

Balázs Gulyás: Publications

Publications in peer-reviewed journals

243. Mohamed Asik R, Suganthi N, Aarifa MA, Kumar A, Szigeti K, Mathe D, Gulyás B, Archunan G, Padmanabhan P. Alzheimer's Disease: A Molecular View of β -Amyloid Induced Morbific Events. *Biomedicines*. 2021 Sep 1;9(9):1126. doi: 10.3390/biomedicines9091126.
242. Zoey FL, Palanivel M, Padmanabhan P, Gulyás B. Parkinson's Disease: A Nanotheranostic Approach Targeting Alpha-Synuclein Aggregation. *Front Cell Dev Biol*. 2021 Aug 20;9:707441. doi: 10.3389/fcell.2021.707441.
241. Ghosh KK, Padmanabhan P, Yang CT, Ng DCE, Palanivel M, Mishra S, Halldin C, Gulyás B. Positron emission tomographic imaging in drug discovery. *Drug Discov Today*. 2021 Jul 28:S1359-6446(21)00334-2. doi: 10.1016/j.drudis.2021.07.025.
240. Singh S, Mishra S, Juha S, Pramanik M, Padmanabhan P, **Gulyás B**. Nanotechnology Facilitated Cultured Neuronal Network and Its Applications. *Int J Mol Sci*. 2021 May 24;22(11):5552. doi: 10.3390/ijms22115552.
239. Pae, JY, Nair, RV, Padmanabhan, P, Radhakrishnan, G, **Gulyás, B**, Matham MV. Gold Nano-Urchins Enhanced Surface Plasmon Resonance (SPR) BIOSENSORS for the Detection of Estrogen Receptor Alpha (ER α) *IEEE Xplore 27/5(2021)* DOI: 10.1109/JSTQE.2021.3069453
238. Patel, P, Nadar, VM, Umopathy, D, Manivannan, S, Venkatesan, R, Arokiyam, VAJ, Pappu, S, Prakash, PA, Jabir, MSM, **Gulyas, B**. Doxorubicin-Conjugated Platinum Theranostic Nanoparticles Induce Apoptosis via Inhibition of a Cell Survival (PI3K/AKT) Signaling Pathway in Human Breast Cancer Cells. *ACS Applied Nanomaterials 4(2021):198-210*. DOI: 10.1021/acsnm.0c02521
237. Manting CL, **Gulyas B**, Ullén F, Lundqvist D. Auditory steady-state responses during and after a stimulus: Cortical sources, and the influence of attention and musicality. *Neuroimage*. 2021 Mar 18;233:117962. doi: 10.1016/j.neuroimage.2021.117962.
236. Selvan, ST, Ravichandar, R, Ghosh, KK, Mohan, A, Mahalakshmi, P, **Gulyas, B**, Padmanabhan, P. Coordination chemistry of ligands: Insights into the design of amyloid beta/tau-PET imaging probes and nanoparticles-based therapies for Alzheimer's disease. *Coordination Chemistry Reviews*. 430(2021):Article Number: 213659. DOI: 10.1016/j.ccr.2020.213659
235. Nair, RV, Padmanabhan, P, **Gulyas, B**, Matham, MV. Fluorescence Resonance Energy Transfer (FRET)-Based ThT Free Sensing of Beta-Amyloid Fibrillation by Carbon Dot-Ag Composites. *Plasmonics*, DOI: 10.1007/s11468-020-01338-w
234. Ghosh KK, Padmanabhan P, Yang CT, Wang Z, Palanivel M, Ng KC, Lu J, Carlstedt-Duke J, Halldin C, **Gulyás B**. An In Vivo Study of a Rat Fluid-Percussion-Induced Traumatic Brain Injury Model with [^{11}C]PBR28 and [^{18}F]flumazenil PET Imaging. *Int J Mol Sci*. 2021 Jan 19;22(2):951. doi: 10.3390/ijms22020951.
233. Mishra S, Kumar A, Padmanabhan P, **Gulyás B**. Neurophysiological Correlates of Cognition as Revealed by Virtual Reality: Delving the Brain with a Synergistic Approach. *Brain Sci*. 2021 Jan 5;11(1):51. doi: 10.3390/brainsci11010051.
232. Xia, Y. Padmanabhan, P., Vijayaragavan, V., Murukeshan, V.M., **Gulyás, B**. Amyloid Beta42 Peptide Functionalized Iron Oxide. Nanoparticles for Specific Targeting of SH-SY5Y Neuroblastoma Cells. *J Nanoscience Nanotech 21(2021):1-7*. doi:10.1166/jnn.2021.19352
231. Padmanabhan P, Palanivel M, Kumar A, Máthé D, Radda GK, Lim KL, **Gulyás B**. Nanotheranostic agents for neurodegenerative diseases. *Emerg Top Life Sci*. 4(2020):645-675. doi: 10.1042/ETLS20190141.

230. Vanan, S., Zeng, X., Chia, S.Y., Varnäs, K., Jiang, M., Zhang, K., Saw, W.T., Padmanabhan, P., Yu, W-P., Zhou, Z-D., Halldin, C., **Gulyás, B.**, Tan, E-K., Zeng, L. Altered striatal dopamine levels in Parkinson's disease VPS35 D620N mutant transgenic aged mice. *Mol Brain* 13(2020):164. doi: 10.1186/s13041-020-00704-3.
229. Singh, S., Wang, L., Gupta, S., **Gulyás, B.**, Parasuraman, P. A shallow 3D CNN for medical imaging sensors: Application to Different Acute Brain Hemorrhages. *IEEE Sensors Journal*. 20(2020):5-97. doi:10.3390/s20185097
228. Yang, X., Padmanabhan, P., Vijayaragavan, V., Murukeshan, V.M., **Gulyás, B.** A β 42 Peptide Functionalized Iron Oxide Nanoparticles for Specific Targeting of SH-SY5Y Neuroblastoma Cells. *J Nanosci Nanotech.* 2020, in press.
227. Boobalan, T., Sethupathi, M., Sengottuvelan, N., Kumar, P., **Gulyás, B.**, Padmanabhan, P., Selvan, S.T., Arun, A. Mushroom-Derived Carbon Dots for Toxic Metal Ion Detection and as Antibacterial and Anticancer Agents. *ACS Appl. Nano Mater.* 3(2020):5910–5919.
226. Cong, G. Z., Ghosh, K.K., Mishra, S., Gulyás, M., Kovács, T., Máthé, D., Padmanabhan, P., **Gulyás B.** Targeted pancreatic beta cell imaging for early diagnosis. *Eur J Cell Biology* (2020) <https://doi.org/10.1016/j.ejcb.2020.151110>
225. Ghosh, K.K., Padmanabhan, P., Yang, C.T., Mishra, S., Halldin, C., **Gulyás, B.** Dealing with PET Radiometabolites. *EJNMMI Research*. 10(2020):109. <https://doi.org/10.1186/s13550-020-00692-4>
224. Manting CL, Andersen LM, **Gulyas B**, Ullén F, Lundqvist D. Attentional Modulation of the Auditory Steady-State Response across the Cortex. *Neuroimage NeuroImage* 217(2020):116930.
223. Singh, P, Venkatesan, A, Padmanabhan, P, **Gulyás, B**, Dass JFP. (2019).Codon usage of human Hepatitis C virus (HCV) clearance genes in relation to its expression. *J Cell Biochem.* 121(2020):534-544. doi: 10.1002/jcb.29290.
222. Yang, C.T., Hattiholi, A., Yan, S.X., Selvan, S.T., Fang, W.W., Chandrasekharan, P., Koteswaraiah, P., **Gulyás, B.**, Aw, S.E., He, T., Ng, D.C.E., Padmanabhan, P. Bimodal probes of Gd enhanced T1-weighted MR/optical imaging. *Acta Biomaterialia* 110(2020):15-36.
221. Radhika V Nair, R.V., Pae, J.P., Padmanabhan, P., **Gulyás, B.**, Murukeshan, V. M. Localized surface plasmon resonance-based sensing of beta amyloid fibrillation using Au nano-urchins. *Nanoscale Advances* 2(2020):2678-2687. DOI: 10.1039/D0NA00164C
220. Ang, H.X., Zeng, J.L., Subramanian, G.S., Chellappan, V., Sudhaharan, T., Padmanabhan, P., **Gulyás, B.**, Selvan, S.T. Highly Fluorescent Mn-Doped ZnS Nanocrystals for Cancer Theranostics. *ACS Applied Nanomaterials*, 3(2020):3088-3096.
219. Musafargani S, Mishra S, Gulyás M, Mahalakshmi P, Archunan G, Padmanabhan P, **Gulyás B.** Blood brain barrier: A tissue engineered microfluidic chip. *J Neurosci Methods* 331(2020):108525. doi:10.1016/j.jneumeth.2019.108525.
218. Selvan, ST, Padmanabhan, P, **Gulyás, B.** Nanotechnology Based Diagnostics and Therapy for Pathogens-Related Infections in the CNS. *ACS Chem Neurosci*, 27 Nov 2019. PMID: 31726008
217. Lahiri S, Kim H, Garcia-Perez I, Reza MM, Martin KA, Kundu P, Cox LM, Selkrig J, Posma JM, Zhang H, Padmanabhan P, Moret C, **Gulyás B**, Blaser MJ, Auwerx J, Holmes E, Nicholson J, Wahli W, Pettersson S (2019) Microbiome signaling pathways influence skeletal muscle mass and function. *Science Translational Medicine*. Vol. 11, Issue 502, ean5662, DOI: 10.1126/scitranslmed.aan5662
216. Kaleshkumar K, Rajaram R, Gayathri N, Sivasudha T, Arun G, Archunan G, **Gulyás B**, Padmanabhan P. Muscle extract of *Arothron immaculatus* regulates the blood glucose level and the antioxidant system in high-fat diet and streptozotocin induced diabetic rats. *Bioorg Chem.* 2019 Sep;90:103072. doi: 10.1016/j.bioorg.2019.103072.
215. Sarnyai Z, Nagy K, Patay G, Molnár M, Rosenqvist G, Tóth M, Takano A, **Gulyás B**, Major P, Halldin C, Varrone A. Performance Evaluation of a High-Resolution Nonhuman Primate PET/CT System. *Nucl Med.* 2019 Dec;60(12):1818-1824. doi: 10.2967/jnumed.117.206243.

