

Department of Medical Pharmacology

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Research Areas:

Basic mechanisms of central nervous system disorders

Parkinson's Disease

Epilepsy

Substance abuse and addiction

Morphine and drug withdrawal

Forensic pharmacology

Clinical Pharmacology

Seizure

Epileptogenesis

Ictogenesis

Animal models

Neuropharmacology

Psychopharmacology

Autonomous nervous system

Cholinergic system

Pharmacoepidemiology

Pharmacovigilance

Drug Utilization

Rational Use of Medicine

Pharmacoeconomy

Clinical Trials and Marketing Authorization of Pharmaceutical Products

Pharmacogenetics

Drug safety

Recent Publications (2013- 2016)

1. Cavdar S, Bay HH, Kirazlı O, Cakmak YO, Onat F. Comparing GABAergic cell populations in the thalamic reticular nucleus of normal and genetic absence epilepsy rats from Strasbourg (GAERS). *Neurol Sci.*34(11):1991-2000, 2013. doi: 10.1007/s10072-013-1435-4. PMID: 23595547
2. Onat FY, van Luijtelaar G, Nehlig A, Snead OC 3rd. The involvement of limbic structures in typical and atypical absence epilepsy. *Epilepsy Res.* 103(2-3):111-23, 2013. doi:10.1016/j.eplepsyres.2012.08.008 PubMed PMID: 22989853
3. Onat F. Astrocytes and absence epilepsy. *Br J Pharmacol.* 2013 Mar; 168(5):1086-7. doi: 10.1111/bph.12050. PMID: 23145977
4. Carçak N, Zheng T, Ali I, Abdullah A, French C, Powell KL, Jones NC, van Raay L, Rind G, Onat F, O'Brien TJ. The effect of amygdala kindling on neuronal firing patterns in the lateral thalamus in the GAERS model of absence epilepsy. *Epilepsia* 55(5):654-65, 2014. doi: 10.1111/epi.12592. PubMed PMID: 24673730.
5. Cavdar S, Bay HH, Yildiz SD, Akakin D, Sirvanci S, Onat F. Comparison of numbers of interneurons in three thalamic nuclei of normal and epileptic rats. *Neurosci Bull.* 30(3):451-60, 2014. doi: 10.1007/s12264-013-1402-3 PMID: 24526659
6. Taylor H, Schmiedt JT, Carçak N, Onat F, Di Giovanni G, Lambert R, Leresche N, Crunelli V, David F. Investigating local and long-range neuronal network dynamics by simultaneous optogenetics, reverse microdialysis and silicon probe recordings in vivo. *J Neurosci Methods* 30;235:83-91, 2014. doi: 10.1016/j.jneumeth.2014.06.031. PMID: 25004203
7. Kuru P, Torun M, Halac HM, Temiz G, Iskender E, Karamahmutoglu T, Idrizoglu MG, Onat FY. Electroencephalographic and behavioral effects of intracerebroventricular or intraperitoneal injections of toxic honey extract in adult Wistar rats and GAERS. *Neurol Sci.* 35(12):1903-8, 2014. doi: 10.1007/s10072-014-1858-6. PMID:25120202
8. Yuce-Dursun B, Danis O, Demir S, Ogan A, Onat F. Proteomic changes in the cortex membrane fraction of genetic absence epilepsy rats from Strasbourg. *J Integr Neurosci.* 13(4):633-44, 2014. doi: 10.1142/S021963521450023X. PMID: 25352154
9. Powell KL, Tang H, Ng C, Guillemain I, Dieuset G, Dezsi G, Carçak N, Onat F, Martin B, O'Brien TJ, Depaulis A, Jones NC. Seizure expression, behavior, and brain morphology differences in colonies of Genetic Absence Epilepsy Rats from Strasbourg. *Epilepsia.* 2014 Dec;55(12):1959-68. doi: 10.1111/epi.12840. PMID:25377760
10. van Luijtelaar G, Onat FY, Gallagher MJ. Animal models of absence epilepsies:What do they model and do sex and sex hormones matter? *Neurobiol Dis.* 72:167-179, 2014. doi:

10.1016/j.nbd.2014.08.014. PMID: 25132554

11. Ozkaynakci A, Gulcebi MI, Ergeç D, Ulucan K, Uzan M, Ozkara C, Guney I, Onat FY. The effect of polymorphic metabolism enzymes on serum phenytoin level. *Neurol Sci.* 36:397-401, 2015. doi: 10.1007/s10072-014-1961-8. PMID:25311916

12. Akman O, Gulcebi MI, Carcak N, Ketenci Ozatman S, Eryigit T, Moshé SL, Galanopoulou AS, Yilmaz Onat F. The role of the substantia nigra pars reticulata in kindling resistance in rats with genetic absence epilepsy. *Epilepsia* 56(11):1793-802, 2015. doi: 10.1111/epi.13204. PMID:26471261

13. Uyar R, Turk CC, Isik N, Kalelioglu M, Onat F, Ozek M. The Acute and Delayed Effects of Vagal Nerve Stimulation on an Absence Epilepsy Model in WAG/Rij. *Turk Neurosurg.* 2016;26(3):352-6. doi: 10.5137/1019-5149 PMID: 27161460

14. Gülçebi İdriz Oğlu M, Küçükibrahimoğlu E, Karaalp A, Sarikaya Ö, Demirkapu M, Onat F, Gören MZ, Potential drug–drug interactions in a medical intensive care unit of a university hospital. *Turk J Med Sci.* 2016; 46: 812-819. doi:10.3906/sag-1504-147 PMID:27513261

15. Çarçak N, Dileköz E, Gülhan R, Onur R, Onat FY, Sara Y. Increased inhibitory synaptic activity in the hippocampus (CA1) of genetic absence epilepsy rats:Relevance of kindling resistance. *Epilepsy Res.* 2016 Oct;126:70-7. doi: 10.1016/j.eplepsyres.2016.06.013. PMID: 27434859

16. Çavdar S, Özgür M, Kirazlı Ö, Karahüseyinoğlu S, Onat F. Comparing glutamatergic neuron population in the mediodorsal thalamic nucleus of genetic absence epilepsy rats from Strasbourg (GAERS) and normal control Wistar rats. *J Chem Neuroanat.* 2016 Nov;77:93-99. doi: 10.1016/j.jchemneu.2016.05.009. PMID:27262783

14. Kirazlı Ö, Çavdar S, Yıldız S, Onat F, Kaptanoğlu E. A developmental study of glutamatergic neuron populations in the ventrobasal and the lateral geniculate nucleus of the thalamus: Comparing Genetic Absence Rats from Strasbourg (GAERS) and normal control wistar rats. *Int J Dev Neurosci.* 2016 Dec 6;56:35-41. doi:10.1016/j.ijdevneu.2016.12.001. PMID: 27939427

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Acar, F., Asirdizer, M., Aker, R.G., Kucukibrahimoglu, E.E., Ates, I., Erol, Y., Sahin, A. A review

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