

Curriculum vitae (CV)

Personal Information

Last name: Amani

First name: Mohammad

Degree: PhD in Physiology

E-mail: m.amani@outlook.com

Place of birth: Ardabil, Iran

Date of birth: August, 23, 1978

Sex: Male

Marital status: Married

Nationality: Iranian

Title of PhD thesis _____

Effect of troxerutin on spatial memory and synaptic plasticity of hippocampal dentate gyrus neurons in a β -amyloid model of Alzheimer's disease

Ad-hoc Reviewer _____

- Brain Research
- Neurobiology of Learning and Memory
- Acta Physiologica Sinica
- Behavioral Neuroscience
- Metabolic Brain Disease
- Pharmacological Research
- Metabolic Brain Disease
- Iranian Journal of Basic Medical Sciences
- English language editor, Journal of Ardabil University of Medical Sciences (JARUMS)

Publications (* indicates corresponding author; please note that all of the electrophysiology in below publications has been done by Mohammad Amani) _____

1. Soraya Mansouri, Ali-Akbar Salari, Ali Abedi, Parham Mohammadi, **Mohammad Amani***(*Corresponding author*) (2022). Melatonin treatment improves cognitive deficits by altering inflammatory and neurotrophic factors in the hippocampus of obese mice. *Physiology and Behavior*. 254, 113919.
2. Nastaran Golitabari, Forouzan Mohammadian, Ali-Akbar Salari, **Mohammad Amani***(*Corresponding author*) (2022). Neonatal NMDA blockade alters the LTP, LTD and cognitive functions in male and female Wistar rats. *Neuropharmacology*. 205, 108896, doi: 10.1016/j.neuropharm.2021.108896.
3. Aliza A. Le, Julian Quintanilla, **Mohammad Amani**, Daniele Piomelli, Gary Lynch, Christine M. Gall (2022). Persistent sexually dimorphic effects of adolescent THC exposure on hippocampal

synaptic plasticity and episodic memory in rodents. *Neurobiology of Disease*. 162, 105565. doi: 10.1016/j.nbd.2021.105565.

4. **Mohammad Amani**, Julie Lauterborn, Aliza Le, Brittney Cox, Weisheng Wang, Julian Quintanilla, Conor Cox, Christine Gall, and Gary Lynch (2021). Rapid aging in the perforant path projections to the rodent dentate gyrus. *Journal of Neuroscience*. 41(10):2301–2312.
5. Nozad A, Hamidi N, **Amani M***(*Corresponding author*) (2021). The role of glutamate transporter-1 in firing activity of locus coeruleus neurons and nociception in rats. *Experimental Brain Research*. 239(4):1287-1294.
6. Naderipoor, P, **Amani, M**, Abedi, A, Sakhaeie N, Sadegzadeh, F, Saadati, H (2021). Alterations in the behavior, cognitive function, and BDNF level in adult male rats following neonatal blockade of GABA-A receptors. *Brain Research Bulletin*.169, 35-42.
7. **Amani M**, Houwing DJ, Homberg, JR, Salari A-A (2021). Perinatal fluoxetine dose-dependently affects prenatal stress-induced neurobehavioural abnormalities, HPA-axis functioning and underlying brain alterations in rat dams and their offspring. *Reproductive Toxicology*. 104, 27–43.
8. Hamidi N, Nozad A, Sheikhkanloui Mila H, Salari AA, **Amani M***(*Corresponding author*) (2019). Effect of ceftriaxone on paired-pulse response and long-term potentiation of hippocampal dentate gyrus neurons in rats with Alzheimer-like disease. *Life Sci*.16, 238:116969.
9. Lauterborn JC, Schultz MN, Le AA, **Amani M**, Friedman AE, Leach PT, Gall CM, Lynch GS, Crawley JN (2019). Spaced training improves learning in Ts65Dn and Ube3a mouse models of intellectual disabilities. *Transl Psychiatry*. 9(1):166.
10. **Amani M**, Shokouhi G, Salari AA (2019). Minocycline prevents the development of depression-like behavior and hippocampal inflammation in a rat model of Alzheimer’s disease. *Psychopharmacology*. 236(4), 1281-1292.
11. Hamidi N, Nozad A, Sheikhkanloui Milan H, **Amani M***(*Corresponding author*) (2019). Okadaic acid attenuates short-term and long-term synaptic plasticity of hippocampal dentate gyrus neurons in rats. *Neurobiology of Learning and Memory*. 158, 24-31.
12. **Mohammad Amani**, Maryam Zolghadrasab, Ali-Akbar Salari (2019). NMDA receptor in the hippocampus alters neurobehavioral phenotypes through inflammatory cytokines in rats with sporadic Alzheimer-like disease. *Physiology & Behavior*. 202, 52-61
13. Salari AA, **Amani M***(*Corresponding author*) (2017). Neonatal blockade of GABA-A receptors alters behavioral and physiological phenotypes in adult mice. *Int. J. Devl Neuroscience*. 57, 62–71.
14. Fereshteh Farajdokht, **Mohammad Amani**, Fariba Mirzaei Babil, Alireza Alihemmati, Gisou Mohaddes, Shirin Babri (2017). Troxerutin protects hippocampal neurons against amyloid beta-induced oxidative stress and apoptosis. *EXCLI Journal*. 16, 1081-1089.
15. Babri Sh, Mohaddes G, Feizi I, Mohammadnia A, Niapour A, Alihemmati A, **Amani M***(*Corresponding author*) (2014). Effect of troxerutin on synaptic plasticity of hippocampal dentate gyrus neurons in a β -amyloid model of Alzheimer’s disease: An electrophysiological study. *European Journal of Pharmacology*. 732, 19-25.