214. Nag S, Krasikova R, Airaksinen AJ, Arakawa R, Petukhovd M, **Gulyás B**. Synthesis and biological evaluation of [¹⁸F]fluorovinpocetine, a potential PET radioligand for TSPO imaging. *Bioorg Med Chem Lett*. 2019 Jun 20. pii: S0960-894X(19)30417-2. doi: 10.1016/j.bmcl.2019.06.037.
213. Xia Y, Padmanabhan P, Sarangapani S, **Gulyás B**, Vadakke Matham M. Bifunctional Fluorescent/Raman Nanoprobe for the Early Detection of Amyloid. *Sci Rep*. 2019 Jun 11;9(1):8497. doi: 10.1038/s41598-019-43288-2.
212. Svedberg MM, Varnäs K, Varrone A, Mitsios N, Mulder J, **Gulyás B**, Beaumont V, Munoz-Sanjuan I, Zaleska MM, Schmidt CJ, Halldin C, Mrzljak L. In vitro phosphodiesterase 10A (PDE10A) binding in whole hemisphere human brain using the PET radioligand [¹⁸F]MNI-659. *Brain Res*. 2019 Jan 18. pii: S0006-8993(19)30038-1. doi: 10.1016/j.brainres. 2019.01.021
211. Rajagopal, T, Ponmanickam, P, Chinnathambi, A, Padmanabhan, P, **Gulyás, B**, Archunan, G. Inter-relationship of behaviour, faecal testosterone levels and glandular volatiles in determination of dominance in male Blackbuck. *Indian J Exp Biol* 56(2018): 781-794.
210. **Gulyás, B.**, Mitra, R., Vyas, A., Amin, S. M., Gulyás, V., Padmanabhan, P. Aging, Brain Aging and Cognitive Resilience. *Innovation* 16(2018):33-38.
209. Yang CT, Ghosh KK, Padmanabhan P, Langer O, Liu J, Eng DNC, Halldin C, **Gulyás B**. PET-MR and SPECT-MR multimodality probes: Development and challenges. *Theranostics*. 2018 Nov 29;8(22):6210-6232. doi: 10.7150/thno.26610. eCollection 2018.
208. Ramanathan S, Archunan G, Sivakumar M, Tamil Selvan S, Fred AL, Kumar S, **Gulyás B**, Padmanabhan P. Theranostic applications of nanoparticles in neurodegenerative disorders. *Int J Nanomedicine*. 2018 Sep 20;13:5561-5576. doi: 10.2147/IJN.S149022. eCollection 2018.
207. Narayanan K, Kumar S, Padmanabhan P, **Gulyás B**, Wan ACA, Rajendran VM. Lineage-specific exosomes could override extracellular matrix mediated human mesenchymal stem cell differentiation. *Biomaterials*. 2018 Nov;182:312-322. doi: 10.1016/j.biomaterials.2018.08.027. Epub 2018 Aug 11.
206. Pandarinathan, G, Mishra, S, Nedumaran, AM, Padmanabhan, P; **Gulyás, B**. The Potential of Cognitive Neuroimaging: A Way Forward to the Mind-Machine Interface. *J Imaging*, 4(2018):70. DOI: 10.3390/jimaging4050070
205. Kumar S, Karthikeyan N, Mishra S, Padmanabhan P, Radda G, **Gulyás B**. Misfolded Protein Linked Strategies Toward Biomarker Development for Neurodegenerative Diseases. *Mol Neurobiol*. 2018 Jul 24. doi: 10.1007/s12035-018-1232-4.
204. Htike TT, Mishra S, Kumar S, Padmanabhan P, **Gulyás B**. Peripheral Biomarkers for Early Detection of Alzheimer's and Parkinson's Diseases. *Mol Neurobiol*. 2018 Jul 14. doi: 10.1007/s12035-018-1151-4.
203. Musafargani S, Ghosh KK, Mishra S, Mahalakshmi P, Padmanabhan P, **Gulyás B**. PET/MRI: a frontier in era of complementary hybrid imaging. *Eur J Hybrid Imaging*. 2018;2(1):12. doi: 10.1186/s41824-018-0030-6. Epub 2018 Jun 25.
202. Muthukumar S, Rajesh D, Selvam RM, Saibaba G, Suvaitenamudhan S, Akbarsha MA, Padmanabhan P, **Gulyás B**, Archunan G. Buffalo nasal odorant-binding protein (bunOBP) and its structural evaluation with putative pheromones. *Sci Rep*. 2018 Jun 19;8(1):9323. doi: 10.1038/s41598-018-27550-7. Erratum in: *Sci Rep*. 2018 Aug 1;8(1):11785.
201. Szigeti, K, Hegedűs, N, Rácz, K, Horváth, I, Veres, DS, Szöllösi, D, Futó, I, Modos, K, Bozó, T, Karlinger, K, Kovács, N, Varga, Z, Babos, M, Budan, F, Padmanabhan, P, **Gulyás, B**, Máthe, D. Thallium Labeled Citrate-Coated Prussian Blue Nanoparticles as Potential Imaging Agent. *Contrast Media and Molecular Imaging*. 2018. UNSP 2023604. DOI: 10.1155/2018/2023604
200. Odano, I, Varrone, A, Hosoya, T, Sakaguchi, K, **Gulyás, B**, Padmanabhan, P, Ghosh, KK, Yang, CT, Guenther, I, Wang, ZM, Serrano, R, Chimon, NG, Christer Halldin, C. Simplified estimation of binding parameters based on image-derived reference tissue models for dopamine transporter bindings in non-human primates using [¹⁸F]FE-PE2I and PET. *Am J Nucl Med Mol Imaging* 7(2017):246-254. www.ajnmml.us /ISSN:2160-8407/ajnmml0064637

199. Yang, CT, Ghosh, KK, Padmanabhan, P, Langer, O, Liu, J, Halldin, C, **Gulyás, BZ**. PET probes for imaging pancreatic islet cells. *Clin and Trans Imaging* 5(2017):507-523.
198. Lim J, Chin R, Ho NF, Lam M, Sum MY, Collinson S, Phillips L, Lee TS, **Gulyás BZ**, Zhou J, Sim K. Elucidation of shared and specific white matter findings underlying psychopathology clusters in schizophrenia. *Asian J Psychiatr*. 2017 Sep 1;30:144-151. doi: 10.1016/j.ajp.2017.08.016.
197. Narayanan K, Mishra S, Singh S, Pei M, **Gulyás B**, Padmanabhan P. Engineering Concepts in Stem Cell Research. *Biotechnol J*. 2017 Sep 13. doi: 10.1002/biot.201700066.
196. Kannan, P, Schain, M, Kretzschmar, WW, Weidner, L, Mitsios, N, **Gulyás, B**, Blom, H, Gottesman, MM, Innis, RB, Hall, MD, Mulder, J. An automated method measures variability in P-glycoprotein and ABCG2 densities across brain regions and brain matter. *J Cerebr Blood Flow Metab* 37(2017):2062-2075
195. Thiruppathi R, Mishra S, Ganapathy M, Padmanabhan P, **Gulyás, B**. Nanoparticle Functionalization and Its Potentials for Molecular Imaging. *Advanced Science* 4(2017). DOI: 10.1002/advs.201600279
194. Sikkandhar MG, Nedumaran AM, Ravichandar R, Singh S, Santhakumar I, Goh ZC, Mishra S, Archunan G, **Gulyás B**, Padmanabhan P. Theranostic Probes for Targeting Tumor Microenvironment: An Overview. *Int J Mol Sci*. 2017 May 11;18(5). pii: E1036. doi: 10.3390/ijms18051036.
193. Kovács T, Billes V, Komlós M, Hotzi B, Manzéger A, Tarnóci A, Papp D, Szikszai F, Szinyákóvics J, Rácz Á, Noszál B, Veszélka S, Walter FR, Deli MA, Hackler L Jr, Alfoldi R, Huzian O, Puskas LG, Liliom H, Tárnok K, Schlett K, Borsy A, Welker E, Kovács AL, Pádár Z, Erdős A, Legrádi A, Bjelik A, Gulya K, **Gulyás B**, Vellai T. The small molecule AUTEN-99 (autophagy enhancer-99) prevents the progression of neurodegenerative symptoms. *Sci Rep*. 2017 Feb 16;7:42014. doi: 10.1038/srep42014.
192. Sridhar S, Mishra S, Gulyás M, Padmanabhan P, **Gulyás B**. An Overview of Multimodal Neuroimaging Using Nanoprobes. *Int J Mol Sci*. 2017 Feb 1;18(2). pii: E311. doi: 10.3390/ijms18020311.
191. Ismail MAM, Mateos L, Maioli S, Merino-Serrais P, Ali Z, Lodeiro M, Westman E, Leitersdor E, **Gulyás B**, Wahlund LO, Windblad B, Bjorkehem I, Savitcheva I, Cedazo-Minguez A. 27-Hydroxycholesterol Impairs Neuronal Glucose Uptake Through An IRAP/GLUT4 System Dysregulation. *J Exp Medicine*, 214(2017):699-717.
190. Yang CT, Padmanabhan P, **Gulyás B**. Gadolinium (iii) based nanoparticles for T1-weighted magnetic resonance imaging probes. *RSC Advances* 6 (2016), 60945-60966.
189. Kumar A, Narayanan K, Chaudhary RK, Mishra S, Kumar S, Vinoth KJ, Padmanabhan P, **Gulyás B**. Current Perspective of Stem Cell Therapy in Neurodegenerative and Metabolic Diseases. *Mol Neurobiol*. 2016 Nov 4. [Epub ahead of print]
188. Saibaba G, Rajesh D, Muthukumar S, Sathiyarayanan G, Padmanabhan P, Akbarsha MA, **Gulyás B**, Archunan G. Proteomic analysis of human saliva: An approach to find the marker protein for ovulation. *Reprod Biol*. 2016 Dec;16(4):287-294. doi: 10.1016/j.repbio.2016.10.005.
187. Rajesh D, Muthukumar S, Saibaba G, Siva D, Akbarsha MA, **Gulyás B**, Padmanabhan P, Archunan G. Structural elucidation of estrus urinary lipocalin protein (EULP) and evaluating binding affinity with pheromones using molecular docking and fluorescence study. *Sci Rep*. 2016 Oct 26;6:35900. doi: 10.1038/srep35900.
186. Gopinath PM, Ranjani A, Dhanasekaran D, Thajuddin N, Archunan G, Akbarsha MA, **Gulyás B**, Padmanabhan P. Multi-functional nano silver: A novel disruptive and theranostic agent for pathogenic organisms in real-time. *Sci Rep*. 2016 Sep 26;6:34058. doi: 10.1038/srep34058.
185. Takano A, Varrone A, **Gulyás B**, Salvadori P, Gee A, Windhorst A, Vercouillie J, Bormans G, Lammertsma AA, Halldin C. Guidelines to PET measurements of the target occupancy in the brain for drug development. *Eur J Nucl Med Mol Imaging*. 2016 Nov;43(12):2255-2262.
184. Kannan P, Schain M, Kretzschmar WW, Weidner L, Mitsios N, **Gulyás B**, Blom H, Gottesman MM, Innis RB, Hall MD, Mulder J. An automated method measures variability in P-glycoprotein and ABCG2 densities across brain regions and brain matter. *J Cerebr Blood Flow Metab*. 2016 Aug 3. pii: 0271678X16660984

183. Xia, Y., Matham, M. V., Su, H., Padmanabhan, P., **Gulyás, B.** Nanoparticulate Contrast Agents for Multimodality Molecular Imaging. *J Biomed Nanotech*, 12(2016):1553-1584.
182. Padmanabhan P, Kumar A, Kumar S, Chaudhary RK, **Gulyás B.** Nanoparticles in practice for molecular-imaging applications: An overview. *Acta Biomater.* 2016: pii: S1742-7061(16)30271-9. doi: 10.1016/j.actbio.2016.06.003
181. Billes V, Kovács T, Hotzi B, Manzéger A, Tagscherer K, Komlós M, Tarnóci A, Pádár Z, Erdős A, Bjelik A, Legradi A, Gulya K, **Gulyás B**, Vellai T. AUTEN-67 (Autophagy Enhancer-67) Hampers the Progression of Neurodegenerative Symptoms in a Drosophila model of Huntington's Disease. *Journal of Huntington's Disease* 5(2016):133-147.
180. Hjorth, S., Karlsson, C., Jucaite, A., Varnas, K., Hamren, U.W., Johnstrom, P., **Gulyas, B.**, Donohue, S.R., Pike, V.W., Halldin, C., Farde, L. A PET study comparing receptor occupancy by five selective cannabinoid 1 receptor antagonists in non-human primates. *Neuropharmacology*, 101(2016):519-530.
179. Papp D, Kovács T, Billes V, Varga M, Tarnóci A, Hackler L Jr, Puskás LG, Liliom H, Tárnok K, Schlett K, Borsy A, Pádár Z, Kovács AL, Hegedűs K, Juhász G, Komlós M, Erdős A, **Gulyás B**, Vellai T. AUTEN-67, an autophagy-enhancing drug candidate with potent antiaging and neuroprotective effects. *Autophagy*. 2016 Feb;12(2):273-86. doi: 10.1080/15548627.2015.1082023.
178. Takano A, Stepanov V, Nakao R, Amini N, **Gulyás B**, Kimura H, Halldin C. Brain PET measurement of PDE10A occupancy by TAK-063, a new PDE10A inhibitor, using [¹¹C]T-773 in nonhuman primates. *Synapse*. 2016 Feb 15. doi: 10.1002/syn.21896.
177. Yang CT, Tao H, Jackson AW, Chandrasekharan P, Padmanabhan P, **Gulyás B**, Halldin C. Biocompatible branched copolymer nanoparticles prepared by RAFT polymerization as MRI/PET bimodal tracers. *EJNMMI Phys.* 2015 Dec;2(Suppl 1):A90. doi: 10.1186/2197-7364-2-S1-A90.
176. Moosavi, R., Ramanathan, S., Lee, Y.Y., Ling, K.C.S., Afkhami, A., Archunan, G., Padmanabhan, P., **Gulyas, B.**, Kakran, M., Selvan, S.T. Synthesis of antibacterial and magnetic nanocomposites by decorating graphene oxide surface with metal nanoparticles. *RSC Advances* 5(2015): 76442-76450.
175. Tóth M, Häggkvist J, Varrone A, Finnema SJ, Doorduyn J, Tokunaga M, Higuchi M, **Gulyás B**, Halldin C. ABC transporter-dependent brain uptake of the 5-HT_{1B} receptor radioligand [¹¹C]AZ10419369: a comparative PET study in mouse, rat, and guinea pig. *EJNMMI Res.* 4(2014):64. doi: 10.1186/s13550-014-0064-0.
174. Tóth M, Doorduyn J, Häggkvist J, Varrone A, Amini N, Halldin C, **Gulyás B.** Positron Emission Tomography studies with [¹¹C]PBR28 in the Healthy Rodent Brain: Validating SUV as an Outcome Measure of Neuroinflammation. *PLoS One.* 10(2015):e0125917.
173. Rodriguez-Vieitez E, Ni R, **Gulyás B**, Tóth M, Häggkvist J, Halldin C, Voytenko L, Marutle A, Nordberg A. Astrocytosis precedes amyloid plaque deposition in Alzheimer APP^{swe} transgenic mouse brain: a correlative positron emission tomography and in vitro imaging study. *Eur J Nucl Med Mol Imaging.* 42(2015):1119-1132.
172. Takano A, Stepanov V, **Gulyás B**, Nakao R, Amini N, Miura S, Kimura H, Taniguchi T, Halldin C. Evaluation of a novel PDE10A PET radioligand, [¹¹C]T-773, in nonhuman primates: Brain and whole body PET and brain autoradiography. *Synapse.* 69(2015):345-355.
171. Hjorth S, Karlsson C, Jucaite A, Varnäs K, Wählby Hamrén U, Johnström P, **Gulyás B**, Donohue SR, Pike VW, Halldin C, Farde L. A PET study comparing receptor occupancy by five selective cannabinoid 1 receptor antagonists in non-human primates. *Neuropharmacology* 101(2016):519-530.
170. Tóth M, Häggkvist J, Stepanov V, Takano A, Nakao R, Amini N, Miura S, Kimura H, Taniguchi T, **Gulyás B**, Halldin C. Molecular Imaging of PDE10A Knockout Mice with a Novel PET Radiotracer: [¹¹C]T-773. *Mol Imaging Biol.* 17(2015):445-449.
169. Tóth M, Little P, Arnberg F, Häggkvist J, Mulder J, Halldin C, **Gulyás B**, Holmin S. Acute neuroinflammation in a clinically relevant focal cortical ischemic stroke model in rat: longitudinal positron emission tomography and immunofluorescent tracking. *Brain Struct Funct.* 221(2016):1279-1290

