Curriculum Vita
Amir Shojaei

I. PERSONAL INFORMATION:

Name: Amir Shojaei

Academic Degree: Doctor of Physiology

Position: Scholarship holder at Royan Institute

Date of Birth: 1982 /5/14

Place of Birth: Kerman-Iran

Marital Status: Single

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H-index = 14

Citations=669

Degree	Institution	Field	Date	Place
B.Sc.	Shaheed Bahonar University	Biology	2001	Kerman, Iran
M.Sc.	Tarbiat Modares University	Physiology	2006	Tehran, Iran
Ph.D.	Tarbiat Modares University	Physiology	2009	Tehran, Iran

Postdoc	Tarbiat Modares University	Physiology	2016-2018	Tehran, Iran
Postdoc	Royan Institute	Brain development	2018-2019	Tehran, Iran

II. THESIS AND DESERTATION:

M.Sc.: Investigating of elapsed time after several pentylenetetrazol injections on the chemical kindling acquisition in rats – A behavioral and electrophysiological study

Ph.D.: Effects of repetitive transcranial magnetic stimulation applied during amygdala kindling on electrophysiological properties and ionotropic glutamate currents of hippocampal CA1 pyramidal neurons in rats

Postdoc 1: Investigating the role of adenosine A_1 receptors in mediating the improving effects of low-frequency stimulation on seizure-induced cognitive impairments in rat

Postdoc 2: Establishment of human cerebral organoid model of genetic epilepsy - tuberos sclerosis complex

III. RESEARCH interests:

- Neurobiology of social behaviors
- Analyzing the brain electrical signals
- Improvement of cognitive functions following sleep deprivation

IV. Teaching experience

- Physiology. **MSc** students
- New advanced topics in renal physiology and water and electrolytes. **PhD** students
- New advanced topics in endocrine and reproductive physiology. **PhD** students
- Neurobiology of Learning and Memory. **PhD** students
- Pathophysiology. **PhD** students

V. PUBLICATIONS

International Papers

1. Davoudi M, Shojaei A, Palizvan MR, Javan M, Mirnajafi-Zadeh J. Comparison between standard protocol and a novel window protocol for induction of pentylenetetrazol kindled seizures in the rat. Epilepsy Res 2013; 106(1-2):54–63.

2. Esmaeilpour K, Masoumi-Ardakani Y, Sheibani V, Shojaei A, Harandi S, Mirnajafi-Zadeh J. Comparing the anticonvulsant effects of low frequency stimulation of different brain sites on the amygdala kindling acquisition in rats. Basic Clin Neurosci 2013; 4(3):250–6.

3. Mongabadi S, Firoozabadi SM, Javan M, Shojaei A, Mirnajafi-Zadeh J. Effect of different frequencies of repetitive transcranial magnetic stimulation on acquisition of chemical kindled seizures in rats. Neurol Sci 2013; 34(11):1897–903.

4. Ahmadirad N, Shojaei A, Javan M, Pourgholami MH, Mirnajafi-Zadeh J. Effect of minocycline on pentylenetetrazol-induced chemical kindled seizures in mice. Neurol Sci 2014; 35(4):571–6.

5. Asgari A, Semnanian S, Atapour N, Shojaei A, Moradi H, Mirnajafi-Zadeh J. Combined sub-threshold dosages of phenobarbital and low-frequency stimulation effectively reduce seizures in amygdala-kindled rats. Neurol Sci 2014; 35(8):1255–60.

6. Moradi Chameh H, Janahmadi M, Semnanian S, Shojaei A, Mirnajafi-Zadeh J. Effect of low frequency repetitive transcranial magnetic stimulation on kindling-induced changes in electrophysiological properties of rat CA1 pyramidal neurons. Brain Res 2015; 1606:34–43.

7. Ghafouri S, Fathollahi Y, Javan M, Shojaei A, Asgari A, Mirnajafi-Zadeh J. Effect of low frequency stimulation on impaired spontaneous alternation behavior of kindled rats in Y-maze test. Epilepsy Res 2016; 126:37–44.

