Aβ structure and aggregation

Berntsson, Elina; Vosough, Faraz; Noormägi, Andra; Padari, Kärt; Asplund, Fanny; Gielnik, Maciej; Paul, Suman; Jarvet, Jüri; Tõugu, Vello; Palumaa, Peep ACS chemical neuroscience 2023 / p. 2618-2633 : ill <https://doi.org/10.1021/acscchemneuro.3c00130> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Compound's pre-screening of withania somnifera, Baccopa monnieri and centella asiatica extracts

Witter, Steffi; Arju, Georg; Junusova, Marina; Kuhtinskaja, Maria; Samoson, Ago; Witter, Raiker; Vilu, Raivo Journal of biosciences and medicines 2020 / p. 80-98 <https://doi.org/10.4236/jbm.2020.89007>

Coordination of zinc ions to the key proteins of neurodegenerative diseases: A[β], APP, [α]-synuclein and PrP

Tõugu, Vello; Palumaa, Peep Coordination chemistry reviews 2012 / p. 2219-2224 : ill https://www.researchgate.net/publication/236131300_Coordination_of_zinc_ions_to_the_key_proteins_of_neurodegenerative_diseases_Ab_APP_a-synuclein_and_PrP

Cu(II) partially protects three histidine residues and the N-terminus of amyloid-β peptide from diethyl pyrocarbonate (DEPC) modification

Friedemann, Merlin; Tõugu, Vello; Palumaa, Peep FEBS Open Bio 2020 / p. 1072-1081 <https://doi.org/10.1002/2211-5463.12857> [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>

Development of synthetic receptor-based sensors for detection of neurotrophic factor proteins

Kidakova, Anna; Boroznjak, Roman; Reut, Jekaterina; Öpik, Andres; Sõritski, Vitali Graduate Student Symposium on Molecular Imprinting 2019, Berlin, Germany, August 28-30, 2019 : Symposium Programme and Book of Abstracts 2019 / p. 31 <https://drive.google.com/file/d/1zR0jNBFlayQ3AdKgX4YrCztpE00iSex-/view>

Differential regulation of Bdnf expression in cortical neurons by class-selective histone deacetylase inhibitors

Koppel, Indrek; Timmusk, Tõnis Neuropharmacology 2013 / p. 106-115 : ill <https://doi.org/10.1016/j.neuropharm.2013.07.015> [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](#)

Discordance between amyloid-β PET and CSF biomarkers : clinical and pathophysiological consequences = Amüloid-β staatuse vastuolu PET-uuringul ning liikvorianalüüsil : kliiniline ja patofüsioloogiline tähendus

Reimand, Juhan 2021 <https://doi.org/10.23658/taltech.15/2021> https://www.ester.ee/record=b5431268*est <https://digikogu.taltech.ee/et/Item/d14a365f-fbfc-4595-923e-473262485fe2>

Eesti teadlaste leid võib sillutada teed uutmoodi depressiooniravile

novaator.err.ee 2025 <https://novaator.err.ee/1609664366/eesti-teadlaste-leid-voib-sillutada-teed-uumoodi-depressiooniravile>
<https://doi.org/10.1523/JNEUROSCI.0313-24.2025>

Effect of methionine-35 oxidation on the aggregation of amyloid- β peptide

Friedemann, Merlin; Helk, Eneken; Tiiman, Ann; Zovo, Kairit; Palumaa, Peep; Tõugu, Vello Biochemistry and biophysics reports 2015 / p. 94-99 : ill <http://dx.doi.org/10.1016/j.bbrep.2015.07.017>

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](#)

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/>

Estonian scientists' find could pave the way for new depression treatment

err.ee 2025 <https://news.err.ee/1609664915/estonian-scientists-find-could-pave-the-way-for-new-depression-treatment>
<https://doi.org/10.1523/JNEUROSCI.0313-24.2025>

Forkhead transcription factor FOXO3a levels are increased in Huntington disease because of overactivated positive autophagy loop

Kannike, Kaja; Sepp, Mari; Zuccato, Chiara; Cattaneo, Elena; Timmusk, Tõnis Journal of biological chemistry 2014 / p. 32845-32857 : ill <https://doi.org/10.1074/jbc.M114.612424> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Geenide sosinad: TalTechi teadus avab ukse ajutervise saladustesse

Vaaks, Eveliis Trialoog 2025 <https://trialoog.taltech.ee/geenide-sosinad-taltech-teadus-avab-ukse-ajutervise-saladustesse/>

Identification of two highly antigenic epitope markers predicting multiple sclerosis in optic neuritis patients

Sadam, Helle; Pihlak, Arno; Jaago, Mariliis; Pupina, Nadežda; Rähni, Annika; Toots, Maarja; Vaheri, Antti; Nieminen, Janne K.; Siuko, Mika; Tienari, Pentti J.; Palm, Kaia EBioMedicine 2021 / art. 103211, 8 p <https://doi.org/10.1016/j.ebiom.2021.103211> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Identifying the role of co-aggregation of Alzheimer's amyloid- β with amorphous protein aggregates of non-amyloid proteins