168. Comley RA, van der Aart J, **Gulyás B**, Garnier M, Iavarone L, Halldin C, Rabiner EA. In vivo occupancy of the 5-HT_{1A} receptor by a novel pan 5-HT_{1(A/B/D)} receptor antagonist, GSK588045, using positron emission tomography. *Neuropharmacology* 92C(2014):44-48.
167. Braniste V, Al-Asmakh M, Kowal C, Anuar F, Abbaspour A, Tóth M, Korecka A, Bakocevic N, Guan NL, Kundu P, **Gulyás B**, Halldin C, Hultenby K, Nilsson H, Hebert H, Volpe BT, Diamond B, Pettersson S. The gut microbiota influences blood-brain barrier permeability in mice. *Science* 344(2014):1248-1251.
166. Muthukumar S, Rajkumar R, Rajesh D, Saibaba G, Liao CC, Archunan G, Padmanabhan P, **Gulyás B**. Exploration of salivary proteins in buffalo: an approach to find marker proteins for estrus. *FASEB J*. 28(2014):4700-4709.
165. Todde S, Windhorst AD, Behe M, Bormans G, Decristoforo C, Faivre-Chauvet A, Ferrari V, Gee AD, **Gulyás B**, Halldin C, Peitl PK, Kozirowski J, Mindt TL, Sollini M, Vercouillie J, Ballinger JR, Elsinga PH. EANM guideline for the preparation of an Investigational Medicinal Product Dossier (IMPD). *Eur J Nucl Med Mol Imaging* 41(2014):2175-2185.
164. **Gulyás B**, Sovago J, Gomez-Mancilla B, Jia Z, Szigeti C, Gulya K, Schumacher M, Maguire RP, Gasparini F, Halldin C. Decrease of mGluR5 receptor density goes parallel with changes in enkephalin and substance P immunoreactivity in Huntington's disease: a preliminary investigation in the postmortem human brain. *Brain Struct Funct*. 220(2015):3043-3051.
163. Gourand F, Emond P, Bergström JP, Takano A, **Gulyás B**, Guilloteau D, Barré L, Halldin C. A radiometabolite study of the serotonin transporter PET radioligand [(11)C]MADAM. *Nucl Med Biol*. 41(2014):501-506.
162. Srinivasan S, Selvan ST, Archunan G, **Gulyás B**, Padmanabhan P. MicroRNAs -the next generation therapeutic targets in human diseases. *Theranostics* 2013 Nov 29;3(12):930-942.
161. Takano A, **Gulyás B**, Varnäs K, Little PB, Noerregaard PK, Jensen NO, Elling CE, Halldin C. Low brain CB1 receptor occupancy by a second generation CB1 receptor antagonist TM38837 in comparison with rimonabant in nonhuman primates: a PET study. *Synapse* 68(2014):89-97.
160. **Gulyás B**, Somogyi P. János Szentágothai. 31 October 1912 - 8 September 1994: Elected ForMemRs 20 April 1978. *Biogr Mem Fellows R Soc*. 59(2013):383-406.
159. Schou M, Varnäs K, Sandell J, Johnström P, Cselenyi Z, Svensson S, Nakao R, Amini N, Bergman L, Sumic A, **Gulyás B**, Lindström-Böök E, Halldin C, Farde L. Synthesis, radiolabeling, and in vivo pharmacokinetic evaluation of the amyloid beta radioligand [11C]AZD4694 in nonhuman primates. *Mol Imaging Biol*. 16(2014):173-179.
158. Nagy K, Tóth M, Major P, Patay G, Egri G, Häggkvist J, Varrone A, Farde L, Halldin C, **Gulyás B**. Performance evaluation of the small-animal nanoScan PET/MRI system. *J Nucl Med*. 54(2013):1825-1832.
157. Airaksinen AJ, Finnema SJ, Balle T, Varnäs K, Bang-Andersen B, **Gulyás B**, Farde L, Halldin C. Radiosynthesis and evaluation of new α 1-adrenoceptor antagonists as PET radioligands for brain imaging. *Nucl Med Biol*. 40(2013):747-754.
156. Takano A, Piehl F, Hillert J, Varrone A, Nag S, **Gulyás B**, Stenkrona P, Villemagne VL, Rowe CC, Macdonell R, Tawil NA, Kucinski T, Zimmermann T, Schultze-Mosgau M, Thiele A, Hoffmann A, Halldin C. In vivo TSPO imaging in patients with multiple sclerosis: a brain PET study with [18F]FEDAA1106. *EJNMMI Res*. 3(2013):30.
155. Finnema SJ, Bang-Andersen B, Jørgensen M, Christoffersen CT, **Gulyás B**, Wikström HV, Farde L, Halldin C. The dopamine D₁ receptor agonist (S)-[¹¹C]N-methyl-NNC 01-0259 is not sensitive to changes in dopamine concentration--a positron emission tomography examination in the monkey brain. *Synapse* 67(2013):586-595.
154. Varrone, A., Mattsson, P., Forsberg, A., Takano, A., Nag, S., **Gulyás, B.**, Borg, J., Boellard, R., Al Tawil, N., Eriksson, M., Zimmermann, T., Schultze-Mosgau, M., Thiele, A., Hoffmann, A., Lammertsma, A. A., Halldin, C. 2013. In vivo imaging of the 18-kDa translocator protein (TSPO) with [18F]FEDAA1106 and PET does not show increased binding in Alzheimer's disease patients. *Eur J Nucl Med Mol Imaging* (40)2013:921-931.

153. Schou M, Varnäs K, Jucaite A, **Gulyás B**, Halldin C, Farde L. Radiolabeling of the cannabinoid receptor agonist AZD1940 with carbon-11 and PET microdosing in non-human primate. *Nucl Med Biol.* 2013 Jan 22. doi:pii: S0969-8051(12)00270-3. 10.1016/j.nucmedbio.2012.10.011. IF: 2.620
152. Máthé, D., Horváth, I., Szigeti, K., Donohue, S.R., Pike, V.W., Jia, Z., Ledent, C., Palkovits, M., Freund, T.F., Halldin, C., **Gulyás, B.** In vivo SPECT and ex vivo autoradiographic brain imaging of the novel selective CB1 receptor antagonist radioligand [¹²⁵I]SD7015 in CB1 knock-out and wildtype mouse. *Brain Res. Bull.*, 91(2013):46-51. IF: 2.605
151. Nag, S, Kettschau, G, Heinrich, T, Varrone, A, Lehmann, L, **Gulyás, B**, Thiele, A, Keller, É, Halldin, C. Synthesis and biological evaluation of novel propargyl amines as potential fluorine-18 labeled radioligands for detection of MAO-B activity. *Bioorg & Medicinal Chemistry* 21(2013):186-195. IF: 2.661
150. Brockschneider D, Schmitt-Willich H, Heinrich T, Varrone A, **Gulyás B**, Tóth M, Andersson J, Boemer U, Krause S, Friebe M, Dinkelborg L, Halldin C, Dyrks T. Preclinical Characterization of a Novel Class of 18F-Labeled PET Tracers for Amyloid-β. *J Nucl Med.* 53(2012):1794-1801. IF: 6.381
149. Funke SA, Bartnik D, Glück JM, Piorkowska K, Wiesehan K, Weber U, **Gulyás B**, Halldin C, Pfeifer A, Spenger C, Muhs A, Willbold D. Development of a Small D-Enantiomeric Alzheimer's Amyloid-β Binding Peptide Ligand for Future In Vivo Imaging Applications. *PLoS One.* 2012;7(7):e41457. IF: 4.092
148. **Gulyás B**, Tóth M, Schain M, Airaksinen A, Vas A, Kostulas K, Lindström P, Hillert J, Halldin C. Evolution of microglial activation in ischaemic core and peri-infarct regions after stroke: A PET study with the TSPO molecular imaging biomarker [((11)C]vinpocetine. *J Neurol Sci.* 2012 Sep 15;320(1-2):110-117. IF: 2.353
147. Fuchigami T, Takano A, **Gulyás B**, Jia Z, Finnema SJ, Andersson JD, Nakao R, Magata Y, Haratake M, Nakayama M, Halldin C. Synthesis and evaluation of 2-chloro N-[(S)-{(S)-1-[¹¹C]methylpiperidin-2-yl}(phenyl)methyl]-3-trifluoromethyl-benzamide ([¹¹C]N-methyl-SSR504734) as a PET radioligand for glycine transporter 1. *EJNMMI Res.* 2012 Jul 9;2(1):37 IF: 4.991
146. **Gulyás, B.** and Halldin, C. New PET radiopharmaceuticals beyond FDG for brain tumor imaging. *Q. J. Nucl. Med. Mol. Imaging.* *Q J Nucl Med Mol Imaging.* 56(2013):173-190. IF: 2.537
145. Farkas S, Nagy K, Jia Z, Hortobágyi T, Varrone A, Halldin C, Csiba L, **Gulyás B.** Signal transduction pathway activity compensates dopamine D₂/D₃ receptor density changes in Parkinson's disease: a preliminary comparative human brain receptor autoradiography study with [³H]raclopride and [³⁵S]GTPγS. *Brain Res.* 1453(2012):56-63. IF: 2.623
144. Nag S, Lehmann L, Kettschau G, Heinrich T, Thiele A, Varrone A, **Gulyás B**, Halldin C. Synthesis and evaluation of [¹⁸F]fluororasagiline, a novel positron emission tomography (PET) radioligand for monoamine oxidase B (MAO-B). *Bioorg Med Chem.* 20(2012):3065-3071. IF: 2.978
143. Farkas S, Nagy K, Jia Z, Harkany T, Palkovits M, Donohou SR, Pike VW, Halldin C, Máthé D, Csiba L, **Gulyás B.** 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(2012):504-510. IF: 2.498
142. Farkas, S., Nagy, K., Palkovits, M., Kovács, G.G., Jia, Z., Donohue, S., Pike, V., Halldin, C., Máthé, D., Harkany, T., **Gulyás, B.**, Csiba, L. [¹²⁵I]SD-7015 reveals fine modalities of CB1 cannabinoid receptor density in the prefrontal cortex during progression of Alzheimer's disease. *Neurochem. Intl.* 2012 Feb;60(3):286-291. IF: 3.228
141. **Gulyás, B.**, Spenger, C., Beliczai, Z., Gulya, K., Kása, P., Jahan, M., Jia, Z., Weber, U., Pfeifer, A., Muhs, A., Willbold, D., Halldin, C. Distribution and binding of 18F-labeled and 125I-labeled analogues of ACI-80, a prospective molecular imaging biomarker of disease: a whole hemisphere post mortem autoradiography study in human brains obtained from Alzheimer's disease patients. *Neurochem. Intl. Neurochem. Intl.* 60(2012):153-162. IF: 3.228
140. Jahan, M., Nag, S., Krasikova, R., Weber, U., Muhs, A., Pfeifer, A., Spenger, C., **Gulyás, B.**, Halldin, C. Fluorine-18 labeling of three novel D-peptides by conjugation with N-succinimidyl-4-[¹⁸F]fluorobenzoate and preliminary

