

LIST OF THE PUBLICATIONS
from studies by using human brain samples from the
Human Brain Tissue Bank and Laboratory, Semmelweis University

2 0 2 5

Odagaki Y, Kinoshita M, Honda M, Meana JJ, Callado LF, García-Sevilla JA, **Palkovits M**, Borroto-Escuela DO & Fuxe K (2025) Receptor-mediated Gi-3 activation in mammalian and human brain membranes: Reestablishment method and its application to nociceptin/orphanin FQ opioid peptide (NOP) receptor/Gi-3 interaction, *J Pharmacol Sci* **158**: 131-138

2 0 2 4

Odagaki Y, Kinoshita M, **Palkovits M**, Borroto-Escuela DO & Fuxe K (2024) Potential differences in receptor-mediated G-protein activation in postmortem human hippocampal membranes prepared from healthy controls and suicide victims, *Neuropsychopharmacol Rep* **44**: 762-773

Dóra F, Hajdu T, **Renner É**, Paál K, **Alpár A**, **Palkovits M**, Chinopoulos C & Dobolyi A (2024) Reverse phase protein array-based investigation of mitochondrial genes reveals alteration of glutaminolysis in the parahippocampal cortex of people who died by suicide, *Transl Psychiatry* **14**: 479 (14 pages), doi: 10.1038/s41398-024-03137-x

Dobolyi A, Cservedák M, Bagó AG, Chen C, Stepanova A, Paal K, Lee J, **Palkovits M**, Hudson G & Chinopoulos C (2024) Cell-specific expression of key mitochondrial enzymes limits OXPHOS in astrocytes of the adult human neocortex and hippocampal formation, *Commun Biol* **7**: 1045 (11 pages), doi:10.1038/s42003-024-06751-z

Sepp M, Leiss K, Murat F, Okonechnikov K, Joshi P, Leushkin E, Spänig L, Mbengue N, Schneider C, Schmidt J, Trost N, Schauer M, Khaitovich P, Lisgo S, **Palkovits M**, Giere P, Kutscher LM, Anders S, Cardoso-Moreira M, Sarropoulos I, Pfister SM & Kaessmann H (2024) Cellular development and evolution of the mammalian cerebellum, *Nature* **625**: 788-796

Barde S, Aguila J, Zhong W, Solarz A, Mei I, Prud'homme J, **Palkovits M**, Turecki G, Mulder J, Uhlén M, Nagy C, Mechawar N, Hedlund E & Hökfelt T (2024) Substance P, NPY, CCK and their receptors in five brain regions in major depressive disorder with transcriptomic analysis of locus coeruleus neurons, *Eur Neuropsychopharmacol* **78**: 54-63

2 0 2 3

Borbély É, Kecskés A, Kun J, Kepe E, Fülöp B, Kovács-Rozmer K, Scheich B, **Renner É**, **Palkovits M** & Helyes Z (2023) Hemokinin-1 is a mediator of chronic restraint stress-induced pain, *Sci Rep* **13**: 20030, doi: 10.1038/s41598-023-46402-7

Samardžija B, Juković M, Zaharija B, **Renner É**, **Palkovits M** & Bradshaw NJ (2023) Co-aggregation and parallel aggregation of specific proteins in major mental illness, *Cells* **12**: 1848 (16 pages), doi: 10.3390/cells12141848

Vas S, **Papp RS**, Könczöl K, Bogáthy E, Papp N, Ádori C, Durst M, Sípó K, Ocskay K, Farkas I, Bálint F, Ferenci S, Török B, Kovács A, Szabó E, Zelena D, Kovács KJ, Földes A, Kató E, Köles L, Bagdy G, **Palkovits M** & Tóth ZE (2023) Prolactin-releasing peptide contributes to

stress-related mood disorders and inhibits sleep/mood regulatory melanin-concentrating hormone neurons in rats, *J Neurosci* **43**: 846-862

2022

Kovács T, Szinyákovich J, Billes V, Murányi G, Varga VB, Bjelik A, Légrádi Á, Szabó M, Sándor S, Kubinyi E, Szekeres-Paracki C, Szocsics P, Lőke J, Mulder J, Gulyás B, **Renner É, Palkovits M**, Gulya K, Maglóczky Z & Vellai T (2022) A conserved MTMR lipid phosphatase increasingly suppresses autophagy in brain neurons during aging, *Sci Rep* **12**: 21817 (18 pages), doi: 10.1038/s41598-022-24843-w

Renner É, Dóra F, Oszwald E, Dobolyi Á & **Palkovits M** (2022) Elevated glucagon-like peptide-1 receptor level in the paraventricular hypothalamic nucleus of type 2 diabetes mellitus patients, *Int J Mol Sci* **23**: 15945 (15 pages), doi: 10.3390/ijms232415945

Toomey CE, Heywood WE, Evans JR, Lachica J, Pressey SN, Foti SC, Al Shahrani M, D'Sa K, Hargreaves IP, Heales S, Orford M, Troakes C, Attems J, Gelpi E, **Palkovits M**, Lashley T, Gentleman SM, Revesz T, Mills K & Gandhi S (2022) Mitochondrial dysfunction is a key pathological driver of early stage Parkinson's, *Acta Neuropathol Commun* **10**: 134 (25 pages), doi: 10.1186/s40478-022-01424-6

Zhong W, Barde S, Mitsios N, Adori C, Oksvold P, Feilitzén KV, O'Leary L, Csiba L, Hortobágyi T, Szocsics P, Mechawar N, Maglóczky Z, **Renner É, Palkovits M**, Uhlén M, Mulder J & Hökfelt T (2022) The neuropeptide landscape of human prefrontal cortex, *Proc Natl Acad Sci U S A* **119**: e2123146119 (12 pages), doi: 10.1073/pnas.2123146119

