

# 18F FEPPA positron emission tomography

- 1: Young JW, Barback CV, Stolz LA, Groman SM, Vera DR, Hoh C, Kotta KK, Minassian A, Powell SB, Brody AL. MicroPET evidence for a hypersensitive neuroinflammatory profile of gp120 mouse model of HIV. *Psychiatry Res Neuroimaging*. 2022 Apr;321:111445. doi: 10.1016/j.psychres.2022.111445. Epub 2022 Jan 26. PMID: 35101828.
- 2: Delage C, Vignal N, Guerin C, Taib T, Barboteau C, Mamma C, Khacef K, Margail I, Sarda-Mantel L, Rizzo-Padoin N, Hontonnou F, Marchand-Leroux C, Lerouet D, Hosten B, Besson V. From positron emission tomography to cell analysis of the 18-kDa Translocator Protein in mild traumatic brain injury. *Sci Rep*. 2021 Dec 14;11(1):24009. doi: 10.1038/s41598-021-03416-3. PMID: 34907268; PMCID: PMC8671393.
- 3: Joers V, Masilamoni G, Kempf D, Weiss AR, Rotterman TM, Murray B, Yalcin- Cakmakli G, Voll RJ, Goodman MM, Howell L, Bachevalier J, Green SJ, Naqib A, Shaikh M, Engen PA, Keshavarzian A, Barnum CJ, Nye JA, Smith Y, Tansey MG. Microglia, inflammation and gut microbiota responses in a progressive monkey model of Parkinson's disease: A case series. *Neurobiol Dis*. 2020 Oct;144:105027. doi: 10.1016/j.nbd.2020.105027. Epub 2020 Jul 24. PMID: 32712266; PMCID: PMC7484290.
- 4: Vignal N, Boulay AC, San C, Cohen-Salmon M, Rizzo-Padoin N, Sarda-Mantel L, Declèves X, Cisternino S, Hosten B. Astroglial Connexin 43 Deficiency Protects against LPS-Induced Neuroinflammation: A TSPO Brain  $\mu$ PET Study with [ $^{18}$ F]FEPPA. *Cells*. 2020 Feb 7;9(2):389. doi: 10.3390/cells9020389. PMID: 32046185; PMCID: PMC7072124.
- 5: Rathitharan G, Truong J, Tong J, McCluskey T, Meyer JH, Mizrahi R, Warsh J, Rusjan P, Kennedy JL, Houle S, Kish SJ, Boileau I. Microglia imaging in methamphetamine use disorder: a positron emission tomography study with the 18 kDa translocator protein radioligand [F-18]FEPPA. *Addict Biol*. 2021 Jan;26(1):e12876. doi: 10.1111/adb.12876. Epub 2020 Feb 4. PMID: 32017280; PMCID: PMC7398821.
- 6: Goggi JL, Hartimath SV, Hwang Y, Tan YX, Khanapur S, Ramasamy B, Jiang L, Yong FF, Cheng P, Tan PW, Husaini MA, Yuen TY, Jieu B, Chacko AM, Larbi A, Renia L, Johannes C, Robins EG. Examining Immunotherapy Response Using Multiple Radiotracers. *Mol Imaging Biol*. 2020 Aug;22(4):993-1002. doi: 10.1007/s11307-020-01477-w. PMID: 32006204.
- 7: Da Silva T, Hafizi S, Watts JJ, Weickert CS, Meyer JH, Houle S, Rusjan P, Mizrahi R. In Vivo Imaging of Translocator Protein in Long-term Cannabis Users. *JAMA Psychiatry*. 2019 Dec 1;76(12):1305-1313. doi: 10.1001/jamapsychiatry.2019.2516. Erratum in: *JAMA Psychiatry*. 2019 Oct 16;; PMID: 31532458; PMCID: PMC6751758.
- 8: Da Silva T, Hafizi S, Rusjan PM, Houle S, Wilson AA, Prce I, Sailasuta N, Mizrahi R. GABA levels and TSPO expression in people at clinical high risk for psychosis and healthy volunteers: a PET-MRS study. *J Psychiatry Neurosci*. 2019 Mar 1;44(2):111-119. doi: 10.1503/jpn.170201. PMID: 30255837; PMCID: PMC6397035.
- 9: Li H, Sagar AP, Kéri S. Microglial markers in the frontal cortex are related to cognitive dysfunctions in major depressive disorder. *J Affect Disord*. 2018 Dec 1;241:305-310. doi: 10.1016/j.jad.2018.08.021. Epub 2018 Aug 8. PMID: 30142589.
- 10: Vignal N, Cisternino S, Rizzo-Padoin N, San C, Hontonnou F, Gelé T, Declèves X, Sarda-Mantel L, Hosten B. [ $^{18}$ F]FEPPA a TSPO Radioligand: Optimized Radiosynthesis and Evaluation as a PET

