

Education:

Undergraduate School: B.Sc in Biology

Graduate School: M.Sc in Human Physiology, TMU, Tehran, I.R. Iran.

Doctoral Degree: Ph.D. in Human Physiology, TMU, Tehran, I.R. Iran.

Postdoctoral training: Fourth IBRO postdoctoral training workshop in Basic Neuroscience, Hong Kong.

Teaching experience:

a- Teaching Medical Physiology since 1987.

b- Teaching Physiology for M.Sc students since 1991.

c- Teaching Physiology for Ph.D. students since 1995.

Present research interest: Network Physiology, Synaptic plasticity and Metaplasticity

Research experiences:

1-Brain cannulation in rat

2- Brain slices

3- Extra- and intracellular recording methods

4- Methods of learning and memory studies

5- Methods of the animal model of epilepsy

Publications

Manuscripts:

Papers in the international journals:

1. Moradpour F, Fathollahi Y, Naghdi N, Hosseinmardi N, Javan M. Prepubertal castration-associated developmental changes in sigma-1 receptor gene expression levels regulate hippocampus area CA1 activity during adolescence. *Hippocampus*. 2016 Jul; 26 (7):933-46. doi: 10.1002/hipo.22576. Epub 2016 Feb 27.
2. Dehghan S, Hesaraki M, Soleimani M, Mirnajafi-Zadeh J, Fathollahi Y, Javan M. Oct4 transcription factor in conjunction with valproic acid accelerates myelin repair in demyelinated optic chiasm in mice. *Neuroscience*. 2016 Mar 24; 318:178-89. doi: 10.1016/j.neuroscience.2016.01.028. Epub 2016 Jan 22.
3. Gholami M, Moradpour F, Semnanian S, Naghdi N, Fathollahi Y. Chronic sodium salicylate administration enhances population spike long-term potentiation following a combination of theta frequency primed-burst stimulation and the transient application of pentylentetrazol in rat CA1 hippocampal neurons. *Eur J Pharmacol*. 2015 Nov 15; 767:165-74. doi: 10.1016/j.ejphar.2015.10.021. Epub 2015 Oct 22.
4. Kaeidi A, Azizi H, Javan M, Ahmadi Soleimani SM, Fathollahi Y, Semnanian S. Direct Facilitatory Role of Paragigantocellularis Neurons in Opiate Withdrawal-Induced Hyperactivity of Rat Locus Coeruleus Neurons: An In Vitro Study. *PLoS One*. 2015 Jul 31; 10(7):e0134873. doi: 10.1371/journal.pone.0134873. eCollection 2015.
5. Azhdari-Zarmehri H, Semnanian S, Fathollahi Y. Orexin-a modulates firing of rat rostral ventromedial medulla neurons: an in vitro study. *Cell J*. 2015 Spring; 17 (1):163-70. Epub 2015 Apr 8.
6. Doost Mohammadpour J, Hosseinmardi N, Janahmadi M, Fathollahi Y, Motamedi F, Rohampour K. Non-selective NSAIDs improve the amyloid- β -mediated suppression of memory and synaptic plasticity. *Pharmacol Biochem Behav*. 2015 Feb 17; 132:33-41. doi: 10.1016/j.pbb.2015.02.012. [Epub ahead of print]

7. Dehghan S, Asadi S, Hajikaram M, Soleimani M, Mowla SJ, Fathollahi Y, Ahmadiani A, Javan M. Exogenous Oct4 in combination with valproic acid increased neural progenitor markers: an approach for enhancing the repair potential of the brain. *Life Sci.* 2015 Feb 1; 122:108-15. doi: 10.1016/j.lfs.2014.12.007. Epub 2014 Dec 19.
8. Sadegh M, Fathollahi Y. Repetitive systemic morphine alters activity-dependent plasticity of Schaffer-collateral-CA1 pyramidal cell synapses: involvement of adenosine A1 receptors and adenosine deaminase. *J Neurosci Res.* 2014 Oct; 92 (10):1395-408. doi: 10.1002/jnr.23414. Epub 2014 Jun 5.
9. Azhdari-Zarmehri H, Semnanian S, Fathollahi Y. Orexin-A microinjection into the rostral ventromedial medulla causes antinociception on formalin test. *Pharmacol Biochem Behav.* 2014 Jul; 122:286-90. doi: 10.1016/j.pbb.2014.03.017. Epub 2014 Mar 29.
10. Azhdari-Zarmehri H, Semnanian S, Fathollahi Y, Pakdel FG. Tail flick modification of orexin-a induced changes of electrophysiological parameters in the rostral ventromedial medulla. *Cell J.* 2014 Summer; 16 (2):131-40. Epub 2014 May 25.
11. Miladi-Gorji H, Rashidy-Pour A, Fathollahi Y, Semnanian S, Jadidi M. Effects of voluntary exercise on hippocampal long-term potentiation in morphine-dependent rats. *Neuroscience.* 2014 Jan 3; 256:83-90. doi: 10.1016/j.neuroscience.2013.09.056. Epub 2013 Oct 17.
12. Sadegh M, Fathollahi Y, Semnanian S. The chronic treatment in vivo of salicylate or morphine alters excitatory effects of subsequent salicylate or morphine tests in vitro in hippocampus area CA1. *Eur J Pharmacol.* 2013 Dec 5; 721 (1-3):103-8. doi: 10.1016/j.ejphar.2013.09.048. Epub 2013 Oct 3.
13. Moradpour F, Naghdi N, Fathollahi Y, Javan M, Choopani S, Gharaylou Z. Pre-pubertal castration improves spatial learning during mid-adolescence in rats. *Prog Neuropsychopharmacol Biol Psychiatry.* 2013 Oct 1; 46:105-12. doi: 10.1016/j.pnpbp.2013.07.005. Epub 2013 Jul 16.