Hardwick SA, Hu W, Joglekar A, Fan L, Collier PG, Foord C, Balacco J, Lanjewar S, Sampson MM, Koopmans F, Prjibelski AD, Mikheenko A, Belchikov N, Jarroux J, Lucas AB, **Palkovits M**, Luo W, Milner TA, Ndhlovu LC, Smit AB, Trojanowski JQ, Lee VMY, Fedrigo O, Sloan SA, Tombácz D, Ross ME, Jarvis E, Boldogkői Z, Gan L & Tilgner HU (2022) Single-nuclei isoform RNA sequencing unlocks barcoded exon connectivity in frozen brain tissue, *Nat Biotechnol* **40**: 1082-1092, doi: 10.1038/s41587-022-01231-3

Dóra F, Renner É, Keller D, **Palkovits M** & Dobolyi Á (2022) Transcriptome profiling of the dorsomedial prefrontal cortex in suicide victims, *Int J Mol Sci* **23**: 7067 (30 pages), doi: 10.3390/ijms23137067

Kormos V, Kecskés A, Farkas J, Gaszner T, Csernus V, Alomari A, Hegedüs D, **Renner É, Palkovits M**, Zelena D, Helyes Z, Pintér E & Gaszner B (2022) Peptidergic neurons of the Edinger-Westphal nucleus express TRPA1 ion channel that is downregulated both upon chronic variable mild stress in male mice and in humans who died by suicide, *J Psychiatry Neurosci* **47**: E162-E175, doi: 10.1503/jpn.210187

Vitale-Cross L, Szalayova I, Scoggins A, **Palkovits M** & Mezey E (2022) SARS-CoV-2 entry sites are present in all structural elements of the human glossopharyngeal and vagal nerves: Clinical implications, *eBioMedicine* **78**: 103981 (12 pages), doi: 10.1016/j.ebiom.2022.103981

2021

- Samardžija B, Pavešić Radonja A, Zaharija B, Bergman M, **Renner É, Palkovits M**, Rubeša G & Bradshaw NJ (2021) Protein aggregation of NPAS3, implicated in mental illness, is not limited to the V304I mutation, *J Pers Med* **11**: 1070 (17 pages), doi: 10.3390/jpm11111070
- Velásquez E, Szeitz B, Gil J, Rodriguez J, **Palkovits M, Renner É**, Hortobágyi T, Döme P, Nogueira FCS, Marko-Varga G, Domont GB & Rezeli M (2021) Topological dissection of proteomic changes linked to the limbic stage of Alzheimer's disease, *Front Immunol* **12**: 750665 (17 pages), doi: 10.3389/fimmu.2021.750665
- Hevesi Z, Zelena D, Romanov RA, Hanics J, Ignác A, Zambon A, Pollak DD, Lendvai D, Schlett K, **Palkovits M**, Harkany T, Hökfelt TGM & Alpár A (2021) Secretagogin marks amygdaloid PKC δ interneurons and modulates NMDA receptor availability, *Proc Natl Acad Sci U S A* **118**: e1921123118 (8 pages), doi: 10.1073/pnas.1921123118
- Mezey É, Szalayovaa I, Hogden CT, Brady A, Dósa Á, Sótónyi P & **Palkovits M** (2021) An immunohistochemical study of lymphatic elements in the human brain, *Proc Natl Acad Sci USA* **118**: e2002574118 (12 pages), doi: 10.1073/pnas.2002574118

2020

- Kecskés A, Pohóczky K, Kecskés M, Varga ZV, Kormos V, Szőke É, Henn-Mike N, Fehér M, Kun J, Gyenesei A, **Renner É, Palkovits M**, Ferdinandy P, Ábrahám IM, Gaszner B & Helyes Zs (2020) Characterization of neurons expressing the novel analgesic drug target somatostatin receptor 4 in mouse and human brains, *Int J Mol Sci* **21**: 7788 (21 pages), doi: 10.3390/ijms21207788
- Dobolyi A, Bago A, **Palkovits M**, Nemeria NS, Jordan F, Doczi J, Ambrus A, Adam-Vizi V & Chinopoulos C (2020) Exclusive neuronal detection of KGDHC-specific subunits in the adult human brain cortex despite pancellular protein lysine succinylation, *Brain Struct Funct* **225**: 639-667

2019

- Kardos J, Dobolyi Á, Szabó Z, Simon Á, Lourmet G, **Palkovits M** & Héja L (2019) Molecular plasticity of the nucleus accumbens revisited-astrocytic waves shall rise, *Mol Neurobiol* **56**: 7950-7965
- Mendonça CF, Kuras M, Nogueira FCS, Plá I, Hortobágyi T, Csiba L, **Palkovits M, Renner É**, Döme P, Marko-Varga G, Domont GB & Rezeli M (2019) Proteomic signatures of brain regions affected by tau pathology in early and late stages of Alzheimer's disease, *Neurobiol Dis* **130**: 104509 (19 pages), doi: 10.1016/j.nbd.2019.104509
- Tombácz D, Maróti Z, Kalmár T, **Palkovits M**, Snyder M & Boldogkői Z (2019) Whole-exome sequencing data of suicide victims who had suffered from major depressive disorder, *Sci Data* **6**: 190010 (10 pages), doi: 10.1038/sdata.2019.10

2018

- Alpár A, Zahola P, Hanics J, Hevesi Z, Korchynska S, Benevento M, Pifl C, Zachar G, Perugini J, Severi I, Leitgeb P, Bakker J, Miklosi AG, Tretiakov E, Keimpema E, Arque G, Tasan RO, Sperk G, Malenczyk K, Máté Z, Erdélyi F, Szabó G, Lubec G, **Palkovits M**, Giordano A, Hökfelt TG, Romanov RA, Horvath TL & Harkany T (2018) Hypothalamic CNTF volume

transmission shapes cortical noradrenergic excitability upon acute stress, *EMBO J* **37**: e100087 (23 pages)