- examination by post mortem whole-hemisphere human brain autoradiography. *Nucl Med Biol.* 39(2012):315-323. IF: 2.620
139. Varrone A, **Gulyás B**, Takano A, Stabin MG, Jonsson C, Halldin C. Simplified quantification and whole-body distribution of [(18)F]FE-PE2I in nonhuman primates: prediction for human studies. *Nucl Med Biol.* 52(2011):1313-1321. IF: 2.620
138. Nag S, Lehmann L, Heinrich T, Thiele A, Kettschau G, Nakao R, **Gulyás B**, Halldin C. Synthesis of Three Novel Fluorine-18 Labeled Analogues of l-Deprenyl for Positron Emission Tomography (PET) studies of Monoamine Oxidase B (MAO-B). *J Med Chem.* 54(2011):7023-7029. IF: 5.207
137. **Gulyás B**, Tóth, M., Vas, Á., Shchukin, E., Kostulas, K., Hillert, J., Halldin, C. Visualising neuroinflammation in post-stroke patients: A comparative PET study with the TSPO molecular imaging biomarkers [11C]PK11195 and [11C]vinpocetine. *Current Radiopharm.* 5(2012):19-28.
136. Szilágyi G, Vas A, Kerényi L, Nagy Z, Csiba L, **Gulyás B**. Correlation between crossed cerebellar diaschisis and clinical neurological scales. *Acta Neurol Scand.* 125(2012):373-381. IF: 2.153
135. Varrone A, Stepanov V, Nakao R, Tóth M, **Gulyás B**, Emond P, Deloye JB, Vercouillie J, Stabin MG, Jonsson C, Guilloteau D, Halldin C. Imaging of the Striatal and Extrastriatal Dopamine Transporter with 18F-LBT-999: Quantification, Biodistribution, and Radiation Dosimetry in Nonhuman Primates. *J Nucl Med.* 52(2011):1313-1321. IF: 7.022
134. Takano A, **Gulyás B**, Varrone A, Karlsson P, Sjöholm N, Larsson S, Jonsson C, Odh R, Sparks R, Al Tawil N, Hoffmann A, Zimmermann T, Thiele A, Halldin C. Biodistribution and radiation dosimetry of the 18 kDa translocator protein (TSPO) radioligand [(18)F]FEDAA1106: a human whole-body PET study. *Eur J Nucl Med Mol Imaging.* 38(2011):2058-2065. IF: 4.532
133. Seneca N, Finnema SJ, Laszlovszky I, Kiss B, Horváth A, Pásztor G, Kapás M, Gyertyán I, Farkas S, Innis RB, Halldin C, **Gulyás B**. Occupancy of dopamine D(2) and D (3) and serotonin 5-HT (1A) receptors by the novel antipsychotic drug candidate, cariprazine (RGH-188), in monkey brain measured using positron emission tomography. *Psychopharmacology (Berl).* 2011 May 28. IF: 3.817
132. Takano A, Nag S, **Gulyás B**, Halldin C, Farde L. NET occupancy by clomipramine and its active metabolite, desmethylclomipramine, in non-human primates in vivo. *Psychopharmacology (Berl).* 216(2011):279-286. IF: 3.817
131. **Gulyás B**, Vas A, Tóth M, Takano A, Varrone A, Cselényi Z, Schain M, Mattsson P, Halldin C. Age and disease related changes in the translocator protein (TSPO) system in the human brain: Positron emission tomography measurements with [(11)C]vinpocetine. *Neuroimage* 256(2011):1111-1121. IF: 5.932
130. Andersson JD, Pierson ME, Finnema SJ, **Gulyás B**, Heys R, Elmore CS, Farde L, Halldin C. Development of a PET radioligand for the central 5-HT1B receptor: radiosynthesis and characterization in cynomolgus monkeys of eight radiolabeled compounds. *Nucl Med Biol.* 38(2011):261-272.. IF: 2.620
129. **Gulyás B**, Pavlova E, Kása P, Gulya K, Bakota L, Várszegi S, Keller E, Horváth MC, Nag S, Hermecz I, Magyar K, Halldin C. Activated MAO-B in the brain of Alzheimer patients, demonstrated by [11C]-L-deprenyl using whole hemisphere autoradiography. *Neurochem Int.* 58(2011):60-68. IF: 3.228
128. Varrone A, Tóth M, Steiger C, Takano A, Guilloteau D, Ichise M, **Gulyás B**, Halldin C. Kinetic analysis and quantification of the dopamine transporter in the nonhuman primate brain with 11C-PE2I and 18F-FE-PE2I. *J Nucl Med.* 52(2011):132-139.. IF: 6.424
127. Finnema SJ, Varrone A, Hwang TJ, **Gulyás B**, Pierson ME, Halldin C, Farde L. Fenfluramine-induced serotonin release decreases [(11)C]AZ10419369 binding to 5-HT(1B)-receptors in the primate brain. *Synapse.* 64(2010):573-577. IF: 2.577
126. Andersson, J., Varnäs, K., Cselényi, Z., **Gulyás, B.**, Wensbo, D., Finnema, S., Swahn, B.M., Svensson, S., Nyberg, S., Farde, L., Halldin, C. Radiosynthesis of the candidate β -amyloid radioligand [11C]AZD2184: PET examination and metabolite analysis in cynomolgus monkeys. *Synapse.* 2010 Oct;64(10):733-41. IF: 2.577

125. **Gulyás, B.**, Brockschneider, D., Nag, S., Pavlova, E., Kása, P., Gulya, K., Beliczai, Z., Thiele, A., Dyrk, T., Halldin, C. The norepinephrine transporter radioligand [18F]FD2MeNER shows significant decreases in NET density in the locus coeruleus and the thalamus in Alzheimer's disease: a post-mortem autoradiographic study in human brains. *Neurochem Intl.* 56(2010):789-798. IF: 3.228
124. Donohue SR, Varnäs K, Jia Z, **Gulyás B**, Pike VW, Halldin C. Synthesis and in vitro autoradiographic evaluation of a novel high-affinity radioiodinated ligand for imaging brain cannabinoid subtype-1 receptors. *Bioorg Med Chem Lett.* 19(2009):6209-6212. IF: 2.419
123. Takano A, **Gulyás B**, Varrone A, Halldin C. Comparative evaluations of norepinephrine transporter radioligands with reference tissue models in rhesus monkeys: (S,S)-[(18F)F]MeNER-D (2) and (S,S)-[(11C)C]MeNER. *Eur J Nucl Med Mol Imaging.* 2009(36):1892-1895. IF: 4.532
122. Varrone A, Sjöholm N, Eriksson L, **Gulyás B**, Halldin C, Farde L. Advancement in PET quantification using 3D-OP-OSEM point spread function reconstruction with the HRRT. *Eur J Nucl Med Mol Imaging.* 36(2009):1639-1650. IF: 4.532
121. Varrone A, Steiger C, Schou M, Takano A, Finnema SJ, Guilloteau D, **Gulyás B**, Halldin C. In vitro autoradiography and in vivo evaluation in cynomolgus monkey of [18F]FE-PE2I, a new dopamine transporter PET radioligand. *Synapse.* 63(2009):871-880. IF: 2.577
120. Takano A, **Gulyás B**, Varrone A, Maguire RP, Halldin C. Saturated norepinephrine transporter occupancy by atomoxetine relevant to clinical doses: a rhesus monkey study with (S,S)-[(18F)F]MeNER-D (2). *Eur J Nucl Med Mol Imaging.* 36(2009):1308-1314. IF: 4.532
119. **Gulyás, B.**, Makkai, B., Nagy, K., Vas, Á., Kása, P., Andersson, J., Suhara, T., Suzuki, K., Higuchi, M., Beliczai, Z., Gulya, K., Csiba, L. and Halldin, C. In Vitro Evidence for Competitive TSPO Binding of the Imaging Biomarker Candidates Vinpocetine and Two Iodinated DAA1106 Analogues in Post Mortem Autoradiography Experiments on Whole Hemisphere Human Brain Slices. *Current Radiopharmaceuticals*, 2(2009):42-48.
118. Finnema SJ, Halldin C, Bang-Andersen B, **Gulyás B**, Bundgaard C, Wikström HV, Farde L. Dopamine D(2/3) receptor occupancy of apomorphine in the nonhuman primate brain-A comparative PET study with [(11C)C]raclopride and [(11C)C]MNP. *Synapse.* 63(2009):378-389. IF: 2.577
117. Schou M, Zoghbi SS, Shetty HU, Shchukin E, Liow JS, Hong J, Andrée BA, **Gulyás B**, Farde L, Innis RB, Pike VW, Halldin C. Investigation of the Metabolites of (S,S)-[(11C)C]MeNER in Humans, Monkeys and Rats. *Mol Imaging Biol.* 11(2009):23-30. IF: 3.372
116. Finnema SJ, Donohue SR, Zoghbi SS, Brown AK, **Gulyás B**, Innis RB, Halldin C, Pike VW. Evaluation of [11C]PipISB and [18F]PipISB in monkey as candidate radioligands for imaging brain cannabinoid type-1 receptors in vivo. *Synapse.* 63(2009):22-30. IF: 2.577
115. **Gulyás B**, Makkai B, Kása P, Gulya K, Bakota L, Várszegi S, Beliczai Z, Andersson J, Csiba L, Thiele A, Dyrks T, Suhara T, Suzuki K, Higuchi M, Halldin C. A comparative autoradiography study in post mortem whole hemisphere human brain slices taken from Alzheimer patients and age-matched controls using two radiolabelled DAA1106 analogues with high affinity to the peripheral benzodiazepine receptor (PBR) system. *Neurochem Int.* 54:(2009)28-36. IF: 3.228
114. Beliczai Z, Varszegi S, **Gulyás B**, Halldin C, Kása P, Gulya K. Immunohistoblot analysis on whole human hemispheres from normal and Alzheimer diseased brains. *Neurochem Int.* 53(2008):181-183. IF: 3.228
113. Donohue SR, Pike VW, Finnema SJ, Truong P, Andersson J, **Gulyás B**, Halldin C. Discovery and Labeling of High-Affinity 3,4-Diarylpyrazolines as Candidate Radioligands for In Vivo Imaging of Cannabinoid Subtype-1 (CB1) Receptors. *J Med Chem.* 51(2008):5608-16. IF: 4.898
112. **Gulyás B**, Nyáry I, Borbély K. FDG, MET or CHO? The quest for the optimal PET tracer for glioma imaging continues. *Nat Clin Pract Neurol.* 4(2008):470-471. IF: 6.979
111. Takano A, Varrone A, **Gulyás B**, Karlsson P, Tauscher J, Halldin C. Mapping of the norepinephrine transporter in the human brain using PET with (S,S)-[18F]FMeNER-D2. *Neuroimage.* 42(2008):474-482. IF: 5.694