8. Asgari A, Semnanian S, Atapour N, Shojaei A, Moradi-Chameh H, Ghafouri S et al. Low-frequency electrical stimulation enhances the effectiveness of phenobarbital on GABAergic currents in hippocampal slices of kindled rats. Neuroscience 2016; 330:26–38.

9. Azedi F, Kazemnejad S, Zarnani AH, Soleimani M, Shojaei A, Arasteh S. Comparative capability of menstrual blood versus bone marrow derived stem cells in neural differentiation. Mol Biol Rep 2017; 44(1):169–82.

10. Daneshdoust D, Khalili-Fomeshi M, Ghasemi-Kasman M, Ghorbanian D, Hashemian M, Gholami M et al. Pregabalin enhances myelin repair and attenuates glial activation in lysolecithin-induced demyelination model of rat optic chiasm. Neuroscience 2017; 344:148–56.

11. Bojnordi MN, Azizi H, Skutella T, Movahedin M, Pourabdolhossein F, Shojaei A et al. Differentiation of Spermatogonia Stem Cells into Functional Mature Neurons Characterized with Differential Gene Expression. Mol Neurobiol 2017; 54(7):5676–82.

12. Ghafouri S, Fathollahi Y, Semnanian S, Shojaei A, Mirnajafi-Zadeh J. Effects of Low Frequency Stimulation on Spontaneous Inhibitory and Excitatory Post-Synaptic Currents in Hippocampal CA1 Pyramidal Cells of Kindled Rats. Cell J 2017; 18(4):547–55.

13. Shojaei A, Anaraki AK, Mirnajafi-Zadeh J, Atapour N. Modifications of inhibitory transmission onto pyramidal neurons by postnatal exposure to MK-801: Effects of enriched environment. Int J Dev Neurosci 2017; 57:56–61.

14. Namvar S, Fathollahi Y, Javan M, Zeraati M, Mohammad-Zadeh M, Shojaei A et al. The antiepileptogenic effect of low-frequency stimulation on perforant path kindling involves changes in regulators of G-protein signaling in rat. J Neurol Sci 2017; 375:450–9.

15. Ghasemi Z, Naderi N, Shojaei A, Ahmadirad N, Raoufy MR, Mirnajafi-Zadeh J. Low Frequency Electrical Stimulation Attenuated The Epileptiform Activity-Induced Changes in Action Potential Features in Hippocampal CA1 Pyramidal Neurons. Cell J 2018; 20(3):355–60.

16. Ghasemi Z, Naderi N, Shojaei A, Raoufy MR, Ahmadirad N, Mirnajafi-Zadeh J. Effect of Low-Frequency Electrical Stimulation on the High-K+-Induced Neuronal Hyperexcitability in Rat Hippocampal Slices. Neuroscience 2018; 369:87–96.

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18. Mardani P, Oryan S, Sarihi A, Komaki A, Shojaei A, Dehghan S et al. ERK activation is required for the antiepileptogenic effect of low frequency electrical stimulation in kindled rats. Brain Res Bull 2018; 140:132–9.

19. Ahmadirad N, Fathollahi Y, Janahmadi M, Shojaei A, Ghasemi Z, Barkley V et al. Low-Frequency Electrical Stimulation Reduces the Impairment in Synaptic Plasticity Following Epileptiform Activity in Rat Hippocampal Slices through α1, But Not α2, Adrenergic Receptors. Neuroscience 2019; 406:176–85.

20. Ghafouri S, Fathollahi Y, Semnanian S, Shojaei A, Asgari A, Ebrahim Amini A et al. Deep brain stimulation restores the glutamatergic and GABAergic synaptic transmission and plasticity to normal levels in kindled rats. PLoS One 2019; 14(11):e0224834.

21. Ghasemi Z, Naderi N, Shojaei A, Raoufy MR, Ahmadirad N, Barkley V et al. The inhibitory effect of different patterns of low frequency stimulation on neuronal firing following epileptiform activity in rat hippocampal slices. Brain Res 2019; 1706:184–95.