Martin NA, Nawrocki A, Molnar V, Elkjaer ML, Thygesen EK, **Palkovits M**, Acs P, Sejbaek T, Nielsen HH, Hegedus Z, Sellebjerg F, Molnar T, Barbosa EGV, Alcaraz N, Gallyas F Jr, Svenningsen AF, Baumbach J, Lassmann H, Larsen MR & Illes Z (2018) Orthologous proteins of experimental de- and remyelination are differentially regulated in the CSF proteome of multiple sclerosis subtypes, *PLoS One* **13**: e0202530 (26 pages)

Pálvölgyi A, Simpson J, Bodnár I, Bíró J, **Palkovits M**, Radovits T, Skehel P & Antoni FA (2018) Auto-inhibition of adenylyl cyclase 9 (AC9) by an isoform-specific motif in the carboxyl-terminal region, *Cell Signal* **51**: 266-275

2017

Albert M, Barrantes-Freer A, Lohrberg M, Antel JP, Prineas JW, **Palkovits M**, Wolff JR, Brück W & Stadelmann C (2017) Synaptic pathology in the cerebellar dentate nucleus in chronic multiple sclerosis, *Brain Pathol* **27**: 737-747

Tombácz D, Maróti Z, Kalmár T, Csabai Zs, Balázs Zs, Takahashi S, **Palkovits M**, Snyder M & Boldogkői Zs (2017) High-coverage whole-exome sequencing identifies candidate genes for suicide in victims with major depressive disorder, *Sci Rep* **7**: 7106 (11 pages)

Roy B, Wang Q, **Palkovits M**, Faludi G & Dwivedi Y (2017) Altered miRNA expression network in locus coeruleus of depressed suicide subjects, *Sci Rep* **7**: 4387 (15 pages)

2016

Barde S, Rüegg J, Prud'homme J, Ekström TJ, **Palkovits M**, Turecki G, Bagdy G, Ihnatko R, Theodorsson E, Juhasz G, Diaz-Heijtz R, Mechawar N & Hökfelt TGM (2016) Alterations in the neuropeptide galanin system in major depressive disorder involve levels of transcripts, methylation, and peptide, *P Natl Acad Sci USA* **113**: E8472-E8481

Aschrafi A, Verheijen JM, Gordebeke PM, Olde Loohuis NF, Menting K, Jager A, **Palkovits M**, Geenen B, Kos A, Martens GJ, Glennon JC, Kaplan BB, Gaszner B & Kozicz T (2016) MicroRNA-326 acts as a molecular switch in the regulation of midbrain urocortin 1 expression, *J Psychiatry Neurosci* **41**: 342-353

2015

Hayley S, Du L, Litteljohn D, **Palkovits M**, Faludi G, Merali Z, Poulter MO & Anisman H (2015) Gender and brain regions specific differences in brain derived neurotrophic factor protein levels of depressed individuals who died through suicide, *Neurosci Lett* **600**: 12-16

Amy M, Staehlin O, René F, Blasco H, Marouillat S, Daoud H, Vourc'h P, Gordon PH, Camu W, Corcia P, Loeffler JP, **Palkovits M**, Sommer WH & Andres CR (2015) A common functional allele of the Nogo receptor gene, reticulon 4 receptor (RTN4R), is associated with sporadic amyotrophic lateral sclerosis in a French population, *Amyotroph Lat Scl Fr* **16**: 490-496

Durrenberger PF, Fernando FS, Kashefi SN, Bonnert TP, Seilhean D, Nait-Oumesmar B, Schmitt A, Gebicke-Haerter PJ, Falkai P, Grünblatt E, **Palkovits M**, Arzberger T, Kretschmar H, Dexter DT & Reynolds R (2015) Common mechanisms in neurodegeneration and

neuroinflammation: a BrainNet Europe gene expression microarray study, *J Neural Transm* **122**: 1055-1068

Ádori C, Glück L, Barde S, Yoshitake T, Kovacs GG, Mulder J, Maglóczy Z, Havas L, Bölskei K, Mitsios N, Uhlén M, Szolcsányi J, Kehr J, Rönnbäck A, Schwartz T, Rehfeld JF, Harkany T, **Palkovits M**, Schulz S & Hökfelt T (2015) Critical role of somatostatin receptor 2 in the vulnerability of the central noradrenergic system: new aspects on Alzheimer's disease, *Acta Neuropathol* **129**: 541-563

Dobolyi A, Bagó AG, Gál A, Molnár MJ, **Palkovits M**, Adam-Vizi V & Chinopoulos C (2015) Localization of SUCLA2 and SUCLG2 subunits of succinyl CoA ligase within the cerebral cortex suggests the absence of matrix substrate-level phosphorylation in glial cells of the human brain, *J Bioenerg Biomembr* **47**: 33-41

Dobolyi A, Ostergaard E, Bagó AG, Dóczi T, **Palkovits M**, Gál A, Molnár MJ, Adam-Vizi V & Chinopoulos C (2015) Exclusive neuronal expression of SUCLA2 in the human brain, *Brain Struct Funct* **220**: 135-151

2014

Du L, Merali Z, Poulter MO, **Palkovits M**, Faludi G & Anisman H (2014) Catechol-O-methyltransferase Val158Met polymorphism and altered COMT gene expression in the prefrontal cortex of suicide brains, *Prog Neuropsychopharmacol Biol Psychiatry* **50**: 178-183

Fuxe K, Borroto-Escuela DO, Romero-Fernandez W, **Palkovits M**, Tarakanov AO, Ciruela F & Agnati LF (2014) Moonlighting proteins and protein-protein interactions as neurotherapeutic targets in the G protein-coupled receptor field, *Neuropsychopharmacology* **39**: 131-155