110. Airaksinen AJ, Nag S, Finnema SJ, Mukherjee J, Chattopadhyay S, **Gulyás B**, Farde L, Halldin C. [11C]cyclopropyl-FLB 457: a PET radioligand for low densities of dopamine D2 receptors. *Bioorg Med Chem.* 16(2008):6467-73. IF: 2.921
109. Pierson ME, Andersson J, Nyberg S, McCarthy DJ, Finnema SJ, Varnäs K, Takano A, Karlsson P, **Gulyás B**, Medd AM, Lee CM, Powell ME, Heys JR, Potts W, Seneca N, Mrzljak L, Farde L, Halldin C. [11C]AZ10419369: a selective 5-HT1B receptor radioligand suitable for positron emission tomography (PET). Characterization in the primate brain. *Neuroimage.* 41(2008):1075-85. IF: 5.694
108. Takano A, Halldin C, Varrone A, Karlsson P, Sjöholm N, Stubbs JB, Schou M, Airaksinen AJ, Tauscher J, **Gulyás B**. Biodistribution and radiation dosimetry of the norepinephrine transporter radioligand (S,S)-[(18F)F]FMeNER-D (2): a human whole-body PET study. *Eur J Nucl Med Mol Imaging.* 35(2008):630-636. IF: 4.532
107. Vas A, Shchukin Y, Karrenbauer VD, Cselényi Z, Kostulas K, Hillert J, Savic I, Takano A, Halldin C, **Gulyás B**. Functional neuroimaging in multiple sclerosis with radiolabelled glia markers: Preliminary comparative PET studies with [(11)C]vinpocetine and [(11)C]PK11195 in patients. *J Neurol Sci.* 2008(264):9-17. IF: 2.359
106. Takano A, **Gulyás B**, Varrone A, Karlsson P, Schou M, Airaksinen AJ, Vandenhende F, Tauscher J, Halldin C. Imaging the norepinephrine transporter with positron emission tomography: initial human studies with (S,S)-[(18F)F]FMeNER-D (2). *Eur J Nucl Med Mol Imaging.* 2008(35):153-157. IF: 4.532
105. **Gulyás B**. The receptor fingerprint of the human brain and its changes during life. *Bull Mem Acad R Med Belg.* 162(2007):225-237; discussion 237-238.
104. Borbély K, Tóth M, Nyáry I, Ericson K, **Gulyás B**. Reply to Dr. Lajos Trón's letter to Dr. Robert P. Lisak, Editor-in-Chief, *J Neurol Sci*, regarding the publication: "Optimization of semi-quantification in metabolic PET studies with 18F-fluorodeoxyglucose and 11C-methionine in the determination of malignancy of gliomas" by Borbély et al. [*J Neurol Sci* 246(2006):85-94]. *J Neurol Sci.* 2007 Dec 15;263(1-2):232-3. IF: 2.359
103. Schou M, Pike VW, Sovago J, **Gulyás B**, Gallagher PT, Dobson DR, Walter MW, Rudyk H, Farde L, Halldin C. Synthesis of (11)C-labelled (R)-OHDMI and CFMME and their evaluation as candidate radioligands for imaging central norepinephrine transporters with PET. *Bioorg Med Chem.* 2007 Jan 15;15(2):616-625. IF: 2.921
102. Van Steendam G, Dinnyes A, Mallet J, Meloni R, Casabona CR, Gonzalez JG, Kure J, Szathmary E, Vorstenbosch J, Molnar P, Edbrooke D, Sandor J, Oberfrank F, Cole-Turner R, Hargittai I, Littig B, Ladikas M, Mordini E, Roosendaal HE, Salvi M, **Gulyás B**, Malpede D. The Budapest Meeting 2005 intensified networking on ethics of science: the case of reproductive cloning, germline gene therapy and human dignity. *Sci Eng Ethics.* 2006 Oct;12(4):731-793. IF: 0.738
101. Seneca N, **Gulyás B**, Varrone A, Schou M, Airaksinen A, Tauscher J, Vandenhende F, Kielbasa W, Farde L, Innis RB, Halldin C. Atomoxetine occupies the norepinephrine transporter in a dose-dependent fashion: a PET study in nonhuman primate brain using (S,S)-[18F]FMeNER-D2. *Psychopharmacology (Berl).* 2006 Sep;188(1):119-127. IF: 4.077
100. Cselényi Z, Olsson H, Halldin C, **Gulyás B**, Farde L. A comparison of recent parametric neuroreceptor mapping approaches based on measurements with the high affinity PET radioligands [(11)C]FLB 457 and [(11)C]WAY 100635. *Neuroimage.* 2006 Oct 1;32(4):1690-708. IF: 4.869
98. **Gulyás, B**. The role of positron emission tomography in drug development. (In Hungarian) *Gyógyszereink,* 50(2006):1-9.
97. Borbély, K. Nyáry, I., Tóth, M., Ericson, K., and **Gulyás, B**. Optimization of semi-quantification in metabolic PET studies with 18F-fluorodeoxyglucose and 11C-methionine in the determination of malignancy of gliomas. *J. Neur. Sci.* 246(2006):85-94. IF: 2.366
96. **Gulyás, B.**, Dobai, J., jr., Szilágyi, G., Csécei, G. and Székely, G. jr. Continuous monitoring of post mortem temperature changes in the human brain. *Neurochem Res.*, 31(2006):157-166 IF: 2.218
95. Seneca N, Finnema SJ, Farde L, **Gulyás B**, Wikstrom HV, Halldin C, Innis RB. Effect of amphetamine on dopamine D2 receptor binding in nonhuman primate brain: A comparison of the agonist radioligand [(11)C]MNPA and antagonist [(11)C]raclopride. *Synapse.* 59(2006):260-269. IF: 2.827

95. Schou M, Sóvágó J, Pike VW, **Gulyás B**, Bogeso KP, Farde L, Halldin C. Synthesis and Positron Emission Tomography Evaluation of Three Norepinephrine Transporter Radioligands: [C-11]Desipramine, [C-11]Talopram and [C-11]Talsupram. *Mol Imaging Biol.* 2(2006)1-8. IF: 3.844
94. Vas, Á. and **Gulyás, B.** Eburnamine derivatives and the brain. *Medical Res Rev.*, 25(2005):737-757. IF: 8.418
93. Sóvágó, J., Farde, L., Halldin, C., Schukin, E., Schou, M., Laszlovszky, I., Kiss, B. and **Gulyás, B.** Lack of effect of reserpine-induced dopamine depletion on the binding of the dopamine-D3 selective radioligand, [11C]RGH-1756. *Brain Res. Bull.*, 67(2005):219-224. IF: 2.429
92. Halldin C, Lundberg J, Sóvágó J, **Gulyás B**, Guilloteau D, Vercouillie J, Emond P, Chalon S, Tarkiainen J, Hiltunen J, Farde L. [(11)C]MADAM, a new serotonin transporter radioligand characterized in the monkey brain by PET. *Synapse.* 58(2005):173-183. IF: 2.827
91. Sóvágó J, Makkai B, **Gulyás B**, Hall H. Autoradiographic mapping of dopamine-D/D receptor stimulated [S]GTPgammaS binding in the human brain. *Eur J Neurosci.* 22(2005):65-71. IF: 3.820
90. Seneca N, Andree B, Sjöholm N, Schou M, Pauli S, Mozley PD, Stubbs JB, Liow JS, Sóvágó J, **Gulyás B**, Innis R, Halldin C. Whole-body biodistribution, radiation dosimetry estimates for the PET norepinephrine transporter probe (S,S)-[18F]FMeNER-D2 in non-human primates. *Nucl Med Commun.* 26(2005):695-700. IF: 1.602
89. McCarron JA, Marchais-Oberwinkler S, Pike VW, Tarkiainen J, Halldin C, Sóvágó J, **Gulyás B**, Wikström HV, Farde L. Two C-methyl derivatives of [11C]WAY-100635--effects of an amido alpha-methyl group on metabolism and brain 5-HT1A receptor radioligand behavior in monkey. *Mol Imaging Biol.* 7(2005):209-219. IF: 3.844
88. Finnema SJ, Seneca N, Farde L, Shchukin E, Sóvágó J, **Gulyás B**, Wikström HV, Innis RB, Neumeyer JL, Halldin C. A preliminary PET evaluation of the new dopamine D(2) receptor agonist [(11)C]MNPA in cynomolgus monkey. *Nucl Med Biol.* 32(2005):353-360. IF: 2.713
87. Ryzhikov NN, Seneca N, Krasikova RN, Gomzina NA, Shchukin E, Fedorova OS, Vassiliev DA, **Gulyás, B.**, Hall H, Savic I, Halldin C. Preparation of highly specific radioactivity [(18)F]flumazenil and its evaluation in cynomolgus monkey by positron emission tomography. *Nucl Med Biol.* 32(2005):109-116. IF: 2.713
86. Szilágyi, G., Nagy, Z., Balkay, L., Boros, I., Emri, M., Lehel, S., Márián, T., Molnár, T., Szakáll, S., Trón, L., Bereczki, D., Csiba, L., Fekete, I., Kerényi, L., Galuska, L., Varga, J., Bönöczk, P., Vas, A., and **Gulyás, B.** Effects of vinpocetine on cerebral blood flow and metabolism in chronic ischaemic stroke patients after a two-week long administration: A PET study. *J. Neur. Sci.* 229-230(2005):275-284. IF: 2.366
85. **Gulyás, B.**, Halldin, C., Vas, A., Banati, R. B., Shchukin, E., Finnema, S., Tarkainen, J., Tihanyi, K., Szilágyi, G., and Farde, L. [¹¹C]Vinpocetine: a prospective peripheral benzodiazepine receptor ligand for primate PET studies. *J. Neur. Sci.* 229-230(2005):219-223. IF: 2.366
84. Kéri, S., **Gulyás, B.**, Benedek, G. and Janka, Z. Feature uncertainty: a novel test to probe prefrontal dysfunction in unaffected siblings of schizophrenia patients. *Neurosci. Lett.*, 375(2005):33-36. IF: 2.019
83. Marchais-Oberwinkler, S., Nowicki, B., Pike, V.W., Halldin, C., Sandell, J., Chou, Y.H., **Gulyás, B.**, Brennum, L.T., Farde, L., Wikström, H.V. N-Oxide analogs of WAY-100635: new high affinity 5-HT(1A) receptor antagonists. *Bioorg Med Chem.* 13(2005):883-893. IF: 2.018
82. Schou M, Halldin C, Sóvágó J, Pike VW, Hall H, **Gulyás B**, Mozley PD, Dobson D, Shchukin E, Innis RB, Farde L. PET evaluation of novel radiofluorinated reboxetine analogs as norepinephrine transporter probes in the monkey brain. *Synapse.* 53(2004):57-67. IF: 2.827
81. Sóvágó, J., Farde, L., Halldin, C., Langer, O., Laszlovszky, I., Kiss, B. and **Gulyás, B.** Positron emission tomographic evaluation of the putative dopamine-D3 receptor ligand, [11C]RGH-1756 in the monkey brain. *Neurochem Int.* 45(2004):609-17. IF: 3.211
80. Cselényi, Z., Lundberg, J., Halldin, C., Farde, L. and **Gulyás, B.** Joint explorative analysis of neuroreceptor subsystems in the human brain: application to receptor-transporter correlation using PET data. *Neurochem Int.* 45(2004):773-81. IF: 3.211
79. Savic, I., Lindström, P., **Gulyás, B.**, Halldin, C., André, B. and Farde, L. Limbic reductions of 5-HT_{1A} receptor binding in human temporal lobe epilepsy. *Ann. Neurol.* 62(2004):1343-1351. IF: 8.097