Wu, Jinming; Österlund, Nicklas; Wang, Hongzhi; Sternke-Hoffmann, R.; Pupart, Hegne; Ilag, Leopold L.; Gräslund, Astrid; Luo, Jinghui Cell Reports Physical Science 2022 / art. 101028 <https://doi.org/10.1016/j.xcrp.2022.101028> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

In vitro fibrillization of Alzheimer's amyloid- β peptide (1-42)

Tiiman, Ann; Krištal, Jekaterina; Palumaa, Peep; Tõugu, Vello AIP advances 2015 / p. 092401-1 - 092401-12 : ill <https://doi.org/10.1063/1.4921071> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Interactions of metal ions with peptides and proteins related to Alzheimer's disease = Metallioonide interaktsioonid Alzheimeri tõvega seotud peptiidide ja valkudega

Berntsson, Elina 2025 https://www.ester.ee/record=b5720764*est <https://doi.org/10.23658/taltech.5/2025>
<https://digikogu.taltech.ee/et/Item/ccd57cc9-0670-4c08-b9b8-9bc359475486>

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/JNEUROSCI.0197-21.2021> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Kuidas totter kolm botaanikatunnist viis Tõnis Timmusk teaduse elutööpreemia ja teenetemärgini

Timmusk, Tõnis postimees.ee 2024 [Kuidas totter kolm botaanikatunnist viis Tõnis Timmusk teaduse elutööpreemia ja teenetemärgini](https://postimees.ee/2024/04/11/kuidas-totter-kolm-botaanikatunnist-viis-tonis-timmusk-teaduse-elutoo-preemia-ja-teenetemargini)

Lithium ions display weak interaction with amyloid-beta (A β) peptides and have minor effects on their aggregation

Berntsson, Elina; Paul, Suman; Vosough, Faraz; Sholts, Sabrina B.; Jarvet, Jüri; Roos, Per M.; Barth, Andreas; Gräslund, Astrid; Wärmländer, Sebastian K.T.S. Acta biochimica Polonica 2021 / p. 169-179 https://doi.org/10.18388/abp.2020_5493 [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Mercury and Alzheimer's disease: Hg(II) ions display specific binding to the amyloid- β peptide and hinder its fibrillization

Wallin, Cecilia; Friedemann, Merlin; Sholts, Sabrina B.; Noormägi, Andra; Svantesson, Teodor; Järvet, Jüri; Roos, Per M.; Palumaa, Peep; Gräslund, Astrid; Wärmländer, Sebastian K.T.S. Biomolecules 2020 / art. 44, 23 p. : ill

Metal ratios as possible biomarkers for amyotrophic lateral sclerosis

Koski, Lassi; **Berntsson, Elina**; Vikström, Max; Wärmländer, Sebastian K.T.S.; Roos, Per M. Journal of trace elements in medicine and biology 2023 / art. 127163, 8 p. : ill <https://doi.org/10.1016/j.jtemb.2023.127163> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Metals in ALS TDP-43 pathology

Koski, Lassi; Ronnevi, Cecilia; **Berntsson, Elina**; Wärmländer, Sebastian K.T.S.; Roos, Per M. International Journal of Molecular Sciences 2021 / Art. nr. 12193 <https://doi.org/10.3390/ijms222212193> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Molecular profile of the rat peri-infarct region four days after stroke : Study with MANF

Teppo, Jaakko; Vaikkinen, Anu; Stratoulas, Vassilis; Mätlik, Kert; **Smolander, Olli-Pekka** Experimental neurology 2020 / art. 113288, 19 p. : ill <https://doi.org/10.1016/j.expneurol.2020.113288> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Molecularly imprinted polymer-based SAW sensor for label-free detection of cerebral dopamine neurotrophic factor protein

Kidakova, Anna; **Boroznjak, Roman**; **Reut, Jekaterina**; **Öpik, Andres**; Saarma, Mart; **Sõritski, Vitali** Sensors and actuators B : chemical 2020 / art. 127708, 8 p. : ill <https://doi.org/10.1016/j.snb.2020.127708> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Monitoring of A-beta fibrillization using an improved fluorimetric method

Karafin, Ann; **Palumaa, Peep**; **Tõugu, Vello** New Trends in Alzheimer and Parkinson Disorders : ADPD 2009 2009 / p. 255-259 <https://www.etis.ee/Portal/Publications/Display/979eb21d-601b-4aa1-b941-121eff184407>

Monitoring of amyloid-beta fibrillization using an improved fluorimetric method [Electronic resource]

Karafin, Ann; **Palumaa, Peep**; **Tõugu, Vello** Neurodegenerative diseases 2009 / S1, Alzheimer's and Parkinson's Diseases : Advances, Concepts and New Challenges, p. 799 [CD-ROM] <https://www.etis.ee/Portal/Publications/Display/979eb21d-601b-4aa1-b941-121eff184407>

Neurotrophic factors: new drugs for neurodegenerative diseases

Saarma, Mart Collegium Internationale Neuro-Psychopharmacologicum (CINP) : final program and book of abstracts : Central/East European CINP Regional Meeting : Tallinn, Estonia, October 5-7, 2006 2006 / p. 68