2013

Pandey GN, Rizavi HS, Ren X, Dwivedi Y & **Palkovits M** (2013) Region-specific alterations in glucocorticoid receptor expression in the postmortem brain of teenage suicide victims, *Psychoneuroendocrinology* **38**: 2628-2639

Le Maître E, Barde SS, **Palkovits M**, Diaz-Heijtz R & Hökfelt TG (2013) Distinct features of neurotransmitter systems in the human brain with focus on the galanin system in locus coeruleus and dorsal raphe, *P Natl Acad Sci USA* **110**: E536-E545, doi: 10.1073/pnas.1221378110

Borroto-Escuela DO, Romero-Fernandez W, Garriga P, Ciruela F, Narvaez M, Tarakanov AO, **Palkovits M**, Agnati LF & Fuxe K (2013) G Protein-Coupled Receptor Heterodimerization in the Brain, *Method Enzymol* **521**: 281-294 (Chapter Fifteen), doi: 10.1016/B978-0-12-391862-8.00015-6

2012

Kékesi KA, Juhász G, Simor A, Gulyácssy P, Szegő ÉM, Hunyadi-Gulyás É, Darula Z, Medzihradszky KF, **Palkovits M**, Penke B & Czurkó A (2012) Altered functional protein networks in the prefrontal cortex and amygdala of victims of suicide, *Plos One* **7**: e50532, 18 p. doi:10.1371/journal.pone.0050532

Durrenberger PF, Fernando FS, Magliozzi R, Kashefi SN, Bonnert TP, Ferrer I, Seilhean D, Nait-

- Oumesmar B, Schmitt A, Gebicke-Haerter PJ, Falkai P, Grünblatt E, **Palkovits M**, Parchi P, Capellari S, Arzberger T, Kretzschmar H, Roncaroli F, Dexter DT & Reynolds R (2012) Selection of novel reference genes for use in the human central nervous system: a BrainNet Europe Study, *Acta Neuropathol* **124**: 893-903
- Zhurov V, Stead JD, Merali Z, **Palkovits M**, Faludi G, Schild-Poulter C, Anisman H & Poulter MO (2012) Molecular pathway reconstruction and analysis of disturbed gene expression in depressed individuals who died by suicide, *PLoS One* **7**: e47581, doi: 10.1371/journal.pone.0047581
- Tofighi R, Barde S, **Palkovits M**, Höög A, Hökfelt T, Ceccatelli S & Hulting AL (2012) Galanin and its three receptors in human pituitary adenoma, *Neuropeptides* **46**: 195-201
- Kalló I, Mohácsik P, Vida B, Zeöld A, Bardóczi Z, Zavacki AM, Farkas E, Kádár A, Hrabovszky E, Arrojo e Drigo R, Dong L, Barna L, **Palkovits M**, Borsay BA, Herczeg L, Lechan RM, Bianco AC, Liposits Z, Fekete C & Gereben B (2012) A novel pathway regulates thyroid hormone availability in rat and human hypothalamic neurosecretory neurons, *PLoS One* **7**: e37860 (page 1-16)
- Schéle E, Fekete C, Egri P, Füzesi T, **Palkovits M**, Keller E, Liposits Z, Gereben B, Karlsson-Lindahl L, Shao R & Jansson JO (2012) Interleukin-6 receptor α is co-localised with melanin-concentrating hormone in human and mouse hypothalamus, *J Neuroendocrinol* **24**: 930-943
- Farkas S, Nagy K, Jia Z, Harkany T, **Palkovits M**, Donohou SR, Pike VW, Halldin C, Mathe D, Csiba L & Gulyas B (2012) The decrease of dopamine D2/D3 receptor densities in the putamen and nucleus caudatus goes parallel with maintained levels of CB1 cannabinoid receptors in Parkinson's disease: A preliminary autoradiographic study with the selective dopamine D2/D3 antagonist [3H]raclopride and the novel CB1 inverse agonist [125I]SD7015, *Brain Res Bull* **87**: 504-510
- Farkas S, Nagy K, **Palkovits M**, Kovács GG, Jia Z, Donohue S, Pike V, Halldin C, Máthé D, Harkany T, Gulyás B & Csiba L (2012) [125I]SD-7015 reveals fine modalities of CB1 cannabinoid receptor density in the prefrontal cortex during progression of Alzheimer's disease, *Neurochem Int* **60**: 286-291
- Bloem B, Xu L, Morava E, Faludi G, **Palkovits M**, Roubos EW & Kozicz T (2012) Sex-specific differences in the dynamics of cocaine- and amphetamine-regulated transcript and nesfatin-1 expressions in the midbrain of depressed suicide victims vs. controls, *Neuropharmacology* **62**: 297-303
- Stacey D, Bilbao A, Maroteaux M, Jia T, Easton AC, Longueville S, Nymberg C, Banaschewski T, Barker GJ, Büchel C, Carvalho F, Conrod PJ, Desrivières S, Fauth-Bühler M, Fernandez-Medarde A, Flor H, Gallinat J, Garavan H, Bokde AL, Heinz A, Ittermann B, Lathrop M, Lawrence C, Loth E, Lourdasamy A, Mann KF, Martinot JL, Nees F, **Palkovits M**, Paus T, Pausova Z, Rietschel M, Ruggeri B, Santos E, Smolka MN, Staehlin O, Jarvelin MR, Elliott P, Sommer WH, Mameli M, Müller CP, Spanagel R, Girault JA, Schumann G & the IMAGEN Consortium (2012) *RASGRF2* regulates alcohol-induced reinforcement by influencing mesolimbic dopamine neuron activity and dopamine release, *P Natl Acad Sci USA* **109**: 21128-21133, doi: 10.1073/pnas.1211844110