78. Kovács G., **Gulyás, B.**, Savic, I., Perrett, D. I., Cornwell, R. E., Little, A. C., Jones, B. C., Burt, D. M., Gál, V. and Vidnyánszky, Z. Smelling human sex hormone-like compounds affects face gender judgment of men. *NeuroReport*, 15(2004):1275-1277. IF: 2.351
77. McCarron, J.A., Pike, V.W., Halldin, C., Sandell, J., Sóvágó, J., **Gulyás, B.**, Cselényi, Z., Wikström, H.V., Marchais-Oberwinkler, S., Nowicki, B., Dolle, F. and Farde, L. The Pyridinyl-6 Position of WAY-100635 as a site for radiofluorination-effect on 5-HT(1A) receptor radioligand behavior in vivo. *Mol Imaging Biol.* 6(2004):17-26. IF: 3.844
76. **Gulyás, B.**, Kéri, S., O'Sullivan, B. T., Decety, J. and Roland, P. E. The putative pheromone androstadienone activates cortical fields in the human brain related to social cognition. *Neurochem. Int.* 44(2004):39-44. IF: 3.211
75. Kéri, S., Decety, J., Roland, P. E. and **Gulyás, B.** Feature uncertainty activates anterior cingulate cortex. *Human Brain Mapping* 21(2004):26-33. IF: 4.815
74. Vas, Á., Halldin, C., Sóvágó, J., Sandell, J., Cselényi, Z., Kiss, B., Kárpáti, E., Farde, L. and **Gulyás, B.** Positron emission tomography studies with orally administered [¹¹C]vinpocetine. (*Orvosi Hetilap*) (*Hungarian Medical Journal*), 144/47/(2003):2271-2276.
73. Schou, M., Halldin, C., Sóvágó, J., Pike, V. W., **Gulyás, B.**, Mozley, P. D., Johnson, D. P., Hall, H., Innis, R. R. and Farde, L. Specific in vivo binding to the norepinephrine transporter demonstrated with the PET radioligand, (S,S)-[¹¹C]MeNER. *Nucl Med Biol.* 30(2003):707-714. IF: 2.713
72. Kéri, S. and **Gulyás, B.** Four facets of a single brain: relationship among behavior, cerebral blood flow/metabolism, neuronal activity and neurotransmitter dynamics. *Neuroreport* 14(2003):1-11. IF: 2.351
71. Tárnok, Z. and **Gulyás, B.** Dyslexia: phenomenology and possible explanations. (*Pszichológiai Szemle*) (*Hungarian Review of Psychology*), 57:(2002)485 – 497.
70. **Gulyás, B.** and Szathmáry, E. Monkeys – a great asset to reveal human cognitive functions. *NeuroReport*, 17(2002):2167-2168 IF: 2.351
69. **Gulyás, B.**, Vas, Á., Halldin, H., Sóvágó, J., Sandell, J. Fredriksson, A., Stone-Elander, S., and Farde, L. Cerebral uptake of [¹¹C]vinpocetine and [¹¹C]ethanol in cynomolgous monkeys: A comparative preclinical PET study. *Nucl. Med. Biol.*, 29(2002)753-759. IF: 2.713
68. Vas, Á., Sóvágó, J., Halldin, C. Sandell, J., Karlsson, P., Kárpáti, E., Kiss, B., Cselényi, Z., Farde, L., and **Gulyás, B.** [¹¹C]-vinpocetin brain uptake and regional distribution after intravenous administration to healthy men: A PET study. (*Orvosi Hetilap*) *Hungarian Medical Journal*, 143/47/(2002):2631-2636.
67. Vas, Á., **Gulyás, B.**, Szabó, Z., Bönöczk, P., Csiba, L., Kiss, B., Kárpáti, E., Pánczél, G. and Nagy Z. Clinical and non-clinical investigations using positron emission tomography, near infrared spectroscopy and transcranial Doppler studies on the neuroprotective drug vinpocetine: A summary of evidences. *J. Neurol. Sci.*, 203-204(2002):259-262. IF: 2.366
66. Sandell, J., Halldin, C., Sóvágó, J., Chou, Y. H., **Gulyás, B.**, Yu, M., Emond, P., Någren, K., Guilloteau, D., and Farde, L. PET examination of [¹¹C]5-methyl-6-nitroquipazine, a radioligand for visualization of the serotonin transporter. *J. Nucl. Med.*, 29(2002):651-656. IF: 5.362
65. **Gulyás, B.**, Sóvágó, J., Sandell, J., Halldin, C., Cselényi, Z. M., Vas, Á., Kiss, B., Kárpáti, E. and Farde, L. Drug distribution in man: a positron emission tomography study after oral administration of the labelled neuroprotective drug vinpocetine. *Eur. J. Nucl. Med.*, 29(2002):1031-1038. IF: 3.935
64. Cselényi, Z., Olsson, H., Farde, L. and **Gulyás, B.** Wavelet-aided parametric mapping of central D2 receptors using the high affinity PET radioligand [¹¹C]FLB 457. *Neuroimage*, 17(2002)47-60. IF: 4.869
63. Savic, I., **Gulyás, B.**, and Berglund, H. Odorant differentiated pattern of cerebral activation: a comparison of acetone and vanillin. *Human Brain Mapping*, 17(2002):17-27. IF: 4.815
62. **Gulyás, B.**, Halldin, C., Sandell, J., Swahn, C.-G., Bönöck, P., Kiss, B., Vas, Á., Cselényi, Z. M., Vas, Á. and Farde, L. PET studies on the brain uptake and regional distribution of [¹¹C]vinpocetine in human subjects. *Acta Neurol. Scand.*, 106(2002):325-332. IF: 1.712

61. Larsson, J., Amunts, K., **Gulyás, B.**, Malikovic, A., Zilles, K. and Roland, P. E. Perceptual segregation of overlapping shapes activates posterior extrastriate visual cortex in man. *Exp. Brain Res.*, 143(2002):1-10. IF: 2.304
60. Hall, H., Varnäs, K., Sandell, J., Halldin, C., Farde, L., Vas, Á., Kárpáti, E. and **Gulyás, B.** Autoradiographic evaluation of [¹¹C]vinpocetine binding in the human postmortem brain. *Acta Biol. Hung.*, 53(2002):59-66. IF: 0.425
59. Sóvágó, J., Dupuis, D.S., **Gulyás, B.** and Hall, H. An overview on functional receptor autoradiography using [³⁵S]GTPγS. *Brain Res. Rev.*, 38(2001):149-164. IF: 4.617
58. Halldin, C., **Gulyás, B.** and Farde, L. PET studies with Carbon-11 radioligands in neuropsychological drug development. *Current Radiopharm. Design*, (2001):1907-1929. IF: 5.385
57. Savic, I. Berglund, H., **Gulyás, B.**, Roland, P. E. Smelling of odorous sex hormone-like compounds causes sex-differentiated hypothalamic activations in humans. *Neuron* 31(2001):661-668. IF: 14.439
56. Bengtsson, S., Berglund, H., **Gulyás, B.**, Cohen, E. and Savic, I. Brain activation during odor perception in males and females. *Neuroreport*, 12(2001):2027-2033. IF: 2.351
55. Halldin, C., **Gulyás, B.**, Langer, O. and Farde, L. Brain radioligands - State of the art and new trends. *Q J Nucl Med* 2(2001):139-152. IF: 2.194
54. **Gulyás, B.** Personality trait and disposition - a new opening for functional neuroimaging. *Neuroreport* 12(2001):A49. IF: 2.351
53. **Gulyás, B.**, Bönöczk, P., Vas, Á., Csiba, L., Bereczki, D., Boros, I., Szakáll, S., Balkay, L., Emri, M., Fekete, I., Galuska, L., Kerényi, L., Lehel, S., Márián, T., Molnár, T., Varga, J. and Trón, L. The hemodynamic and metabolic effect of a single-dose intravenous vinpocetine treatment in post-stroke patients. (*Orvosi Hetilap*) *Hungarian Medical Journal*, 142(2001):443-449.
52. **Gulyás, B.** The dynamics of cortical macronetworks in the human brain. *Brain Res. Bull.* 53(2001):251-253. IF: 2.429
51. **Gulyás, B.** Neural networks for internal reading and visual imagery of reading: A PET study. *Brain Res. Bull.* 53(2001):319-328. IF: 2.429
50. Bönöczk, P., **Gulyás, B.**, Ádám.Vizi, V., Nemes, A., Kárpáti, E., Kiss, B., Kapás, M., Szántay, C., Koncz, I., Zelles, T. and Vas, Á. Role of sodium channel inhibition in neuroprotection: effect of vinpocetine. *Brain Res. Bull.* 53(2000):245-254. IF: 2.429
49. Langer, O., **Gulyás, B.**, Sandell, J., Laszlovszky, I., Kiss, B., Domány, G., Ács, T., Farde, L. and Halldin, C. Radiochemical labelling of the dopamine D3 receptor ligand RGH-1756. *J. Labelled Cpd. Radiopharm.* 43(2000)1069-1074. IF: 1.048
48. Savic, I. and **Gulyás, B.** PET shows that odors are processed both ipsilaterally and contralaterally to the stimulated nostril. *NeuroReport* 11(2000):2861-2866. IF: 2.351
47. Molnár, M. Valikovics, A., Trón, L., Diószeghy, P. Mechler, F. and **Gulyás, B.** Cerebral blood flow and glucose metabolism in different mitochondrial disorders. *Neurology* 55(2000):544-548. IF: 5.973
46. Vidnyánszky, Z., **Gulyás, B.** and Roland, P. E. Visual exploration of form and position with identical stimuli: functional anatomy with PET. *Human Brain Mapping* 11(2000):104-116. IF: 4.815
45. Bereczki, D. Csiba, L. and **Gulyás, B.** Investigations into the central nervous system's metabolism and blood flow with various functional imaging techniques. *Clinical Neuroscience* 53(2000):77-91. IF: 1.076
44. **Gulyás, B.** "Overlearning" - vista into the nature of conscious processes. *NeuroReport* 3/11(2000):i-ii. IF: 2.351
43. Savic, I., **Gulyás, B.**, Larson, M. and Roland, P. E. Olfactory functions are mediated by parallel and hierarchical processing. *Neuron* 26(2000):735-745. IF: 14.439

42. Tárnok Zs., Kovács Gy., and **Gulyás B.** A figyelemhiányos hiperaktivitási zavar és agyi képalkotó eljárások. (Attention deficit hyperactivity disease and functional neuroimaging techniques) (*Pszichológiai Szemle*) (*Hungarian Review of Psychology*), LIV(1999): 59-70.
41. **Gulyás, B.**, Halldin, C., Karlsson, P., Chou, Y.-H., Swahn, C.-G., Bönöczk, P., Paróczai, M. and Farde, L. Brain uptake and plasma metabolism of ¹¹C-vinpocetine. A PET-study in cynomolgus monkey. *J. Neuroimaging*, 9(1999):217-222. IF: 1.068
40. Larsson, J., Amunts, K., **Gulyás, B.**, Malikovic, A., Zilles, K. and Roland, P. E. Neuronal correlates of real and illusory contour perception: functional anatomy with PET. *Eur. J. Neurosci.* 11(1999):4024-4036. IF: 3.820
39. **Gulyás, B.** and Lestár, M. (1999) Functional neuroimaging-functional neuropathology: the quest for validation. *Neuroreport* 10:R1 IF: 2.351
38. **Gulyás, B.** The dynamics of cortical networks in the human brain. *NeuroReport*, 9/10(1999):i-ii. IF: 2.351
37. Cselényi, Z., Hall, H., Csiba, L. and **Gulyás, B.** Applications of whole-hemisphere autoradiography in neuroscience and neurology. *Hungarian Medical Weekly*, 140(1999):1737-1742.
36. **Gulyás, B.**, Halldin, C., Karlsson, P., Chou, Y.-H., Swahn, C.-G. and Farde, L. Brain uptake and plasma metabolism of ¹¹C-vinpocetine. A PET-study in cynomolgus monkey. (*Orvosi Hetilap*) *Hungarian Medical Weekly*, 140(1999):1687-1691.
35. **Gulyás, B.**, Roland, P. E., Cowey, A., Heywood, C. A., and Popplewell, D. Visual form discrimination from texture cues: A PET study. *Human Brain Mapping*. 6(1998):115-127. IF: 4.815
34. Szakáll, S., Boros, I., Balkay, L., Emri, M., Fekete, I., Kerényi, L., Lehel, S., Márián, T., Molnár, T., Varga, J., Galuska, L., Trón, L., Csiba L. and **Gulyás, B.** The cerebral effects of a single-dose intravenous vinpocetine in chronic stroke patients: A PET study. *J. Neuroimaging*, 8(1998)197-204. IF: 1.068
33. Savic, I., Blomqvist, G., Halldin, C., Litton, J. E. and **Gulyás, B.** Regional increases in (11C)flumazenil binding after epilepsy surgery. *Acta Neurol. Scand.* 97(1998):279-286. IF: 1.712
32. Csépany, T., **Gulyás, B.**, Trón, L., Szakáll, S., Kiss, E., Kollár, J., Sikula, J., Szegedi, G., and Csiba, L. Cerebral positron emission tomographic study in systemic lupus erythematosus. (*Orvosi Hetilap*) *Hungarian Medical Journal*, **138**(1997):1947-1952.
31. Trón, L., Ésik, O., Borbély, K., Clemens, B., Csépany, T., Csernay, L., Csiba, L., Degrell, I., Halász, P., Holló, A., Illés, Á., Kollár, J., Köszegi, Zs., Németh, Gy., Novák, L., Nyáry, I., Pávics, L., Sikula, J., Szakáll, Sz. and **Gulyás, B.** First experiences with positron emission tomography in Hungary. (*Orvosi Hetilap*) *Hungarian Medical Journal*, **138**(1997):259-269
30. Roland, P. E. and **Gulyás, B.** Assumptions and validations of statistical tests for functional neuroimaging. *Eur. J. Neurosci.* **8**(1996):2232-2235. IF: 3.820
29. **Gulyás, B.**, Trón, L., Balkay, L., Emri, M., Márián, T., Molnár, T. and Tóth, Gy. Regional glucose metabolic rates in the human brain: A PET study. *Acta Biol. Hung.* **47**(1996):291-306. IF: 0.425
28. Larsson, J., **Gulyás, B.**, and Roland, P. E. Cortical representation of self-initiated rhythmic finger movements. *NeuroReport*, **5**(1996):463-468. IF: 2.351
27. Kinomura, S., Larsson, J., **Gulyás, B.**, and Roland, P. E. Attention activates the midbrain reticular formation and thalamic interlaminar nuclei in man. *Science*, **271**(1996):512-515. IF: 31.853
26. **Gulyás, B.**, Trón, L., Csiba, L., Ésik, O., Pálincás, J., and Szabó, Zs. PET: Foundations and applications. *Hungarian Medical Journal (Orvosi Hetilap)* **137**(1996):731-738.
25. **Gulyás, B.** and Roland, P. E. Cortical fields participating in spatial frequency and orientation discrimination: functional anatomy by positron emission tomography. *Human Brain Mapping* **3**(1995):133-152. IF: 4.815
24. **Gulyás, B.** and Persson, H. E. Visual imagery of reading: A Brain Electric Activity Mapping (BEAM) study. *Nieuw Archief voor Wiskunde* **13**(1995):313-323.

