

## List of Publications (2013-2018)

### Original papers

1. **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. Hypothalamic CNTF volume transmission shapes cortical noradrenergic excitability upon acute stress. **EMBO J**. 2018 Sep 12. pii: e100087.  
*\* corresponding author*
2. Király K, Kozsurek M, Lukácsi E, Barta B, Alpár A, Balázs T, Fekete C, Szabon J, Helyes Z, Bölcskei K, Tékus V, Tóth ZE, Pap K, Gerber G, Puskár Z. Glial cell type-specific changes in spinal dipeptidyl peptidase 4 expression and effects of its inhibitors in inflammatory and neuropathic pain. **Sci Rep** 2018 8:3490.
3. Lékó AH, Cservenák M, Szabó ÉR, Hanics J, Alpár A, Dobolyi Á. Insulin-like growth factor I and its binding protein-3 are regulators of lactation and maternal responsiveness. **Sci Rep** 2017 7:3396
4. Hanics J, Szodorai E, Tortoriello G, Malenczyk K, Keimpema E, Lubec G, Hevesi Z, Lutz MI, Kozsurek M, Puskár Z, Tóth ZE, Wagner L, Kovács GG, Hökfelt TG, Harkany T, Alpár A\*. Secretagogin-dependent matrix metalloprotease-2 release from neurons regulates neuroblast migration. **Proc Natl Acad Sci U S A** 2017 114:E2006-E2015  
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5. Romanov RA, Zeisel A, Bakker J, Girach F, Hellysaz A, Tomer R, Alpár A, Mulder J, Clotman F, Keimpema E, Hsueh B, Crow AK, Martens H, Schwindling C, Calvigioni D, Bains JS, Máté Z, Szabó G, Yanagawa Y, Zhang MD, Rendeiro A, Farlik M, Uhlén M, Wulff P, Bock C, Broberger C, Deisseroth K, Hökfelt T, Linnarsson S, Horvath TL, Harkany T. Molecular interrogation of hypothalamic organization reveals distinct dopamine neuronal subtypes. **Nat Neurosci** 2017 20:176-188.
6. Hanics J, Teleki G, Alpár A, Székely AD, Csillag A. Multiple amygdaloid divisions of arcopallium send convergent projections to the nucleus accumbens and neighboring subpallial amygdala regions in the domestic chicken: a selective pathway tracing and reconstruction study. **Brain Struct Funct** 2017 222:301-315.
7. Somogyi A, Katonai Z, Alpár A, Wolf E. A novel form of compensation in the Tg2576 amyloid mouse model of Alzheimer's disease. **Front Cell Neurosci** 2016 10:152.
8. Guggenhuber S, Alpár A, Chen R, Schmitz N, Wickert M, Mattheus T, Harasta AE, Purrio M, Kaiser N, Elphick MR, Monory K, Kilb W, Luhmann HJ, Harkany T, Lutz B, Klugmann M. Cannabinoid receptor-interacting protein Crip1a modulates CB1 receptor signaling in mouse hippocampus. **Brain Struct Funct** 2016 221:2061-74.
9. Bitencourt RM, Alpár A, Cinquina V, Ferreira SG, Pinheiro BS, Lemos C, Ledent C, Takahashi RN, Sialana FJ, Lubec G, Cunha RA, Harkany T, Köfalvi A. Lack of presynaptic interaction between glucocorticoid and CB1 cannabinoid receptors in GABA- and glutamatergic terminals in the frontal cortex of laboratory rodents. **Neurochem Int** 2015 90:72-84.