Schumann G, Coin LJ, Lourdasamy A, Charoen P, Berger KH, Stacey D, Desrivieres S, Aliev FA, Khan AA, Amin N, Aulchenko YS, Bakalkin G, Bakker SJ, Balkau B, Beulens JW, Bilbao A, de Boer RA, Beury D, Bots ML, Breetvelt EJ, Cauchi S, Cavalcanti-Proença C, Chambers JC, Clarke TK, Dahmen N, de Geus EJ, Dick D, Ducci F, Easton A, Edenberg HJ, Esk T, Fernández-Medarde A, Foroud T, Freimer NB, Girault JA, Grobbee DE, Guarrera S, Gudbjartsson DF, Hartikainen AL, Heath AC, Hesselbrock V, Hofman A, Hottenga JJ, Isohanni MK, Kaprio J, Khaw KT, Kuehnel B, Laitinen J, Lobbens S, Luan J, Mangino M, Maroteaux M, Matullo G, McCarthy MI, Mueller C, Navis G, Numans ME, Núñez A, Nyholt DR, Onland-Moret CN, Oostra BA, O'Reilly PF, **Palkovits M**, Penninx BW, Polidoro S, Pouta A, Prokopenko I, Ricceri F, Santos E, Smit JH, Soranzo N, Song K, Sovio U, Stumvoll M, Surakk I, Thorgeirsson TE, Thorsteinsdottir U, Troakes C, Tyrfingsson T, Tönjes A, Uitterwaal CS, Uitterlinden AG, van der Harst P, van der Schouw YT, Staehlin O, Vogelzangs N, Vollenweider P, Waeber G, Wareham NJ, Waterworth DM, Whitfield JB, Wichmann EH, Willemsen G, Witteman JC, Yuan X, Zhai G, Zhao JH, Zhang W, Martin NG, Metspalu A, Doering A, Scott J, Spector TD, Loos RJ, Boomsma DI, Mooser V, Peltonen L, Stefansson K, van Duijn CM, Vineis P, Sommer WH, Kooner JS, Spanagel R, Heberlein UA, Jarvelin MR & Elliott P (2011) Genome-wide association and genetic functional studies identify autism susceptibility candidate 2 gene (AUTS2) in the regulation of alcohol consumption, *P Natl Acad Sci USA* **108**: 7119-7124, doi: 10.1073/pnas.1017288108

Kovacs GG, Molnár K, László L, Ströbel T, Botond G, Hönigschnabl S, Reiner-Concin A, **Palkovits M**, Fischer P & Budka H (2011) A peculiar constellation of tau pathology defines a subset of dementia in the elderly, *Acta Neuropathol* **122**: 205-222

Kovacs Z, Juhasz G, **Palkovits M**, Dobolyi A & Kekesi KA (2011) Area, age and gender dependence of the nucleoside system in the brain: a review of current literature, *Curr Top Med Chem* **11**: 1012-1033

Kozicz T, Bittencourt JC, May PJ, Reiner A, Gamlin PDR, **Palkovits M**, Horn AKE, Toledo CAB & Ryabinin AE (2011) The Edinger-Westphal nucleus: A historical, structural, and functional perspective on a dichotomous terminology, *J Comp Neurol* **519**: 1413-1434

Brun-Heath I, Ermonval M, Chabrol E, Xiao J, **Palkovits M**, Lyck R, Miller F, Couraud P-O, Mornet E & Fonta C (2011) Differential expression of the bone and the liver tissue non-specific alkaline phosphatase isoforms in brain tissues, *Cell Tissue Res* **343**: 521-536

Négyessy L, Xiao J, Kántor O, Kovács GG, **Palkovits M**, Dóczi TP, Renaud L, Baksa G, Glasz T, Ashaber M, Barone P & Fonta C (2011) Layer-specific activity of tissue non-specific alkaline phosphatase in the human neocortex, *Neuroscience* **172**: 406-418

2010

Sommer WH, Lidström J, Sun H, Passer D, Eskay R, Parker SCJ, Witt SH, Zimmermann US, Nieratschker V, Rietschel M, Margulies EH, **Palkovits M**, Laucht M & Heilig M (2010) Human NPY promoter variation rs16147:T>C as a moderator of prefrontal NPY gene expression and negative affect, *Hum Mutat* **31**: E1594-E1608

Poulter MO, Du L, Zhurov V, **Palkovits M**, Faludi G, Merali Z & Anisman H (2010) Altered organization of GABAA receptor mRNA expression in the depressed suicide brain, *Front Mol Neurosci* **3**: 3 (10 pages)

Durrenberger PF, Fernando S, Kashefi SN, Ferrer I, Hauw J-J, Seilhean D, Smith C, Walker R, Al-Sarraj S, Troakes C, **Palkovits M**, Kasztner M, Huitinga I, Arzberger T, Dexter DT, Kretzschmar H & Reynolds R (2010) Effects of antemortem and postmortem variables on human brain mRNA quality: a BrainNet Europe study, *J Neuropath Exp Neur* **69**: 70-81

2009

Bago AG, Dimitrov E, Saunders R, Seress L, **Palkovits M**, Usdin TB & Dobolyi A (2009) Parathyroid hormone 2 receptor and its endogenous ligand tuberoinfundibular peptide of 39 residues are concentrated in endocrine, viscerosensory and auditory brain regions in macaque and human, *Neuroscience* **162**: 128-147

2008

de Mota N, Iturrioz X, Claperon C, Bodineau L, Fassot C, Roques BP, **Palkovits M** & Llorens-Cortes C (2008) Human brain aminopeptidase A: biochemical properties and distribution in brain nuclei, *J Neurochem* **106**: 416-428

Molnár T, Barabás P, Héja L, Kútiné Fekete E, Lasztóczy B, Szabó P, Nyitrai G, Simon-Trompler E, Hajós F, **Palkovits M** & Kardos J (2008) g-Hydroxybutyrate binds to the synaptic site recognizing succinate monocarboxylate: A new hypothesis on astrocyte–neuron interaction via the protonation of buccinate, *J Neurosci Res* **86**: 1566-1576