23. Roland, P. E. and **Gulyás, B.** Visual memory, visual imagery, and visual recognition of large field patterns by the human brain. Functional anatomy by positron emission tomography. *Cerebr. Cortex*, **5**(1995):79-93. IF: 5.322
22. Roland, P. E. and **Gulyás, B.** Beyond 'pet' methodologies to converging evidence. Reply. *Trends Neurosci.* **17**(1994):515-516. IF: 14.794
21. **Gulyás, B.**, Roland, P. E., Heywood, C. A., Popplewell, D. B., and Cowey, A., Visual form discrimination from luminance or disparity cues: Functional anatomy by positron emission tomography. *NeuroReport* **5**(1994):2367-2371. IF: 2.351
20. **Gulyás, B.**, Heywood, C. A., Popplewell, D. B., Cowey, A., and Roland, P. E., Visual form discrimination from colour or motion cues: Functional anatomy by positron emission tomography. *Proc. Natl. Acad. Sci. US*, **91**(1994):9965-9969. IF: 10.452
19. **Gulyás, B.** and Roland, P. E., Processing and analysis of form, colour and binocular disparity in the human brain: functional anatomy by positron emission tomography. *Eur. J. Neurosci.*, **6**(1994):1811-1827. IF: 3.820
18. Roland, P. E. and **Gulyás, B.** Visual representations of scenes and objects: retinotopical or non-retinotopical? *Trends Neurosci.* **17**(1994):294-297. IF: 14.794
17. Roland, P. E. and **Gulyás, B.** Visual imagery and visual representation. *Trends Neurosci.* **17**(1994):281-287. IF: 14.794
16. **Gulyás, B.** and Roland, P. E., Binocular disparity detection in human visual cortex: Functional anatomy by positron emission tomography. *Proc. Natl. Acad. Sci. US*, **91**(1994):1239-1243. IF: 10.452
15. Decety, J., Kawashima, R., **Gulyás, B.**, and Roland, P. E., Preparation for reaching: a PET study. *Neuroreport*, **3**(1992):761-764. IF: 2.351
14. Roland, P. E. and **Gulyás, B.** Anatomical structures in the human brain participating in discrimination of visual patterns and formation of visual memories, *Biomedical Research* **13**(1992):11-14. IF: 0.329
13. **Gulyás, B.** and Roland, P. E., Cortical fields participating in form and colour discrimination in the human brain, *Neuroreport*, **2**(1991):585-588. IF: 2.351
12. Duysens, J., **Gulyás, B.**, and Maes, H., Temporal integration in cat visual cortex: a test of Bloch's law, *Vision Res.*, **31**(1991):1517-1528. IF: 1.812
11. Roland, P. E., **Gulyás, B.**, Seitz, R. J., Bohm, C., Greitz, T., and Stone-Elander, S., Functional anatomy of storage, recall, and recognition of a visual pattern in man, *Neuroreport* **1**(1990):53-56. IF: 2.351
10. Spileers, W., Orban, G. A., **Gulyás, B.**, and Maes, H., Selectivity of cat area 18 neurons for direction and speed in depth, *J. Neurophysiol.* **63**(1990):936-954. IF: 3.592
9. **Gulyás, B.**, L. Lagae, Eysel, U., and Orban, G. A., Corticofugal feedback influences the responses of geniculate neurons to moving stimuli, *Exp. Brain Res.* **79**(1990):441-446. IF: 2.304
8. **Gulyás, B.**, Spileers, W., and Orban, G. A., Modulation by a moving texture of cat area 18 neuron responses to moving bars, *J. Neurophysiol.* **63**(1990):404-423. IF: 3.592
7. Lagae, L., **Gulyás, B.**, Raiguel, S., and Orban, G. A., Laminar analysis of motion information processing in macaque V5, *Brain Res.*, **496**(1989):361-367. IF: 2.389
6. Raiguel, S., Lagae, L., **Gulyás, B.**, and Orban, G. A., Response latencies of visually responsive cells in macaque area V1, V2 and V5, *Exp. Brain. Res.*, **493**(1989):155-159. IF: 2.304
5. Orban, G. A., **Gulyás, B.**, Spileers, W., and Maes, H., Responses of cat striate neurons to moving light and dark bars: changes with eccentricity, *J. Opt. Soc. Am. A.*, **4**(1987):1653-1665. IF: 2.012
4. Orban, G. A., **Gulyás, B.**, and Vogels, R., Influence of a moving textured background direction selectivity of cat striate neurons, *J. Neurophysiol.*, **57**(1987):1792-1812. IF: 3.592

3. **Gulyás, B.**, Orban, G. A., Duysens, J., and Maes, H., The suppressive influence of moving textured background on responses of cat striate neurons to moving bars, *J. Neurophysiol.*, **57**(1987):1767-1791. IF: 3.592
2. **Gulyás, B.** Additional bridges in the universal cyclicity relation, *Acta Geol. Acad. Sci. Hung.*, **1-4**(1980):211-227.
1. **Gulyás, B.**, Élet és Információ (Life and Information), *Biológia*, **2**(1976):79-82. (in Hungarian)

Meeting abstracts:

>200 (cfr. ORCID, Web of Science, Google Scholar)

Book chapters:

46. Lenin Fred A., Kumar, S.N., Padmanabhan, P., Gulyas, B., Kumar, A.H. Fuzzy Crow Search Optimization for Medical Image Segmentation. In: Oliva, D. and Hinojosa, S. (eds.), Applications of Hybrid Metaheuristic Algorithms for Image Processing. Studies in Computational Intelligence 890. Springer Nature, 2020. https://doi.org/10.1007/978-3-030-40977-7_18
45. Lenin Fred, A., Kumar, S.N., Padmanabhan, P., Gulyas, B., Kumar, A.H. Analysis of Segmentation Algorithms for Detection of Anomalies in MR Brain Images. In: Jayakumari, J. et al. (eds.), Advances in Communication Systems and Networks, Lecture Notes in Electrical Engineering 656. 2021 https://doi.org/10.1007/978-981-15-3992-3_11
44. Kumar, S.N., Lenin Fred, A., Padmanabhan, P., Gulyas, B., Kumar, A. Deep Learning Algorithms in Medical Image Processing for Cancer Diagnosis: Overview, Challenges and Future. In: Kose, U. and Alzubi, J.(eds.), Deep Learning for Cancer Diagnosis. Studies in Computational Intelligence 908. Springer Nature Singapore Pte Ltd. 2021. https://doi.org/10.1007/978-981-15-6321-8_3
43. Kumar, S.N., Lenin Fred, A., Kumar, A.H., Padmanabhan, P., Gulyás, B. Multilevel thresholding using crow search optimization for medical images. In: Dinesh C.S. Bisht and Mangey Ram (eds), Computational Intelligence, p231–258. De Gruyter, 2021. , <https://doi.org/10.1515/9783110671353-014>. eISBN: 9783110671353.
42. Kumar S.N., Lenin Fred A., Miriam, J., Padmanabhan P., Gulyas B., Kumar H.A. Non-Linear Tensor Diffusion Based Unsharp Masking for Filtering of COVID-19 CT Images. In: Raza K. (eds) Computational Intelligence Methods in COVID-19: Surveillance, Prevention, Prediction and Diagnosis. Studies in Computational Intelligence, vol 923. Springer, 2021. https://doi.org/10.1007/978-981-15-8534-0_22
41. Kumar, S.N., Lenin Fred, A., Padmanabhan, P., Gulyás, B., Kumar, A. Multimedia-Based Learning Tools and Its Scope, Applications for Virtual Learning Environment. In: Deyasi A., Mukherjee S., Mukherjee A., Bhattacharjee A.K., Mondal A. (eds) Computational Intelligence in Digital Pedagogy. Intelligent Systems Reference Library, vol 197. Springer, 2021. https://doi.org/10.1007/978-981-15-8744-3_3.
40. Lenin Fred, A., Kumar, S.N., Padmanabhan, P., Gulyás, B., Kumar, A. A novel neutrosophic approach-based filtering and Gaussian mixture modeling clustering for CT/MR images. In: Artificial Intelligence for Data-Driven Medical Diagnosis. De Gruyter, 2021. DOI: <https://doi.org/10.1515/9783110668322-007>
39. S.N Kumar, Lenin Fred A, Miriam LJ, Kumar A, Padmanabhan P, Gulyás B (2021). Improved FCM Based on Gaussian Kernel and Crow Search Optimization for ROI Extraction on Corona Virus Disease (COVID-19) CT Images. In: Translational Bioinformatics Applications in Healthcare. CRC press, 2021. DOI-10.1201/9781003146988-12
38. Lenin Fred A , Miriam L.J ,Kumar, S.N., Kumar, A., Padmanabhan, P., Gulyás, B. Lossless Medical Image Compression Using Hybrid Block-Based Algorithm for Telemedicine Application. In: Translational Bioinformatics Applications in Healthcare. CRC press, 2021. DOI: 10.1201/9781003146988-11
37. Kumar, S.N., Lenin Fred, A., Jonisha Miriam, L.J., Kumar, A., Padmanabhan, P., Gulyás, B. Region of Interest Detection in COVID-19 CT Images Using Neutrosophic Logic. In: Health, CRC Press, 2021. DOI: 10.1201/9781003161066-19
36. Kumar, S.N., Lenin Fred, A., Jonisha Miriam, L.J., Kumar, A., Padmanabhan, P., Gulyás, B. Adaptive Regularized Gaussian Kernel FCM for the Segmentation of Medical Images, An Artificial Intelligence-Based IoT Implementation for Teleradiology Network. In: Artificial Intelligence Techniques in IoT Sensor Networks (1st ed.). CRC Press, 2021. <https://doi.org/10.1201/9781003007265>
35. Introduction. In: Vasbinder, J.W., Gulyás, B. and Sim, J. Y. H. (eds). Grand Challenges for Science in the 21st Century. World Scientific Publishing Company, 2018. Pp. 1-2.
34. Introduction. In: Vasbinder, J.W. and Gulyás, B. Cultural Patterns and Neurocognitive Circuits. (Series title: Exploring Complexity: Volume 2. East–West Connections) World Scientific, 2016. pp. vii-ix.
33. Halldin, C., Gulyás, B., Coenen, H. H., Guilloteau, D., Långström, Salvadori, P., Verbruggen, A., Windhorst, A. Achievements in Drug Development during the past 25 years. In: Bombardieri, E. and Frangos, S. (eds.)