16. Babri S, **Amani M***(*Corresponding author*), Mohaddes G, Alihemmati A, Ebrahimi H (2012). Effect of Aggregated β -Amyloid (1-42) on Synaptic Plasticity of Hippocampal Dentate Gyrus Granule Cells in Vivo. *BioImpacts*. 2(4), 189-194.
17. Babri S, **Amani M***(*Corresponding author*), Mohaddes G, Alihemmati A, Ebrahimi H (2012). Protective Effects of Troxerutin on β -Amyloid (1-42)-Induced Impairments of Spatial Learning and Memory in Rats. *Neurophysiology*. 44, 387-393.
18. **Amani M***(*Corresponding author*) (2016). Pathophysiology of Alzheimer's Disease. *J Ardabil Univ Med Sci*. 16(4), 452-463. [Fulltext in Persian]
19. Niapour N, Mohammadi-Ghalehbin B, Golmohammadi MG, Gholami MR, **Amani M**, Niapour A (2015). An efficient system for selection and culture of Schwann cells from adult rat peripheral nerves. *Cytotechnology*. 68(4):629-36.
20. Nazila Niapour, Ali Niapour, Hamid Sheikhkanlou Milan, **Mohammad Amani**, Hossein Salehi, Nowrouz Najafzadeh, Mohammad Reza Gholami (2014). All trans retinoic acid modulates peripheral nerve fibroblasts viability and apoptosis. *Tissue and Cell*. 47(1): 61-5.
21. Majidi-Zolbanin J, Doosti M.H, Baradaran B, **Amani M**, Azarfarin M, Salari AA (2014). Neonatal immune activation during early and late postnatal brain development differently influences depression-related behaviors in adolescent and adult C57BL/6 mice. *Neuroimmunology and Neuroinflammation*. 1(1):35-39
22. Shirin B, **Amani M***(*Corresponding author*), Gisou M, Fariba M, Fariba M (2013). Effects of intrahippocampal injection of ghrelin on spatial memory in PTZ-induced seizures in male rats. *Neuropeptides*. 47, 355–360.
23. **Amani M**, Samadi H, Doosti MH, Azarfarin M, Bakhtiari A, Majidi-Zolbanin N, Mirza-Rahimi M, Salari AA (2013). Neonatal NMDA receptor blockade alters anxiety-and depression-related behaviors in a sex-dependent manner in mice. *Neuropharmacology*. 73, 87-97.
24. Doosti MH, Bakhtiari A, Zare P, **Amani M**, Majidi N, Babri S, Salari AA (2012). Impacts of early intervention with fluoxetine following early neonatal immune activation on depression-like behaviors and body weight in mice. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*. 43, 55-65
25. **Amani M***(*Corresponding author*), Ali N, Reza B, Ali K (2010). Effect of ascorbic acid supplementation on nitric oxide metabolites and systolic blood pressure in rats exposed to lead. *Indian journal of pharmacology*. 42 (2), 78-81.
26. **Amani M**, Jeddi S, Ahmadiasl N, Usefzade N, Zaman J (2012). Effect of Hemado on the level of cardiac enzymes in ischemia / reperfusion injury in the isolated rat heart. *Bioimpacts*. 3(2), 101-104.
27. Moslem Najafi, Safar Farajnia, Mustafa Mohammadi, Reza Badalzadeh, Naser Ahmadi Asl, Behzad Baradaran, **Mohammad Amani** (2014). Inhibition of mitochondrial permeability transition pore restores the cardioprotection by postconditioning in diabetic hearts. *Journal of Diabetes & Metabolic Disorders*. 13(1):106.
28. Nazila Niapour, Behnam Mohammadi-Ghalehbin, Mohammad Ghasem Golmohammadi, **Mohammad Amani**, Hossein Salehi, Ali Niapour (2015). Efficacy of optimized in vitro