22. Sadeghian A, Fathollahi Y, Javan M, Shojaei A, Kosarmadar N, Rezaei M et al. Spatial Learning and Memory in Barnes Maze Test and Synaptic Potentiation in Schaffer Collateral-CA1 Synapses of Dorsal Hippocampus in Freely Moving Rats. Basic Clin Neurosci 2019; 10(5):461–8.

23. Zarei-Kheirabadi M, Hesaraki M, Shojaei A, Kiani S, Baharvand H. Generation of neural stem cells from adult astrocytes by using a single reprogramming factor. J Cell Physiol 2019; 234(10):18697–706.

24. Darvishi M, Ghasemi Hamidabadi H, Sahab Negah S, Moayeri A, Tiraihi T, Mirnajafi-Zadeh J et al. PuraMatrix hydrogel enhances the expression of motor neuron progenitor marker and improves adhesion and proliferation of motor neuron-like cells. Iran J Basic Med Sci 2020; 23(4):431–8.

25. Eftekhari G, Shojaei A, Raoufy MR, Azizi H, Semnanian S, Mani AR. Neonatal Sepsis Alters the Excitability of Regular Spiking Cells in the Nucleus of the Solitary Tract in Rats. Shock 2020; 54(2):265–71.

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27. Keramatzadeh K, Kiakojouri A, Nahvi MS, Khazaei Y, Feizi-Nejad A, Maghami MH et al. Wireless, miniaturized, semi-implantable electrocorticography microsystem validated in vivo. Sci Rep 2020; 10(1):21261.

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34. Ghasemi Z, Naderi N, Shojaei A, Raoufy MR, Ahmadirad N, Barkley V et al. Group I metabotropic glutamate receptors contribute to the antiepileptic effect of electrical stimulation in hippocampal CA1 pyramidal neurons. Epilepsy Res 2021; 178:106821.

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38. Alaee E, Pachenari N, Khani F, Semnanian S, Shojaei A, Azizi H. Enhancement of neuronal excitability in the medial prefrontal cortex following prenatal morphine exposure. Brain Res Bull 2023; 204:110803.

39. Alipour V, Shojaei A, Rezaei M, Mirnajafi-Zadeh J, Azizi H. Intergenerational consequences of adolescent morphine exposure on learning and memory. Neurosci Lett 2023; 808:137303.

40. Bakhtiarzadeh F, Shahpasand K, Shojaei A, Fathollahi Y, Roohi N, Barkley V et al. Age-dependent Effects of Dopamine on Working Memory and Synaptic Plasticity in Hippocampal CA3-CA1 Synapses in Mice. Neuroscience 2023; 532:14–22.

41. Esmaeili Tazangi P, Alosaimi F, Bakhtiarzadeh F, Shojaei A, Jahanshahi A, Mirnajafi-Zadeh J. Effect of Deep Brain Stimulation in The Ventral Tegmental Area on Neuronal Activity in Local and Remote Brain Regions in Kindled Mice. Cell J 2023; 25(4):273–86.

42. Fatemeh B, Koorosh S, Amir S, Yaghoub F, Javad M-Z. Intra-hippocampal cis-P tau microinjection induces long-term changes in behavior and synaptic plasticity in mice. Behav Brain Funct 2023; 19(1):9.

43. Naderi S, Shiri Z, Zarei-Kheirabadi M, Mollamohammadi S, Hosseini P, Rahimi G et al. Cryopreserved clinical-grade human embryonic stem cell-derived dopaminergic progenitors function in Parkinson's disease models. Life Sci 2023; 329:121990.

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48. Ahmadi M, Rouhi N, Fathollahi Y, Shojaei A, Rezaei M, Rostami S et al. A Dual Effect of Dopamine on Hippocampal LTP and Cognitive Functions in Control and Kindled Mice. J Neurosci 2024; 44(5).

49. Bakhtiarzadeh F, Shahpasand K, Shojaei A, Fathollahi Y, Roohi N, Barkley V et al. Corrigendum to "Age-dependent Effects of Dopamine on Working Memory and Synaptic Plasticity in Hippocampal CA3-CA1 Synapses in Mice" Neuroscience 532 (2023) 14-22. Neuroscience 2024; 542:85.