Radiotracer for Brain Inflammation in a Peripheral LPS-Injected Mouse Model. *Molecules*. 2018 Jun 7;23(6):1375. doi: 10.3390/molecules23061375. PMID: 29875332; PMCID: PMC6099542.

11: Hafizi S, Da Silva T, Meyer JH, Kiang M, Houle S, Remington G, Prce I, Wilson AA, Rusjan PM, Sailasuta N, Mizrahi R. Interaction between TSPO-a neuroimmune marker-and redox status in clinical high risk for psychosis: a PET- MRS study. *Neuropsychopharmacology*. 2018 Jul;43(8):1700-1705. doi: 10.1038/s41386-018-0061-5. Epub 2018 Apr 13. PMID: 29748630; PMCID: PMC6006145.

12: Li H, Sagar AP, Kéri S. Translocator protein (18kDa TSPO) binding, a marker of microglia, is reduced in major depression during cognitive-behavioral therapy. *Prog Neuropsychopharmacol Biol Psychiatry*. 2018 Apr 20;83:1-7. doi: 10.1016/j.pnpbp.2017.12.011. Epub 2017 Dec 19. PMID: 29269262.

13: Attwells S, Setiawan E, Wilson AA, Rusjan PM, Mizrahi R, Miler L, Xu C, Richter MA, Kahn A, Kish SJ, Houle S, Ravindran L, Meyer JH. Inflammation in the Neurocircuitry of Obsessive-Compulsive Disorder. *JAMA Psychiatry*. 2017 Aug 1;74(8):833-840. doi: 10.1001/jamapsychiatry.2017.1567. PMID: 28636705; PMCID: PMC5710556.

14: Hafizi S, Da Silva T, Gerritsen C, Kiang M, Bagby RM, Prce I, Wilson AA, Houle S, Rusjan PM, Mizrahi R. Imaging Microglial Activation in Individuals at Clinical High Risk for Psychosis: an In Vivo PET Study with [<sup>18</sup>F]FEPPA. *Neuropsychopharmacology*. 2017 Dec;42(13):2474-2481. doi: 10.1038/npp.2017.111. Epub 2017 Jun 12. PMID: 28604733; PMCID: PMC5686484.

15: Mabrouk R, Strafella AP, Knezevic D, Ghadery C, Mizrahi R, Gharehgazlou A, Koshimori Y, Houle S, Rusjan P. Feasibility study of TSPO quantification with [<sup>18</sup>F]FEPPA using population-based input function. *PLoS One*. 2017 May 17;12(5):e0177785. doi: 10.1371/journal.pone.0177785. PMID: 28545084; PMCID: PMC5435246.

16: Ghadery C, Koshimori Y, Coakeley S, Harris M, Rusjan P, Kim J, Houle S, Strafella AP. Microglial activation in Parkinson's disease using [<sup>18</sup>F]-FEPPA. *J Neuroinflammation*. 2017 Jan 11;14(1):8. doi: 10.1186/s12974-016-0778-1. PMID: 28086916; PMCID: PMC5234135.