14. Sadegh M, Fathollahi Y, Naghdi N, Semnanian S. Morphine deteriorates spatial memory in sodium salicylate treated rats. *Eur J Pharmacol.* 2013 Mar 15; 704 (1-3):1-6. doi: 10.1016/j.ejphar.2013.02.017. Epub 2013 Feb 24.
15. Moradpour F, Fathollahi Y, Naghdi N, Hosseinmardi N, Javan M. Prepubertal castration causes the age-dependent changes in hippocampal long-term potentiation. *Synapse.* 2013 May; 67 (5):235-44. doi: 10.1002/syn.21636. Epub 2013 Feb 14.
16. Ranjbar-Slamloo Y, Azizi H, Fathollahi Y, Semnanian S. Orexin receptor type-1 antagonist SB-334867 inhibits the development of morphine analgesic tolerance in rats. *Peptides.* 2012 May; 35 (1):56-9. doi: 10.1016/j.peptides.2012.02.023. Epub 2012 Mar 6.
17. Hosseinmardi N, Azimi L, Fathollahi Y, Javan M, Naghdi N. In vivo sodium salicylate causes tolerance to acute morphine exposure and alters the ability of high frequency stimulation to induce long-term potentiation in hippocampus area CA1. *Eur J Pharmacol.* 2011 Nov 30; 670 (2-3):487-94. doi: 10.1016/j.ejphar.2011.09.008. Epub 2011 Sep 21.
18. Miladi-Gorji H, Rashidy-Pour A, Fathollahi Y, Akhavan MM, Semnanian S, Safari M. Voluntary exercise ameliorates cognitive deficits in morphine dependent rats: the role of hippocampal brain-derived neurotrophic factor. *Neurobiol Learn Mem.* 2011 Oct; 96 (3):479-91. doi: 10.1016/j.nlm.2011.08.001. Epub 2011 Aug 22.
19. Miladi-Gorji H, Rashidy-Pour A, Fathollahi Y. Anxiety profile in morphine-dependent and withdrawn rats: effect of voluntary exercise. *Physiol Behav.* 2012 Jan 18; 105(2):195-202. doi: 10.1016/j.physbeh.2011.08.010. Epub 2011 Aug 17.
20. Azhdari Zarmehri H, Semnanian S, Fathollahi Y, Erami E, Khakpay R, Azizi H, Rohampour K. Intra-periaqueductal gray matter microinjection of orexin-A decreases formalin-induced nociceptive behaviors in adult male rats. *J Pain.* 2011 Feb; 12 (2):280-7. doi: 10.1016/j.jpain.2010.09.006. Epub 2010 Dec 10.
21. Ahmed T, Gilani AH, Hosseinmardi N, Semnanian S, Enam SA, Fathollahi Y. Curcuminoids rescue long-term potentiation impaired by amyloid peptide in rat hippocampal slices. *Synapse.* 2011 Jul; 65 (7):572-82. doi: 10.1002/syn.20876. Epub 2010 Dec 3.

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27. Rashidy-Pour A, Vafaei AA, Taherian AA, Miladi-Gorji H, Sadeghi H, Fathollahi Y, Bandegi AR. Verapamil enhances acute stress or glucocorticoid-induced deficits in retrieval of long-term memory in rats. *Behav Brain Res*. 2009 Oct 12; 203 (1):76-80. doi: 10.1016/j.bbr.2009.04.018. Epub 2009 Apr 24.
28. Jafarzadeh Z, Fathollahi Y, Semnanian S, Omrani A, Salmanzadeh F, Salmani ME. Morphine dependence increases the response to a brief pentylenetetrazol administration in rat hippocampal CA1 in vitro. *Epilepsia*. 2009 Apr; 50 (4):789-800. doi: 10.1111/j.1528-1167.2008.01802.x. Epub 2008 Oct 6.