- Nuclear Medicine: Fusing the Ideas of Democritus and Hippocrates. 25 years of the EANM. EANM, 2012. pp. 63-67.
32. Fedor, A., Pléh, C., Brauer, J., Caplan, D., Friederici, A.D., Gulyás, B., Hagoort, P., Nazir, T. and Singer, W. What Are the Brain Mechanisms Underlying Syntactic Operations? In: Bickerton, D. and Szathmáry, E. (eds.) *Biological Foundations and Origin of Syntax*. MIT Press, 2009. pp. 299-324.
 31. Gulyás, B. Visions, Visual Perception and Visual Imagery. A Neurobiological Approach. In: William A. Christian and Gábor Klaniczay (eds.) *The "Vision Thing". Studying Divine Intervention*. Collegium Budapest Press, 2009. pp. 481-497.
 30. Gulyás, B. History, personality – and the human brain. In: *Hommage à Kosáry Domokos, president of the Hungarian Academy of Sciences*. Budapest, Academic Press, 2009. pp. 163-174.
 29. Gulyás, B. Functional Neuroimaging and the Logic of Brain Operations. Methodologies, Caveats, and Fundamental Examples from Language Research. In: Derek Bickerton and Eörs Szathmáry (eds.) *Biological Foundations and Origin of Syntax*. MIT Press, 2009. pp. 41-62.
 28. Gulyás, B. Functional Neuroimaging and the Logic of Conscious and Unconscious Mental processes. In: Kraft, E., Gulyás, B. and Pöppel, E. (eds.) *Neural Correlates of Thinking*. Springer Verlag, 2008. pp. 139-171.
 27. Gulyás, B. Brain and Inner Silence: A Neurobiologist's View. In: Vizi, E. S. and Kucsera, T. G. (eds.) *Europe in a World in Transformation*. Budapest, Hungarian Academy of Sciences, 2008. pp. 73-91.
 26. Gulyás, B. and Mórocz, I. Á. Functional imaging techniques. In: Kállai, J., Bende, I., Karádi, K., and Racsmány, M. (eds.) *Introduction to Neuropsychology*. Budapest, Medicina, 2008. pp. 45-68.
 25. Gulyás, B. and Sjöholm, N. Principles of Positron Emission Tomography. In: *Functional Neuroimaging in Clinical Populations*. (Eds.: Frank G. Hillary and John DeLuca). Guilford Press, 2007. pp. 3-30.
 24. Gulyás, B., Halldin, C. and Mazière, B. In vivo imaging of neurotransmitter systems. In: *Handbook of Neurochemistry*. (Eds.: E. Sylvester Vizi and Michel Hamon). Springer Verlag, 2008. pp. 75-100.
 23. Halldin, C., Gulyás, B. and Farde, L. PET for Drug Development. In: *From Morphological Imaging to Molecular Targeting*. Springer Verlag, 2004. p. 95-110.
 22. Gulyás, B., Kovács, G. and Vidnyánszky, Z. Consciousness and cognitive neurosciences. In: Pléh, C., Kovács, G. and Gulyás, B. (eds.) *Cognitive Neuroscience*. Budapest, Osiris Press, 2003. pp. 619-649.
 21. Gulyás, B., Functional neuroimaging in cognitive neurosciences, In: Pléh, C., Kovács, G. and Gulyás, B. (eds.) *Cognitive Neuroscience*. Budapest, Osiris Press, 2003. pp. 103-125.
 20. Kéri, Sz. and Gulyás, B. Electrophysiological techniques used in cognitive neurosciences. In: Pléh, C., Kovács, G. and Gulyás, B. (eds.) *Cognitive Neuroscience*. Budapest, Osiris Press, 2003. pp. 81-96.
 19. Kéri, Sz. and Gulyás, B. Localisation and lesion analysis in the cognitive neurosciences. In: Pléh, C., Kovács, G. and Gulyás, B. (eds.) *Cognitive Neuroscience*. Budapest, Osiris Press, 2003. pp. 67-80.
 18. Gulyás, B. Can we map conscious and non-conscious cognitive functions with functional neuroimaging techniques? In: Vizi, E. S., Altrichter, F., Nyiri, K. and Pléh, C. (eds.) *Brain and Consciousness*. Budapest, Osiris Press, 2002. pp. 61-94.
 17. Cselényi, Z., Hall, H. and Gulyás, B. Neurotransmitter and receptor studies with autoradiography. In: Vizi, E. S. (ed.) *Human Pharmacology*. 2nd edition. Budapest, Medicina, 2002. pp. 1202-1211.
 16. Gulyás, B. The application of positron emission tomography in human pharmacology. In: Vizi, E. S. (ed.) *Human Pharmacology*. 2nd edition. Budapest, 2002. pp. 1188-1202.
 15. Ésik, O., Gulyás, B. and Trón, L. Diagnosis, differential diagnosis, and follow-up of tumors by means of FDG PET. In: Gulyás, B. and Müller-Gärtner, H. W. (eds.) *Positron emission tomography: A critical assessment of recent trends*. Dordrecht: Kluwer Academic Publisher, 1998. pp. 199-212.
 14. Leövey, J., Ésik, O., Gulyás, B., Tóth, E., Molnár, T. and Trón, L. Evaluation of metastatic lymph nodes by means of FDG PET. In: Gulyás, B. and Müller-Gärtner, H. W. (eds.) *Positron emission tomography: A critical assessment of recent trends*. Dordrecht: Kluwer Academic Publisher, 1998. pp. 223-226.

13. Gulyás, B. PET centres around the world. In: Gulyás, B. and Müller-Gärtner, H. W. (eds.) Positron emission tomography: A critical assessment of recent trends. Dordrecht: Kluwer Academic Publisher, 1998. pp. 429-462.
12. Gulyás, B. (ed.) PET centers and PET projects in Central and Eastern Europe. In: Gulyás, B. and Müller-Gärtner, H. W. (eds.) Positron emission tomography: A critical assessment of recent trends. Dordrecht: Kluwer Academic Publisher, 1998. pp. 417-428.
11. Gulyás, B., Csiba, L., Kerényi, L., Galuska, L., and Trón, L. PET studies on chronic stroke patients before and after a single-dose intravenous Cavinton infusion. In: Gulyás, B. and Müller-Gärtner, H. W. (eds.) Positron emission tomography: A critical assessment of recent trends. Dordrecht: Kluwer Academic Publisher, 1998. pp. 291-306.
10. Gulyás, B. Functional organization of human visual cortical areas. In: Peters, A. and Jones, E. G. (eds.) Cerebral Cortex. Vol. 12. New York and London: Plenum Press, 1997. pp. 743-775.
9. Gulyás, B. The application of positron emission tomography in human pharmacology. In: Vizi, E. S. (ed.) Human Pharmacology. Budapest, Medicina, 1997. pp. 1297-1306.
8. Roland, P. E., Kawashima, R., Gulyás, B., and O'Sullivan, B., PET in cognitive neuroscience: Methodological constraints, strategies, and examples from learning and memory. In: Gazzaniga, M. (ed.) Handbook of Cognitive Neuroscience. 1994. pp. 781-789.
7. Gulyás, B. and Roland, P. E., Visual cortical regions involved in stereovision. In: Gulyás, B., Ottoson, D., and Roland, P. E. (eds.) Functional Organization of the Human Visual Cortex. Oxford: Pergamon Press, 1993. pp. 341-357.
6. Gulyás, B. In: Chadwick, D. J. and Whelan, J. (eds.) Exploring brain functional anatomy with positron tomography. CIBA Symposium series, No. 163. Chichester: John Wiley & Sons, 1991. pp. 102, 159-161, 209.
5. Roland, P. E., Gulyás, B., and Seitz, R., Structures in the human brain participating in visual learning, tactile learning, and motor learning. In: Squire, L. (ed.) Memory: Organization and Locus of Change. Oxford: University Press, 1991. pp. 95-113.
4. Orban, G. A., Lagae, L., Raiguel, S., Gulyás, B., and Maes, H., Analysis of complex motion signals in the brain of cats and monkeys, In: Models of Brain Function. Cotterill, R. M. J. (ed.), Cambridge: Cambridge University Press, 1989. pp. 151-165.
3. Orban, G. A., and Gulyás, B., Image segregation by motion: cortical mechanisms in neural networks. In: Neural Computers. (NATO ASI Series, Series F: Computer and Systems Sciences, Vol. 41). Eckmiller, R. and Malsburg, Ch. v. d. (eds.). Berlin: Springer Verlag, 1988. pp. 149-158.
2. Orban, G. A., Gulyás, B., and Spileers, W., Influence of moving textured backgrounds on responses of cat area 18 cells to moving bars. In: Progress in Brain Research. Vision within Extrageniculo-Striate Systems. Vol. 75. Hicks, T. P. and Benedek, G. (eds.). Amsterdam: Elsevier, 1988. pp. 137-145.
1. Gulyás, B., On Biological Hysteresis Cycles, In: Cyclicity. Theory and Practice. E. Szádeczky-Kardoss (ed.) Budapest: Hung. Acad. Sci., 1978. pp. 81-82.

Books:

15. Gulyás, B., Manger, P., Molnár, Z. (eds.) Minor Senses in Humans. World Scientific Publishing Company, 2022. (committed)
14. Gulyás, B., Padmanabhan, P., Fred, A.L., Kumar, T.R.S., Kumar, S. (eds.) ICTMI 2017 – Proceedings of the International Conference on Translational Medicine and Imaging. Springer, 2018. ISBN 978-981-13-1476-6.
13. Vasbinder, J.W., Gulyás, B. and Sim, J. Y. H. (eds). Grand Challenges for Science in the 21st Century. World Scientific Publishing Company, 2018. ISBN: 978-981-3276-43-7.
12. Tomasz Jadczyk, Ewa Bryndza Tfaily, Sachin Mishra, Marek Jędrzejek, Parasuraman Padmanabhan, Wojciech Wojakowski, Stárek Zdeněk, Sylvain Martel, Balázs Gulyás. (authors) Innovative Diagnostics and Treatment:

Nanorobotics and Stem Cells. Nanotheranostics Series. Springer, 2017. ISBN 978-981-10-4527-1
<http://www.springer.com/us/book/9789811045264>

11. Gulyás, B. and Vasbinder, J.W. Cultural Patterns and Neurocognitive Circuits. II. (Series title: Exploring Complexity: Volume 2. East–West Connections) World Scientific Publishing Company, 2017. ISBN-13: 978-9813230477
10. Vasbinder, J.W. and Gulyás, B. Cultural Patterns and Neurocognitive Circuits. I. (Series title: Exploring Complexity: Volume 2. East–West Connections) World Scientific Publishing Company, 2016. Pp. 212. ISBN: 978-981-3147-48-5
9. Kraft, E., Gulyás, B. and Pöppel, E. (eds.) Neural Correlates of Thinking. Springer Verlag, 2008. xv + 285 p. ISBN 978 3 540 68042 0
8. Gulyás, B. (editor-in-chief) World Science Forum – Budapest. Hungarian Academy of Sciences, Budapest, 2004 September. 92 p.
7. Pléh, C., Kovács, G. and Gulyás, B. (eds.) Cognitive Neuroscience. Budapest, Osiris Press, 2003. 832 p. ISBN 963 389 313 5.
6. Gulyás, B. (ed.) European PET Centers 1996-1997. Debrecen: DOTE, 1998. p. 145.
5. Gulyás, B. and Müller-Gärtner, H. W. (eds.) Positron emission tomography: A critical assessment of recent trends. Dordrecht: Kluwer Academic Publisher, 1998. p. 482. ISBN 0 7923 5091 X
4. Gulyás, B., Ottoson, D., and Roland, P. E. (eds.) Functional Organization of the Human Visual Cortex. Oxford: Pergamon Press, 1993. p. 391. ISBN 0 08 042004 4.
3. Gulyás, B. Relative Motion Sensitivity in the Visual System of Cats and Monkeys. Leuven: Leuven University Press, 1988. p. V + 165. ISBN 90 6186 277 9.
2. Gulyás, B. (ed.) The Brain-Mind Problem. Philosophical and Neurophysiological Approaches. Leuven and Assen: Leuven University Press and Van Gorcum, 1987. p. XI+119. ISBN 90 6186 246 9
1. Gulyás, B., Emergent Evolutionism and the Brain-Mind Problem. K.U.Leuven: Higher Institute of Philosophy, 1984. p. XI+120.

Guest editor of peer reviewed journal volumes:

4. Innovation, Volume 16, No. 1. 2018. Volume on Aging.
<https://www.innovationmagazine.com/volumes/v16n1/contents.html>
3. NeuroImage, Special Issue, 2004. Tenth Annual Meeting of the Organization for Human Brain Mapping. (95 pp.)
2. Brain Research Bulletin, Vol 54/3, 2001, dedicated volume. The dynamics of cortical networks in the human brain. (pp. 251-328)
1. Hungarian Science, dedicated volume, October 1999. PET in Hungary and world-wide. (138 pp.)

Contribution to book publications (assisting Sydney Brenner):

3. Sydney Brenner: Loose Ends... False Starts. World Scientific Publishing Company, 2019. ISBN 978-981-120-816-4
2. Sydney Brenner's 10-on-10: The Chronicles of Evolution. Wildtype Books, 2018. 272 pages.
<https://doi.org/10.1142/as001> ISBN 978-9821-11-9716-8718-6
1. In the Spirit of Science. Lectures by Sydney Brenner on DNA, Worms and Brains. World Scientific Publishing Company, 2018. 128 pages. <https://doi.org/10.1142/11029> ISBN 978-981-3271-73-9