17: Hafizi S, Tseng HH, Rao N, Selvanathan T, Kenk M, Bazinet RP, Suridjan I, Wilson AA, Meyer JH, Remington G, Houle S, Rusjan PM, Mizrahi R. Imaging Microglial Activation in Untreated First-Episode Psychosis: A PET Study With [<sup>18</sup>F]FEPPA. *Am J Psychiatry*. 2017 Feb 1;174(2):118-124. doi: 10.1176/appi.ajp.2016.16020171. Epub 2016 Sep 9. PMID: 27609240; PMCID: PMC5342628.

18: Zhang X, Liu S, Newport GD, Paule MG, Callicott R, Thompson J, Liu F, Patterson TA, Berridge MS, Apana SM, Brown CC, Maisha MP, Hanig JP, Slikker W Jr, Wang C. In Vivo Monitoring of Sevoflurane-induced Adverse Effects in Neonatal Nonhuman Primates Using Small-animal Positron Emission Tomography. *Anesthesiology*. 2016 Jul;125(1):133-46. doi: 10.1097/ALN.0000000000001154. PMID: 27183169.

19: Koshimori Y, Ko JH, Mizrahi R, Rusjan P, Mabrouk R, Jacobs MF, Christopher L, Hamani C, Lang AE, Wilson AA, Houle S, Strafella AP. Imaging Striatal Microglial Activation in Patients with Parkinson's Disease. *PLoS One*. 2015 Sep 18;10(9):e0138721. doi: 10.1371/journal.pone.0138721. PMID: 26381267; PMCID: PMC4575151.

20: Suridjan I, Pollock BG, Verhoeff NP, Voineskos AN, Chow T, Rusjan PM, Lobaugh NJ, Houle S, Mulsant BH, Mizrahi R. In-vivo imaging of grey and white matter neuroinflammation in Alzheimer's disease: a positron emission tomography study with a novel radioligand, [<sup>18</sup>F]-FEPPA. *Mol Psychiatry*.