Bell JE, Alafuzoff I, Al-Sarraj S, Arzberger T, Bogdanovic N, Budka H, Dexter DT, Falkai P, Ferrer I, Gelpi E, Gentleman SM, Giaccone G, Huitinga I, Ironside JW, Klioueva N, Kovacs GG, Meyrenot D, **Palkovits M**, Parchi P, Patsuoris E, Reynolds R, Riederer P, Roggendorf W, Seilhean D, Schmitt A, Schmitz P, Streichenberger N, Schwalber A & Kretzschmar H (2008) Management of a twenty-first century brain bank: experience in the BrainNet Europe consortium, *Acta Neuropathol* **115**: 497-507

Palkovits M, Harvey-White J, Liu J, Kovacs ZS, Bobest M, Lovas G, Bagó AG & Kunos G (2008) Regional distribution and effects of postmortal delay on endocannabinoid content of the human brain, *Neuroscience* **152**: 1032-1039

Kozicz T, Tilburg-Ouwens D, Faludi G, **Palkovits M** & Roubos E (2008) Gender-related urocortin 1 and brain-derived neurotrophic factor expression in the adult human midbrain of suicide victims with major depression, *Neuroscience* **152**: 1015-1023

Anisman H, Du L, **Palkovits M**, Faludi G, Kovacs GG, Szontagh-Kishazi P, Merali Z & Poulter MO (2008) Serotonin receptor subtype and p11 mRNA expression in stress-relevant brain regions of suicide and control subjects, *J Psychiatr Neurosci* **33**: 131-141

Bagó AG, **Palkovits M**, Usdin TB, Seress L & Dobolyi Á (2008) Evidence for the expression of parathyroid hormone 2 receptor in the human brainstem, *Clin Neurosci/Idégyógy Sz* **61**: 123-126

Ludányi A, Eröss L, Czirják S, Vajda J, Halász P, Watanabe M, **Palkovits M**, Maglóczy Z, Freund TF & Katona I (2008) Downregulation of the CB1 cannabinoid receptor and related molecular elements of the endocannabinoid system in epileptic human hippocampus, *J Neurosci* **28**: 2976-2990

2007

- Landgraf P, Rusu M, Sheridan R, Sewer A, Iovino N, Aravin A, Pfeffer S, Rice A, Kamphorst AO, Landthaler M, Lin C, Socci ND, Hemida L, Fulci V, Chiaretti S, Foa R, Schliwka J, Fuchs U, Novosel A, Müller R-M, Schermer B, Bissels U, Inman J, Phan Q, Chien M, Weir DB, Choksi R, De Vita G, Frezzetti D, Trompeter H-I, Hornung V, Teng G, Hartmann G, **Palkovits M**, Di Lauro R, Wernet P, Macino G, Rogler CE, Nagle JW, Ju J, Papavasiliou FN, Benzing T, Lichter P, Tam W, Brownstein MJ, Bosio A, Borkhardt A, Russo JJ, Sander C, Zavolan M & Tuschl T (2007) A mammalian microRNA expression atlas based on small RNA library sequencing, *Cell* **129**: 1401-1414
- Németh AL, Medveczky P, Tóth J, Siklódi E, Schlett K, Patthy A, **Palkovits M**, Ovádi J, Tökési N, Németh P, Szilágyi L & Gráf L (2007) Unconventional translation initiation of human trypsinogen 4 at a CUG codon with an N-terminal leucine. A possible means to regulate gene expression, *FEBS Journal* **274**: 1610-1620
- Molnár T, Kútiné Fekete E, Kardos J & **Palkovits M** (2007) Characterization of specific succinate binding site in brain synaptic membranes, *Clin Neurosci/Ideggyógy Sz* **60**: 201-204
- Gallatz K, Medveczky P, Németh P, Szilágyi L, Gráf L & **Palkovits M** (2007) Human trypsin(ogen) 4-like immunoreactivity in the white matter of the cerebral cortex and the spinal cord, *Clin Neurosci/Ideggyógy Sz* **60**: 118-123
- Tóth J, Siklódi E, Medveczky P, Gallatz K, Németh P, Szilágyi L, Gráf L & **Palkovits M** (2007) Regional distribution of human trypsinogen 4 in human brain at mRNA and protein level, *Neurochem Res* **32**: 1423-1433
- Hansen A, Chen Y, Inman JM, Phan QN, Qi Z-Q, Xiang CC, **Palkovits M**, Cherman N, Kuznetsov SA, Robey PG, Mezey E & Brownstein MJ (2007) Sensitive and specific method for detecting G protein-coupled receptor mRNAs, *Nature Methods* **4**: 35-37
- Gaszner B, Korosi A, **Palkovits M**, Roubos EW & Kozicz T (2007) Neuropeptide Y activates urocortin 1 neurons in the nonpreganglionic Edinger-Westphal nucleus, *J Comp Neurol* **500**: 708-719

2006

- Young WS, Li J, Wersinger SR & **Palkovits M** (2006) The vasopressin 1b receptor is prominent in the hippocampal area CA2 where it is unaffected by restraint stress or adrenalectomy, *Neuroscience* **143**: 1031-1039
- Kékesi KA, Kovács Zs, Szilágyi N, Bobest M, Szikra T, Dobolyi Á, Juhász G & **Palkovits M** (2006) Concentration of nucleosides and related compounds in cerebral and cerebellar cortical areas and white matter of the human brain, *Cell Mol Neurobiol* **26**: 833-844
- Molnár T, Kútiné Fekete E, Kardos J, Simon-Trompler E, **Palkovits M** & Emri Zs (2006) Metabolic GHB precursor succinate binds to GABA_B receptors: Characterization of human basal ganglia areas nucleus accumbens and globus pallidus, *J Neurosci Res* **84**: 27-36
- Dwivedi Y, Mondal AC, Rizavi HS, Faludi G, **Palkovits M**, Sarosi A, Conley RR & Pandey GN (2006) Differential and brain region-specific regulation of Rap-1 and Epac in depressed suicide victims, *Arch Gen Psychiatry* **63**: 639-648

Pandey GN, Dwivedi Y, Ren Y, Rizavi HS, Faludi G, Sarosi A & **Palkovits M** (2006) Regional distribution and relatively abundance of serotonin_{2c} receptors in human brain: Effect of suicide, *Neurochem Res* **31**: 167-176

Merali Z, Kent M, Du L, Hrdina P, **Palkovits M**, Faludi G, Poulter MO, Bédard T & Anisman H (2006) Corticotropin-releasing hormone, arginine vasopressin, gastrin-releasing peptide, and neuromedin B alteration in stress-relevant brain regions of suicides and control subjects, *Biol Psychiatry* **59**: 594-602

2005

Becker JS, Zorly M, Becker JS, Pickhardt C, Damoc E, Juhacz G, **Palkovits M** & Przybylski M (2005) Determination of phosphorus-, copper-, and zinc-containing human brain proteins by LA-ICPMS and MALDI-FTICR-MS, *Anal Chem* **77**: 5851-5860

2004

Merali Z, Du L, Hrdina P, **Palkovits M**, Faludi G, Poulter MO & Anisman H (2004) Dysregulation in the suicide brain: mRNA expression of corticotropin-releasing hormone receptors and GABA-A receptor subunits in frontal cortical brain region, *J Neurosci* **24**: 1478-1485

Dwivedi Y, Rizavi HS, Shukla PK, Lyons J, Faludi G, **Palkovits M**, Sarosi A, Conley RR, Roberts RC, Tamminga CA & Pandey GN (2004) Protein kinase A in postmortem brain of depressed suicide victims: altered expression of specific regulatory and catalytic subunits, *Biol Psychiatry* **55**: 234-243

Witta J, **Palkovits M**, Rosenberger J & Cox BM (2004) Distribution of nociceptin/orphanin FQ in adult human brain, *Brain Res* **997**: 24-29

2002

Du L, Faludi G, **Palkovits M**, Sótonyi P, Bakish D & Hrdina PD (2002) High activity-related allele of MAO-A gene associated with depressed suicide in males, *NeuroReport* **13**: 1195-1198

2000

Lovas G, Szilágyi N, Majtényi K, **Palkovits M** & Komoly S (2000) Axonal changes in chronic demyelinated cervical spinal cord plaques, *Brain* **123**: 308-317

Du L, Faludi G, **Palkovits M**, Bakish D & Hrdina PD (2000) Tryptophan hydroxylase gene 218A/C polymorphism is not associated with depressed suicide, *Int J Neuropsychopharmacol* **3**: 215-220

Faludi G, Du L, **Palkovits M**, Antal B, Sótonyi P & Hrdina PD (2000) Serotonin transporter, serotonin-2A receptor and tryptophan hydroxylase gene polymorphisms in depressed suicide victims, *Neurobiology (Bp)* **8**: 269-271

1999

Du L, Faludi G, **Palkovits M**, Demeter E, Bakish D, Lapierre YD, Sótónyi P & Hrdina PD (1999) Frequency of long allele in serotonin transporter gene is increased in depressed suicide victims, *Biol Psychiatry* **46**: 196-201

Hwang S-R, Steineckert B, Kohn A, **Palkovits M** & Hook VYH (1999) Molecular studies define the primary structure α 1-antichymotrypsin (ACT) protease inhibitor in Alzheimer's disease brains, *J Biol Chem* **274**: 1821-1827

1998

Hrdina P, Faludi G, Li Q, Bendotti C, Tekes K, Sotonyi P & **Palkovits M** (1998) Growth-associated protein (GAP-43), its mRNA, and protein kinase C (PKC) isoenzymes in brain regions of depressed suicides, *Mol Psychiatry* **3**: 411-418

Kovács Zs, Dobolyi Á, Szikra T, **Palkovits M** & Juhász G (1998) Uneven regional distribution of nucleotide metabolism in human brain, *Neurobiology (Bp)* **6**: 315-321

Banay-Schwartz M, DeGuzman T, Faludi G, Lajtha A & **Palkovits M** (1998) Alteration of protease levels in different brain areas of suicide victims, *Neurochem Res* **23**: 953-959

1997

Hwang S-R, **Palkovits M** & Hook VYH (1997) High level expression and characterization of recombinant human hippocampus phenol sulfotransferase. A novel phenol-sulfating form of phenol sulfotransferase, *Protein Expres Purif* **11**: 125-134

Ertl G, Hu K, Gaudron P, **Palkovits M** & Bahner U (1997) Remodeling of the brain post myocardial infarction: Focus on central ANF, *Basic Res Cardiol* **92**: 82-84

1996

Ács G, **Palkovits M** & Blumberg PM (1996) Specific binding of [3H]resiniferatoxin by human and rat preoptic area, locus coeruleus, medial hypothalamus, reticular formation and ventral thalamus membrane preparations, *Life Sci* **58**: 1899-1908

Felder CC, Nielsen A, Briley EM, **Palkovits M**, Priller J, Axelrod J, Nguyen DN, Richardson JM, Riggan RM, Koppel GA, Paul SM & Becker GW (1996) Isolation and measurement of the endogenous cannabinoid receptor agonist, anandamide, in brain and peripheral tissues of human and rat, *FEBS Lett* **393**: 231-235

Lantos TÁ, **Palkovits M**, Rostene W & Béród A (1996) Neurotensin receptors in the human amygdaloid complex. Topographical and quantitative autoradiographic study, *J Chem Neuroanat* **11**: 209-217