predegeneration period on the cell count and purity of canine Schwann cell cultures. *Iranian Journal of Basic Medical Sciences*. 18(3), 2015, 307-311.

Skills

1. Electrophysiology techniques including whole-cell patch clamp recording, *in vivo* and *in vitro* field potential recording from the hippocampus
2. Single unit recording
3. Optogenetics
4. Lentivirus injection
5. Stereotaxic intracortical injection
6. Neurobehavioral tests such as Morris water maze (MWM), elevated plus maze, forced swimming test, radial maze, Y maze, passive avoidance test and etc.
7. Immunohistochemistry
8. Immunoblotting
9. ELISA

Major areas of interest

1. Patch-clamp recording
2. *In vivo* and *in vitro* electrophysiological studies such as field potential recording (LTP and LTD), single unit recording, patch clamp and voltage clamp recording from hippocampus and other cortical neurons.
3. Neurobiology of learning and memory
4. Neurobiology of aging and neurodegenerative diseases such as Alzheimer's disease (AD)
5. Optogenetics
6. Immunohistochemistry
7. Physiology and pharmacology of neural ion channels
8. Physiology and Pharmacology of pain, anxiety and depression like diseases

Conference presentations

1. Amani M, Hamidi N, Nozad A, Milan H (2019). Effect of ceftriaxone on synaptic plasticity of hippocampal dentate gyrus neurons in OKA-induced model of Alzheimer disease in rats. 24th Iranian & 3rd International Congress of Physiology and Pharmacology, 30 Oct-01 Nov, Tehran, Iran.
2. Ali Khoshbaten¹, Alireza Asgari, Ali Norooz zadeh, Mohammad Amani (2008). Effect of ascorbic acid supplementation on nitric oxide metabolites and systolic blood pressure in rats exposed to lead. 45th Congress of the European Societies of Toxicology. Greece, Volume 180, Page S36.
3. 19th Congress of Physiology and Pharmacology, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
4. Congress of Physiology and Pharmacology, Mashad University of Medical Sciences, Mashad, Iran.
5. Mohammad Amani, Shirin Babri, Gisou Mohades, Iraj Feyzi (2013). Effect of Aggregated β -Amyloid 1-42 on Long Term Potentiation in the Hippocampal Dentate Gyrus Granule Cells *In Vivo*. 21th Congress of Physiology and Pharmacology, Tabriz, Iran.
6. 2nd Tehran IBRO School of Neuroscience (Molecular, Electrophysiological and Behavioral Approaches), 2012.

Memberships

1. Membership as an alumni in International Brain Research Organization (IBRO)
2. Iranian Society of Physiology and Pharmacology