- 2015 Dec;20(12):1579-87. doi: 10.1038/mp.2015.1. Epub 2015 Feb 24. PMID: 25707397; PMCID: PMC8026116.
- 21: Setiawan E, Wilson AA, Mizrahi R, Rusjan PM, Miler L, Rajkowska G, Suridjan I, Kennedy JL, Rekkas PV, Houle S, Meyer JH. Role of translocator protein density, a marker of neuroinflammation, in the brain during major depressive episodes. *JAMA Psychiatry*. 2015 Mar;72(3):268-75. doi: 10.1001/jamapsychiatry.2014.2427. PMID: 25629589; PMCID: PMC4836849.
- 22: Mabrouk R, Rusjan PM, Mizrahi R, Jacobs MF, Koshimori Y, Houle S, Ko JH, Strafella AP. Image derived input function for [18F]-FEPPA: application to quantify translocator protein (18 kDa) in the human brain. *PLoS One*. 2014 Dec 30;9(12):e115768. doi: 10.1371/journal.pone.0115768. PMID: 25549260; PMCID: PMC4280118.
- 23: Kenk M, Selvanathan T, Rao N, Suridjan I, Rusjan P, Remington G, Meyer JH, Wilson AA, Houle S, Mizrahi R. Imaging neuroinflammation in gray and white matter in schizophrenia: an in-vivo PET study with [18F]-FEPPA. *Schizophr Bull*. 2015 Jan;41(1):85-93. doi: 10.1093/schbul/sbu157. Epub 2014 Nov 9. PMID: 25385788; PMCID: PMC4266311.
- 24: Suridjan I, Rusjan PM, Kenk M, Verhoeff NP, Voineskos AN, Rotenberg D, Wilson AA, Meyer JH, Houle S, Mizrahi R. Quantitative imaging of neuroinflammation in human white matter: a positron emission tomography study with translocator protein 18 kDa radioligand, [18F]-FEPPA. *Synapse*. 2014 Nov;68(11):536-47. doi: 10.1002/syn.21765. Epub 2014 Jul 28. PMID: 25043159; PMCID: PMC8019486.
- 25: Suridjan I, Rusjan PM, Voineskos AN, Selvanathan T, Setiawan E, Strafella AP, Wilson AA, Meyer JH, Houle S, Mizrahi R. Neuroinflammation in healthy aging: a PET study using a novel Translocator Protein 18kDa (TSPO) radioligand, [(18)F]-FEPPA. *Neuroimage*. 2014 Jan 1;84:868-75. doi: 10.1016/j.neuroimage.2013.09.021. Epub 2013 Sep 21. PMID: 24064066; PMCID: PMC6283059.
- 26: Vasdev N, Green DE, Vines DC, McLarty K, McCormick PN, Moran MD, Houle S, Wilson AA, Reilly RM. Positron-emission tomography imaging of the TSPO with [(18)F]FEPPA in a preclinical breast cancer model. *Cancer Biother Radiopharm*. 2013 Apr;28(3):254-9. doi: 10.1089/cbr.2012.1196. Epub 2013 Jan 25. PMID: 23350894.
- 27: Ko JH, Koshimori Y, Mizrahi R, Rusjan P, Wilson AA, Lang AE, Houle S, Strafella AP. Voxel-based imaging of translocator protein 18 kDa (TSPO) in high- resolution PET. *J Cereb Blood Flow Metab*. 2013 Mar;33(3):348-50. doi: 10.1038/jcbfm.2012.203. Epub 2013 Jan 2. PMID: 23281426; PMCID: PMC3587822.
- 28: Mizrahi R, Rusjan PM, Vitcu I, Ng A, Wilson AA, Houle S, Bloomfield PM. Whole body biodistribution and radiation dosimetry in humans of a new PET ligand, [(18)F]-FEPPA, to image translocator protein (18 kDa). *Mol Imaging Biol*. 2013 Jun;15(3):353-9. doi: 10.1007/s11307-012-0589-4. PMID: 22895910.
- 29: Mizrahi R, Rusjan PM, Kennedy J, Pollock B, Mulsant B, Suridjan I, De Luca V, Wilson AA, Houle S. Translocator protein (18 kDa) polymorphism (rs6971) explains in-vivo brain binding affinity of the PET radioligand [(18)F]-FEPPA. *J Cereb Blood Flow Metab*. 2012 Jun;32(6):968-72. doi: 10.1038/jcbfm.2012.46. Epub 2012 Apr 4. PMID: 22472607; PMCID: PMC3367231.
- 30: Rusjan PM, Wilson AA, Bloomfield PM, Vitcu I, Meyer JH, Houle S, Mizrahi R. Quantitation of translocator protein binding in human brain with the novel radioligand [18F]-FEPPA and positron emission tomography. *J Cereb Blood Flow Metab*. 2011 Aug;31(8):1807-16. doi: 10.1038/jcbfm.2011.55. Epub 2011 Apr 27. PMID: 21522163; PMCID: PMC3170950.
- 31: Leung K. *N*-Acetyl-*N*-(2-[<sup>18</sup>F]fluoroethoxybenzyl)-2-p henoxo-5-pyridinamine. 2008

Last update: 2024/06/07 02:59 [18f\\_feppa\\_positron\\_emission\\_tomography https://neurosurgerywiki.com/wiki/doku.php?id=18f\\_feppa\\_positron\\_emission\\_tomography](https://neurosurgerywiki.com/wiki/doku.php?id=18f_feppa_positron_emission_tomography)

---

Aug 12 [updated 2008 Aug 22]. In: Molecular Imaging and Contrast Agent Database (MICAD) [Internet]. Bethesda (MD): National Center for Biotechnology Information (US); 2004–2013. PMID: 20641889.

32: Wilson AA, Garcia A, Parkes J, McCormick P, Stephenson KA, Houle S, Vasdev N. Radiosynthesis and initial evaluation of [18F]-FEPPA for PET imaging of peripheral benzodiazepine receptors. Nucl Med Biol. 2008 Apr;35(3):305-14. doi: 10.1016/j.nucmedbio.2007.12.009. PMID: 18355686.

From: <https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link: [https://neurosurgerywiki.com/wiki/doku.php?id=18f\\_feppa\\_positron\\_emission\\_tomography](https://neurosurgerywiki.com/wiki/doku.php?id=18f_feppa_positron_emission_tomography)

Last update: **2024/06/07 02:59**