1995

Palkovits M & Fodor M (1995) Distribution of neuropeptides in the human lower brain stem (pons and medulla oblongata), In *Neurotransmitters in the Human Brain* J Stone (eds), pp 101-113, Plenum Press, New York, DJ Tracey, G Paxinos

Palkovits M, Somogyvári-Vigh A & Arimura A (1995) Concentrations of pituitary adenylate cyclase activating polypeptide (PACAP) in human brain nuclei, *Brain Res* **699**: 116-120

Hui M, Demeter-Budai E, Lajtha A, **Palkovits M** & Hui K-S (1995) Changes in puromycin-sensitive aminopeptidases in postmortem schizophrenic brain regions, *Neurochem Int* **27**: 433-441

1994

Fodor M, Pammer Cs, Göröcs T & **Palkovits M** (1994) Neuropeptides in the human dorsal vagal complex: an immunohistochemical study, *J Chem Neuroanat* **7**: 141-157

Banay-Schwartz M, DeGuzman T, **Palkovits M** & Lajtha A (1994) Calpain activity in adult and aged human brain regions, *Neurochem Res* **19**: 563-567

Acs G, **Palkovits M** & Blumberg PM (1994) [3H]Resiniferatoxin binding by the human vanilloid (capsaicin) receptor, *Mol Brain Res* **23**: 185-190

1993

Banay-Schwartz M, **Palkovits M** & Lajtha A (1993) Levels of amino acids in 52 discrete areas of postmortem brain of adult and aged humans, *Amino Acids* **5**: 273-287

Hrdina PD, Demeter E, Vu TB, Sótonyi P & **Palkovits M** (1993) 5-HT uptake sites and 5-HT₂ receptors in brain of antidepressant-free suicide victims/depressives: increase in 5-HT₂ sites in cortex and amygdala, *Brain Res* **614**: 37-44

Banay-Schwartz M, **Palkovits M** & Lajtha A (1993) Heterogeneous distribution of functionally important amino acids in brain areas of adult and aging humans, *Neurochem Res* **18**: 417-423

Squires RF, Lajtha A, Saederup E & **Palkovits M** (1993) Reduced [3H]flunitrazepam binding in cingulate cortex and hippocampus of postmortem schizophrenic brains: Is selective loss of glutamatergic neurons associated with major psychoses? *Neurochem Res* **18**: 219-223

1992

Lopez JF, **Palkovits M**, Arató M, Mansour A, Akil H & Watson SJ (1992) Localization and quantification of pro-opiomelanocortin mRNA and glucocorticoid receptor mRNA in pituitaries of suicide victims, *Neuroendocrinology* **56**: 491-501

Banay-Schwartz M, Lajtha A & **Palkovits M** (1992) Regional distribution of glutamate and aspartate in adult and old human brain, *Brain Res* **594**: 343-346

Banay-Schwartz M, DeGuzman T, Kenessey A, **Palkovits M** & Lajtha A (1992) The distribution of cathepsin D activity in adult and aging human brain regions, *J Neurochem* **58**: 2207-2211

Banay-Schwartz, Kenessey A, DeGuzman T, Lajtha A & **Palkovits M** (1992) Protein content of various regions of rat brain and adult aging human brain, *Age* **15**: 51-54

Fodor M, Göröcs TJ & **Palkovits M** (1992) Immunohistochemical study on the distribution of neuropeptides within the pontine tegmentum - particularly the parabrachial nuclei and the locus coeruleus of the human brain, *Neuroscience* **46**: 891-908

1991

Arató M, Tekes K, Tóthfalusi L, Magyar K, **Palkovits M**, Frecska E, Falus A & MacCrimmon DJ (1991) Reversed hemispheric asymmetry of imipramine binding in suicide victims, *Biol Psychiat* **29**: 699-702

HBTB IN ACKNOWLEDGEMENTS

Hertz H, Carstensen MB, Bering T, Rohde K, Møller M, Granau AM, Coon SL, Klein DC & Rath MF (2020) The Lhx4 homeobox transcript in the rat pineal gland: Adrenergic regulation and impact on transcripts encoding melatonin-synthesizing enzymes, *J Pineal Res* **68**(1): e12616, doi: 10.1111/jpi.12616

Carstensen MB, Hertz H, Bering T, Møller M, Rohde K, Klein DC, Coon SL & Rath MF (2020) Circadian regulation and molecular role of the Bsx homeobox gene in the adult pineal gland, *J Pineal Res* **68**(2): e12629, doi:10.1111/jpi.12629

Pfisterer U, Petukhov V, Demharter S, Meichsner J, Thompson JJ, Batiuk MY, Asenjo-Martinez A, Vasistha NA, Thakur A, Mikkelsen J, Adorjan I, Pinborg LH, Pers TH, von Engelhardt J, Kharchenko PV & Khodosevich K (2020) Author Correction: Identification of epilepsy-associated neuronal subtypes and gene expression underlying epileptogenesis, *Nat Commun* **11**: 5988, doi:10.1038/s41467-020-19869-5 (Erratum for: Nat Commun 2020 Oct 7; 11: 5038.)

Oláh J, Lehotzky A, Szénási T, Berki T & Ovádi J (2022) Modulatory role of TPPP3 in microtubule organization and its impact on alpha-synuclein pathology, *Cells* **11**: 3025, doi:10.3390/cells11193025

Batiuk MY, Tyler T, Dragicevic K, Mei S, Rydbirk R, Petukhov V, Deviatiiarov R, Sedmak D, Frank E, Feher V, Habek N, Hu Q, Igoalkina A, Roszik L, Pfisterer U, Garcia-Gonzalez D, Petanjek Z, Adorjan I, Kharchenko PV & Khodosevich K (2022) Upper cortical layer-driven network impairment in schizophrenia, *Sci Adv* **8**: eabn8367, doi: 10.1126/sciadv.abn8367