29. Mohammad-Zadeh M, Mirnajafi-Zadeh J, Fathollahi Y, Javan M, Jahanshahi A, Noorbakhsh SM, Motamedi F. The role of adenosine A (1) receptors in mediating the inhibitory effects of low frequency stimulation of perforant path on kindling acquisition in rats. *Neuroscience*. 2009 Feb 18; 158 (4):1632-43. doi: 10.1016/j.neuroscience.2008.11.008. Epub 2008 Nov 8.
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33. Satarian L, Javan M, Fathollahi Y. Epinephrine inhibits analgesic tolerance to intrathecal administrated morphine and increases the expression of calcium-calmodulin-dependent protein kinase II alpha. *Neurosci Lett*. 2008 Jan 17; 430 (3):213-7. Epub 2007 Nov 6.
34. Sadegh M, Mirnajafi-Zadeh J, Javan M, Fathollahi Y, Mohammad-Zadeh M, Jahanshahi A, Noorbakhsh SM. The role of galanin receptors in anticonvulsant effects of low-frequency stimulation in perforant path-kindled rats. *Neuroscience*. 2007 Dec 5; 150 (2):396-403. Epub 2007 Oct 9.
35. Salmani ME, Mirnajafizadeh J, Fathollahi Y. Offsetting of aberrations associated with seizure proneness in rat hippocampus area CA1 by theta pulse stimulation-induced activity pattern. *Neuroscience*. 2007 Nov 9; 149 (3):518-26. Epub 2007 Aug 28.
36. Ghorbani P, Mohammad-Zadeh M, Mirnajafi-Zadeh J, Fathollahi Y. Effect of different patterns of low-frequency stimulation on piriform cortex kindled seizures. *Neurosci Lett*. 2007 Oct 2; 425 (3):162-6. Epub 2007 Aug 19.

37. Rezvani ME, Mirnajafi-Zadeh J, Fathollahi Y, Palizvan MR. Anticonvulsant effect of A1 but not A2A adenosine receptors of piriform cortex in amygdala-kindled rats. *Can J Physiol Pharmacol*. 2007 Jun; 85 (6):606-12.
38. Abrari K, Rashidy-Pour A, Semnanian S, Fathollahi Y. Administration of corticosterone after memory reactivation disrupts subsequent retrieval of a contextual conditioned fear memory: dependence upon training intensity. *Neurobiol Learn Mem*. 2008 Feb; 89 (2):178-84. Epub 2007 Aug 16.
39. Shamsizadeh A, Sheibani V, Arabzadeh S, Afarinesh MR, Farazifard R, Noorbakhsh SM, Fathollahi Y. Single whisker experience started on postnatal days 0, 5 or 8 changes temporal characteristics of response integration in layers IV and V of rat barrel cortex neurons. *Brain Res Bull*. 2007 Sep 14; 74 (1-3):29-36. Epub 2007 May 25.
40. Fereidoni M, Fathollahi Y, Janahmadi M, Godarzi I. A rapid and non-leaky way for preparation of the sharp intracellular recording microelectrodes. *J Biochem Biophys Methods*. 2008 Apr 24; 70 (6):1124-9. Epub 2007 May 29.
41. Mohammad-Zadeh M, Mirnajafi-Zadeh J, Fathollahi Y, Javan M, Ghorbani P, Sadegh M, Noorbakhsh SM. Effect of low frequency stimulation of perforant path on kindling rate and synaptic transmission in the dentate gyrus during kindling acquisition in rats. *Epilepsy Res*. 2007 Jul; 75 (2-3):154-61. Epub 2007 Jun 18.
42. Hosseinmardi N, Mirnajafi-Zadeh J, Fathollahi Y, Shahabi P. The role of adenosine A1 and A2A receptors of entorhinal cortex on piriform cortex kindled seizures in rats. *Pharmacol Res*. 2007 Aug; 56 (2):110-7. Epub 2007 May 1.
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46. Heidarianpour A, Sadeghian E, Mirnajafi-Zadeh J, Fathollahi Y, Mohammad-Zadeh M. Anticonvulsant effects of N6-cyclohexyladenosine microinjected into the CA1 region of the hippocampus on entorhinal cortex-kindled seizures in rats. *Epileptic Disord.* 2006 Dec; 8 (4):259-66.
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48. Moradpour F, Naghdi N, Fathollahi Y. Anastrozole improved testosterone-induced impairment acquisition of spatial learning and memory in the hippocampal CA1 region in adult male rats. *Behav Brain Res.* 2006 Dec 15; 175 (2):223-32. Epub 2006 Oct 2.
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Abstracts:

- 1- Fathollahi, Y., Motamedi, F., Semnani, S., Eftekhari-Hosseini, A., Zardoshti, M., Altered synaptic transmission in hippocampus of PTZ-kindled rats: An in vitro study on CA1 of Hippocampal slices, The 12th Iranian congress of Physiology and Pharmacology, Iran University of Medical Sciences, 6-9 Nov, 1995 Tehran, Iran.
- 2- Fathollahi, Y., Motamedi, F., Semnani, S., Zardoshti, M., Effect of pentylentetrazole induced kindling on long-term potentiation in rat hippocampal slices, 4th IBRO World Congress of Neurosciences, 9-14 July 1995, Kyoto, Japan.
- 3- Alizadeh-Mansouri, F., Fathollahi, Y., Motamedi, F., Facilitation of LTP induction in hippocampal CA1 area of morphine dependent rats, 1st Iranian congress of neurosciences Shaheed Beheshti University of Medical sciences and health services, Nov. 27-29, 1996.
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