10. Bullmann T, Seeger G, Stieler J, Hanics J, Reimann K, Kretzschmann TP, Hilbrich I, Holzer M, Alpár A, Arendt T. Tau phosphorylation-associated spine regression does not impair hippocampal-dependent memory in hibernating golden hamsters. **Hippocampus** 2016 26:301-18.
11. Romanov RA, Alpár A\*, Zhang MD, Zeisel A, Calas A, Landry M, Fuszard M, Shirran SL, Schnell R, Dobolyi Á, Oláh M, Spence L, Mulder J, Martens H, Palkovits M, Uhlen M, Sitte HH, Botting CH, Wagner L, Linnarsson S, Hökfelt T, Harkany T. A secretagogin locus of the mammalian hypothalamus controls stress hormone release. **EMBO J**. 2015 34:36-54.  
*\*corresponding author, equal first authorship*
12. Alpár A, Tortoriello G, Calvigioni D, Niphakis MJ, Milenkovic I, Bakker J, Cameron GA, Hanics J, Morris CV, Fuzik J, Kovacs GG, Cravatt BF, Parnavelas JG, Andrews WD, Hurd YL, Keimpema E, Harkany T. Endocannabinoids modulate cortical development by configuring Slit2/Robo1 signalling. **Nat Commun** 2014, 5:4421.
13. Gáti G, Lendvai D, Hökfelt T, Harkany T, Alpár A\*. Revival of calcium-binding proteins for neuromorphology: secretagogin typifies distinct cell populations in the avian brain. **Brain Behav Evol** 2014, 83:82-92.  
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14. Tortoriello G, Morris CV, Alpár A, Fuzik J, Shirran SL, Calvigioni D, Keimpema E, Botting CH, Reinecke K, Herdegen T, Courtney M, Hurd YL, Harkany T. Miswiring the brain:  $\Delta^9$ -tetrahydrocannabinol disrupts cortical development by inducing an SCG10/stathmin-2 degradation pathway. **EMBO J**, 2014 33:668-685.
15. Lendvai D, Morawski M, Négyessy L, Gáti G, Jäger C, Baksa G, Glasz T, Attems J, Tanila H, Arendt T, Harkany T, Alpár A\*. Neurochemical mapping of the human hippocampus reveals perisynaptic matrix around functional synapses in Alzheimer's disease. **Acta Neuropathol** 2013, 125:215-229.  
*\* corresponding author*
16. Keimpema E, Tortoriello G, Alpár A, Capsoni S, Arisi I, Calvigioni D, Hu SS, Cattaneo A, Doherty P, Mackie K, Harkany T. Nerve growth factor scales endocannabinoid signaling by regulating monoacylglycerol lipase turnover in developing cholinergic neurons. **Proc Natl Acad Sci U S A**. 2013, 110:1935-1940.
17. Keimpema E, Alpár A, Howell F, Malenczyk K, Hobbs C, Hurd YL, Watanabe M, Sakimura K, Kano M, Doherty P, Harkany T. Diacylglycerol lipase  $\alpha$  manipulation reveals developmental roles for intercellular endocannabinoid signaling. **Sci Reports** 2013, 3:2093.
18. Jäger C, Lendvai D, Seeger G, Brückner G, Matthews RT, Arendt T, Alpár A\*, Morawski M\*. Perineuronal and perisynaptic extracellular matrix in the human spinal cord. **Neuroscience**. 2013, 238C:168-184.  
*\* corresponding author*
19. Zilberter M, Ivanov A, Ziyatdinova S, Mukhtarov M, Malkov A, Alpár A, Tortoriello G, Botting CH, Fülöp L, Osypov AA, Pitkänen A, Tanila H, Harkany T, Zilberter Y. Dietary energy substrates reverse early neuronal hyperactivity in a mouse model of Alzheimer's disease. **J Neurochem** 2013 125:157-71.

## Comment

1. Alpár A, Harkany T. Orexin neurons use endocannabinoids to break obesity-induced inhibition. **Proc Natl Acad Sci U S A**. 2013, 110: 9625-9626. **IF: 9,737**

## Review articles

1. Alpár A, Harkany T. Novel insights into the spatial and temporal complexity of hypothalamic organization through precision methods allowing nanoscale resolution. **J Intern Med.** 2018 Jul 20. doi: 10.1111/joim.12815. PubMed PMID: 30027599.
2. Romanov RA, Alpár A, Hökfelt T, Harkany T. Molecular diversity of corticotropin-releasing hormone mRNA-containing neurons in the hypothalamus. **J Endocrinol.** 2017;232:R161-R172.
3. Alpár A, Di Marzo V, Harkany T. At the Tip of an Iceberg: Prenatal Marijuana and Its Possible Relation to Neuropsychiatric Outcome in the Offspring. **Biol Psychiatry.** 2016, 79:e33-45.