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53. Riazi H, Nazari M, Raoufy MR, Mirnajafi-Zadeh J, Shojaei A. Olfactory Epithelium Stimulation Using Rhythmic Nasal Air-Puffs Improves the Cognitive Performance of Individuals with Acute Sleep Deprivation. Brain Sci 2024; 14(4).

54. Roohi N, Ahmadi M, Fathollahi Y, Shojaei A, Mirnajafi-Zadeh J. Comparing the Seizure-induced Impairment of Short-term Plasticity in Dorsal and Ventral Hippocampus in Kindled Mice. Basic Clin Neurosci 2024; 15(5):595–606.

55. Zare M, Rezaei M, Nazari M, Kosarmadar N, Faraz M, Barkley V et al. Effect of the closed-loop hippocampal low-frequency stimulation on seizure severity, learning, and memory in pilocarpine epilepsy rat model. CNS Neurosci Ther 2024; 30(3):e14656.

National Papers:

1. Amir Shojaei, Saeed Semnanian, Mahyar Janahmadi, Homeira Moradi-Chameh, Seyed Mohammad Firoozabadi, Javad Mirnajafi-Zadeh. Effect of repeated transcranial magnetic stimulation during epileptogenesis on spontaneous activity of hippocampal CA1 pyramidal neurons in rats. Physyology&Pharmacology. 2015; 19(1):1–13.

2. Amir Shojaei, Vahid Sheybani, Khadijeh Esmaeel pour, Yaser Masoumi, Seyyed Javad Mirnajafizadeh. Effect of low frequency electrical stimulation of dentate gyrus on amygdala kindling acquisition in rats. 2. 2014;20(4):496-504.

3. Khadijeh Esmaeilpour, Yaser Masoumi-Ardakani, Vahid Sheibani, Amir Shojaei, Shaahin Harandi, Javad Mirnajafi-Zadeh. Comparing the anticonvulsant effects of low frequency stimulation of different brain sites on the amygdala kindling acquisition in rats. Basic and clinical neuroscience. 2013;4(3):250.

4. Fatemeh Rostami, Azam Asgari, Amir Shojaei, Yaghob Fattollahi, SeyyedJavad Mirnajafizadeh. The effect of chronic low frequency magnetic stimulation on synaptic potentiation induced by electrical stimulation in the rat's dentate gyrus. 2. 2014;21(5):951-9.

5. Rezaei M, Sadeghian A, Roohi N, Shojaei A, Mirnajafi-Zadeh J, AWT_TAG. Epilepsy and dopaminergic system. Physiology and Pharmacology. 2017; 21.

6. Literature Cited

7. نقش سیستم آدرنرژیک در تحریک .س میرنجفی زاده ,ا شجاعی ,ی فتح الهی ,م جان احمدی ,م زارع ,ن احمدی راد 1398; مجله علمی دانشگاه علوم پزشکی رفسنجان .پذیری نورونی و شکل پذیری سیناپسی: یک مرور روایی undefined(undefined). Available from: URL: https://civilica.com/doc/1586579.

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9. Afsordeh N, Shojaei A, Mirnajafi-Zadeh J, Pourgholami MH. Glioblastoma induced seizures: the mechanisms involved. Iranian Journal of Physiology and Pharmacology 2021; 5(0). Available from: URL: http://ijpp.phypha.ir/article-1-516-fa.html.

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11. Alipour V, Mirnajafi-Zadeh J, Shojaei A, Azizi H. Intergenerational effects of adolescent drug exposure on behavior. Iranian Journal of Physiology and Pharmacology 2022; 6(0). Available from: URL: http://ijpp.phypha.ir/article-1-568-fa.html.

12. Alipour V, Shojaei A, Mirnajafi-Zadeh J, Azizi H. Intergenerational effects of adolescent morphine exposure on anxiety-like behavior evaluated by elevated zero maze in male rats. Iranian Journal of Physiology and Pharmacology 2025; 8(0). Available from: URL: http://ijpp.phypha.ir/article-1-710-fa.html.