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

Närvikasvufaktorid ja neurodegeneratiivsete haiguste ravi : kommentaar Põhjamaade teaduspreemia pälvinud tööle

Saarma, Mart Tallinna Tehnikaülikooli aastaraamat 2009 2010 / lk. 199-204

Oxidation of Methionine-35 in Alzheimer's amyloid-beta peptide and the aggregation of the oxidized peptide

Friedemann, Merlin; **Helk, Eneken**; **Tiiman, Ann**; **Zovo, Kairit**; **Palumaa, Peep**; **Tõugu, Vello** SpringerPlus 2015 / p. 20, P13 <http://dx.doi.org/10.1186/2193-1801-4-S1-P13>

PET and CSF amyloid-β status are differently predicted by patient features: Information from discordant cases

Reimand, Juhan; **Wilde, Arno de**; **Teunissen, Charlotte E.**; **Zwan, Marissa** Alzheimer's Research & Therapy 2019 / art. 100, 16 p. : ill <https://doi.org/10.1186/s13195-019-0561-5> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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://fntdk.ut.ee/wp-content/uploads/2020/01/GSFMT2020.pdf>

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 at WOS](#) [Article at WOS](#)

Redox-active Cu(II)-Aβ causes substantial changes in axonal integrity in cultured cortical neurons in an oxidative-stress dependent manner

Howells, Claire; **Saar, Katrina**; Eaton, Emma; Ray, Shannon; **Palumaa, Peep** Experimental neurology 2012 / p. 499-506 : ill <https://www.sciencedirect.com/science/article/pii/S0014488612002373>

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

Silmatorkamatu DNA jupp võib kujutada võtit ajuhaiguste leevendamiseks

novaator.err.ee 2023 [Silmatorkamatu DNA jupp võib kujutada võtit ajuhaiguste leevendamiseks](#) [Небольшой участок ДНК может стать ключом к лечению заболеваний мозга](#)

Solid-state NMR backbone chemical shift assignments of α -synuclein amyloid fibrils at fast MAS regime

Toleikis, Zigmantas; Paluch, Piotr; Kuc, Ewelina; Petkus, Jana; Sulskis, Darius; **Org-Tago, Mai-Liis; Samoson, Ago**; Smirnovas, Vytautas; Stanek, Jan; Lends, Alons Biomolecular NMR assignments 2024 / p. 181-186 <https://doi.org/10.1007/s12104-024-10186-2> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Status epilepticus in 12-day-old rats leads to temporal lobe neurodegeneration and volume reduction : a histologic and MRI study

Nairismägi, Jaak; Pitkänen, Asla; Kettunen, Mikko; Kauppinen, Risto; Kubova, Hana Epilepsia 2006 / 3, p. 479-488 : ill <https://pubmed.ncbi.nlm.nih.gov/16529609/>

TAF4 controls differentiation of human neural progenitor cells through hTAF4-TAFH activity

Kazantseva, Jekaterina; Tints, Kairit; Neuman, Toomas; **Palm, Kaia** Journal of molecular neuroscience 2015 / p. 160-166 : ill <https://doi.org/10.1007/s12031-014-0295-6> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

The glycine arginine-rich domain of the RNA-binding protein nucleolin regulates its subcellular localization

Doron-Mandel, Ella; **Koppel, Indrek**; Abraham, Ofri; Rishal, Ida The EMBO Journal 2021 / art. e107158 <https://doi.org/10.15252/embj.2020107158> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

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

Toxicity of amyloid beta 1-40 and 1-42 on SH-SY5Y cell line

Krištal, Jekaterina; Bragina, Olga; Metsla, Kristel; Palumaa, Peep; Tõugu, Vello SpringerPlus 2015 / p. 21-22, P19 <http://dx.doi.org/10.1186/2193-1801-4-S1-P19>

Toxicity of amyloid- β peptides varies depending on differentiation route of SH-SY5Y cells

Krištal, Jekaterina; Metsla, Kristel; Bragina, Olga; Tõugu, Vello; Palumaa, Peep Journal of Alzheimer's disease 2019 / p. 879-887 <https://doi.org/10.3233/JAD-190705> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

TTÜ geenitehnoloogid otsivad ravimit Alzheimeri tõvele

Palumaa, Peep; Helme, Kristi Mente et Manu 2013 / lk. 14-16 : fot

Wearable m-assessment system for neurological disease patients

Kuusik, Alar; Alam, Muhammad Mahtab; Kask, Triin; Gross-Paju, Katrin Proceedings : IEEE 4th World Forum on Internet of Things 2018 / p. 201-206 : ill <https://doi.org/10.1109/WF-IoT.2018.8355165>

Why is amyloid- β PET requested after performing CSF biomarkers?

Reimand, Juhan; Groot, Colin; Teunissen, Charlotte E.; Windhorst, Albert D.; Boellaard, Ronald; Barkhof, Frederike; Nazarenko, Sergei; van der Flier, Wiesje M.; Scheltens, Philip; Ossenkoppele, Rik; Bouwman, Femke Journal of Alzheimer's disease 2020 / p. 559-569 <https://doi.org/10.3233/JAD-190836> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS