
MOHAMMAD ALLAHTAVAKOLI

Dept. of Physiology, Rafsanjan, IRAN

Phone +98913 292-6241

Email: allahtavakoli@gmail.com

Education

PhD of Medical Physiology

2002-2006

Tehran University of Medical Sciences, Tehran, Iran

Research Experience

Tehran University of Medical Sciences, Iran

2002-2006

Doctoral thesis research conducted with Dr. Shabanzadeh. Role of PPAR- γ receptor activation and its combination with NMDA inhibition on cerebral ischemia in the rat model of ischemic stroke. Resulted in two publications (PMID:17042914, PMID:17910613).

Howard Florey Institute, Melbourne, Australia

2006-2006

PhD Scholarship for six months, conducting a research with Dr. Bevin Jarrott: The role of Sigma-1 receptor activation on inflammatory responses after cerebral ischemia was investigated. This resulted in one publication (PMID: 21453760). During this abroad research experience, I practiced immunohistochemistry, different models of brain ischemia and many behavioral tests in rodents.

Rafsanjan University of Medical Sciences, IRAN

2006-2018

Scientist and instructor at Dept. of Physiology, running many research setups including different models of cerebral ischemia, behavioral and neurological tests, immunohistochemistry, rodents ovariectomy. Coordinated experiments were done to investigate the effects of different potential neuroprotective agents on cerebral ischemia that resulted in publications shown below.

One of investigations that really impressed me is the neuroprotective effects of Monoacylglycerol Lipase inhibition with both anti-inflammatory and Canabinoid pathway mechanisms. Another investigation that I believe there are still many questions around and needed to be addressed is neuroprotective properties of Ischemic pre/postconditioning (IC). The effects of remote IC in combination with thrombolysis in different ages should be addressed. Since application of Remote IC is safe, I would like to study its effects on thrombolysis therapy.

We have also recently focused on declining the progress of "Aging" in rodents. We therefore have induced different models of aged rat and mice and studied the effects of different agents on mostly Neurocognitive changes after inducing aging.

Graduate School of Medicine, Osaka University, Japan

2009-2009

Postdoctoral fellow of Matsumae international Foundation with conducting a study in the lab of Dr Morishita. As teamwork (with Dr Sato and Dr Shimamura), we studied the role of brain's Periostin in cerebral ischemia which resulted in a publication in stroke journal (PMID: 22308244).

Awards, Grants, and Training

Scholarship by Ministry of health

2006

Howard Florey Institute, Melbourne, Australia

Fellowship of Matsumae International Foundation

2009

Clinical Gene Therapy, Osaka, Japan

Top Researcher

2017

Rafsanjan University of medical Sciences, Iran

Top Researcher

2018

Rafsanjan University of medical Sciences, Iran

Publications

1. Delrobaei F, Fatemi I, Shamsizadeh A, **Allahtavakoli M**. Ascorbic acid attenuates cognitive impairment and brain oxidative stress in ovariectomized mice. *Pharmacol Rep*. 2019 Feb;71(1):133-138
2. Fatemi I, Delrobaei F, Bahmani M, Shamsizadeh A, **Allahtavakoli M**. The effect of the anti-diabetic drug metformin on behavioral manifestations associated with ovariectomy in mice. *Neurosci Lett*. 2018 Oct 12. pii: S0304-3940(18)30700-6. doi: 10.1016/j.neulet.2018.10.024. [Epub ahead of print]
3. Rahmani MR, Shamsizadeh A, Hakimizadeh E, **Allahtavakoli M**. Monoacylglycerol Lipase Inhibitor is Safe when Combined with Delayed r-tPA Administration in Treatment of Stroke. Inflammation. 2018 Jul 25. doi: 10.1007/s10753-018-0848-x. [Epub ahead of print]
4. Rahmani MR, Shamsizadeh A, Moghadam-Ahmadi A, Bazmandegan G, **Allahtavakoli M**. JZL184, as a monoacylglycerol lipase inhibitor, down-regulates inflammation in a cannabinoid pathway dependent manner. *Biomed Pharmacother*. 2018 Jul;103:1720-1726.
5. Fatemi I, Heydari S, Kaeidi A, Shamsizadeh A, Hakimizadeh E, Khaluoi A, **Allahtavakoli M**. Metformin ameliorates the age-related changes of d-galactose administration in ovariectomized mice. *Fundam Clin Pharmacol*. 2018 Aug;32(4):392-399.
6. Rahmani MR, Shamsizadeh A, Moghadam-Ahmadi A, Kaeidi A, **Allahtavakoli M**. Monoacylglycerol lipase inhibitor, JZL-184, confers neuroprotection in the mice middle cerebral artery occlusion model of stroke. *Life Sci*. 2018 Apr 1;198:143-148.
7. Fatemi I, Khaluoi A, Kaeidi A, Shamsizadeh A, Heydari S, **Allahtavakoli M**. Protective effect of metformin on D-galactose-induced aging model in mice. *Iran J Basic Med Sci*. 2018 Jan;21(1):19-25.
8. Naderi S, Alimohammadi R, Hakimizadeh E, Roohbakhsh A, Shamsizadeh A, **Allahtavakoli M**. The effect of exercise preconditioning on stroke outcome in ovariectomized mice with permanent middle cerebral artery occlusion. *Can J Physiol Pharmacol*. 2018 Mar;96(3):287-294.
9. Zarisfi M, Allahtavakoli F, Hassanipour M, Khaksari M, Rezazadeh H, **Allahtavakoli M**, Taghavi MM. Transient brain hypothermia reduces the reperfusion injury of delayed tissue plasminogen activator and extends its therapeutic time window in a focal embolic stroke model. *Brain Res Bull*. 2017 Sep;134:85-90.
10. Zamanian M, Hajizadeh M, Shamsizadeh A, Moemenzadeh M, Amirteimouri M, Elshiekh M, **Allahtavakoli M**. Effects of naringin on physical fatigue and serum MMP-9 concentration in female rats. *Pharm Biol*. 2017 Dec;55(1):423-427.
11. Hakimizadeh E, Shamsizadeh A, Roohbakhsh A, Arababadi MK, Hajizadeh MR, Shariati M, Rahmani MR, **Allahtavakoli M**. Inhibition of transient receptor potential vanilloid-1 confers neuroprotection, reduces tumor necrosis factor-alpha, and increases IL-10 in a rat stroke model. *Fundam Clin Pharmacol*. 2017 Aug;31(4):420-428.
12. Zamanian M, Hajizadeh MR, Esmaeili Nadimi A, Shamsizadeh A, **Allahtavakoli M**. Antifatigue effects of troxerutin on exercise endurance capacity, oxidative stress and matrix metalloproteinase-9 levels in trained male rats. *Fundam Clin Pharmacol*. 2017 Aug;31(4):447-455.

13. Bazmandegan G, Boroushaki MT, Shamsizadeh A, Ayoobi F, Hakimizadeh E, **Allahtavakoli M**. Brown propolis attenuates cerebral ischemia-induced oxidative damage via affecting antioxidant enzyme system in mice. *Biomed Pharmacother*. 2017 Jan;85:503-510
14. Zamanian M, Shamsizadeh A, Esmaeili Nadimi A, Hajizadeh M, Allahtavakoli F, Rahmani M, Kaeidi A, Safari Khalegh H, **Allahtavakoli M**. Short-term effects of troxerutin (vitamin P4) on muscle fatigue and gene expression of Bcl-2 and Bax in the hepatic tissue of rats. *Can J Physiol Pharmacol*. 2017 Jun;95(6):708-713.
15. Kaviani E, Rahmani M, Kaeidi A, Shamsizadeh A, **Allahtavakoli M**, Mozafari N, Fatemi I. Protective effect of atorvastatin on d-galactose-induced aging model in mice. *Behav Brain Res*. 2017 Sep 15;334:55-60.
16. Soltani N, Mohammadi E, **Allahtavakoli M**, Shamsizadeh A, Roohbakhsh A, Haghparast A. Effects of Dimethyl Sulfoxide on Neuronal Response Characteristics in Deep Layers of Rat Barrel Cortex. *Basic Clin Neurosci*. 2016 Jul;7(3):213-20.
17. **Allahtavakoli M**, Honari N, Pourabolli I, Kazemi Arababadi M, Ghafarian H, Roohbakhsh A, Esmaeili Nadimi A, Shamsizadeh A. Vitex Agnus Castus Extract Improves Learning and Memory and Increases the Transcription of Estrogen Receptor α in Hippocampus of Ovariectomized Rats. *Basic Clin Neurosci*. 2015 Jul;6(3):185-92.
18. Roohbakhsh A, Shamsizadeh A, Arababadi MK, Ayoobi F, Fatemi I, **Allahtavakoli M**, Mohammad-Zadeh M. Tactile learning in rodents: Neurobiology and neuropharmacology. *Life Sci*. 2016 Feb 15;147:1-8.
19. Esmaeeli-Nadimi A, Kennedy D, **Allahtavakoli M**. Opening the window: Ischemic postconditioning reduces the hyperemic response of delayed tissue plasminogen activator and extends its therapeutic time window in an embolic stroke model. *Eur J Pharmacol*. 2015; 5;764:55-62.
20. **Allahtavakoli M**, Amin F, Esmaeeli-Nadimi A, Shamsizadeh A, Kazemi-Arababadi M, Kennedy D. Ascorbic Acid Reduces the Adverse Effects of Delayed Administration of Tissue Plasminogen Activator in a Rat Stroke Model. *Basic Clin Pharmacol Toxicol*. 2015 117(5):335-9.
21. **Allahtavakoli M**, Jarrott B. Sigma-1 receptor ligand PRE-084 reduced infarct volume, neurological deficits, pro-inflammatory cytokines and enhanced anti-inflammatory cytokines after embolic stroke in rats. *Brain Research Bulletin* 85 (2011) 219–224.
22. Shimamura M1, Taniyama Y, Katsuragi N, Koibuchi N, Kyutoku M, Sato N, **Allahtavakoli M**, Wakayama K, Nakagami H, Morishita R. Role of central nervous system periostin in cerebral ischemia. *Stroke*. 2012 Apr;43(4):1108-14.
23. **Allahtavakoli M**, Moloudi R, Rezwani ME, Shamsizadeh A. Effect of Morphine Withdrawal Syndrome on Cerebral Ischemia Outcome in Rats. *Iran J Basic Med Sci*. 2011; 14(1): 1-8.
24. **Allahtavakoli M**, Moloudi R, Arababadi MK, Shamsizadeh A, Javanmardi K. Delayed post ischemic treatment with Rosiglitazone attenuates infarct volume, neurological deficits and neutrophilia after embolic stroke in rat. *Brain Research*. 2009; 1271:121-7.
25. Jafarinaveh HR, **Allahtavakoli M**, Rezazadeh H, Kazemi Arababadi M, Taghavi MM, Shamsizadeh A, Rahmani MR. Proinflammatory cytokines in the embolic model of cerebral ischemia in rat. *Iran J Allergy Asthma Immunol*. 2014 Apr;13(2):125-30.
26. Rezazadeh H, Hoseini M, Roohbakhsh A, Shamsizadeh A, **Allahtavakoli M**. Neuroprotective Consequences of Postconditioning on Embolic Model of Cerebral Ischemia in Rat. *Iran J basic Med Sci*. 2013;16(2): 144-9.
27. Zeinivand M, Rahmani MR, **Allahtavakoli M**, Shamsizadeh A, Hassanshahi G, Rezazadeh H, Pourshanazari AA. Effect of co-administration of morphine and nicotine on cardiovascular function in two-kidney one clip hypertensive (2K1C) rats. *Bosn J Basic Med Sci*. 2013 Aug;13(3):140-5.

28. Razavinasab M, Shamsizadeh A, Shabani M, Nazeri M, **Allahtavakoli M**, Asadi-Shekaari M, Esmaeli-Mahani S, Sheibani V. Pharmacological blockade of TRPV1 receptors modulates the effects of 6-OHDA on motor and cognitive functions in a rat model of Parkinson's disease. *Fundam Clin Pharmacol*. 2012 Nov 5.
29. **Allahtavakoli M**, Shabanzadeh A, Roohbakhsh A, Pourshanazari A. Combination therapy of rosiglitazone, a peroxisome proliferator-activated receptor-gamma ligand, and NMDA receptor antagonist (MK-801) on experimental embolic stroke in rats. *Basic Clin Pharmacol Toxicol*. 2007; 101(5):309-14.
30. **Allahtavakoli M**, Shabanzadeh AP, Sadr SS, Parviz M, Djahanguiri B. Rosiglitazone, a peroxisome proliferator-activated receptor-gamma ligand, reduces infarction volume and neurological deficits in an embolic model of stroke. *Clin Exp Pharmacol Physiol*. 2006; 33(11):1052-8.