

Curriculum Vitae

Personal information:

Name: Mahdieh Azin

Date of Birth: Tuesday, November 25, 1980

City of Birth: Rafsanjan, Kerman, Iran

Citizenship: Iranian

Religion: Shia, Islam

Marital status: Married

Children: One son

Contact Information:

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Postal address: Rafsanjan, Persian Gulf Blvd., Pistachio St., School of Medical Sciences, Faculty of Medicine, Department Of Physiology-Pharmacology

Academic profile:

Academic Position: Faculty Member

Academic Degree: Assistant Professor

University: Rafsanjan University of Medical Sciences

Department: Physiology and Pharmacology Department, Rafsanjan University of Medical Sciences

Google Scholar Profile:

<https://scholar.google.com/citations?hl=en&user=r1zSx5EAAAAJ>

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Research Interests:

✱Cognitive Neuroscience;

✱Cognitive Impairment;

✱Motor imagery;

- ✱ Multiple sclerosis;
- ✱ Effect of pesticides on health
- ✱ Magnetic and electrical stimulation of the brain;

Technical Skills:

- PCR techniques and primer design;
- Field potential recording;
- Evoked potential recording;
- Nervous conduction velocity recording (NCV);
- EMG recording;
- EEG recording;
- Transcranial magnetic stimulation;
- cognitive test for neurological diseases;
- PSYTASK software and the possibility of designing cognitive tasks in this software;
- SPSS and PRISM software.

Academic Education:

- **Bachelor:** Biology of Animal Science, University of Tehran, Tehran; 2000-2004
- **Masters:** Physiology; Tarbiat Modarres University, Tehran; 2006-2009
- **Ph.D.:** Neuroscience; Kerman University of Medical Sciences and Health Services, Kerman; 2010-2015

M.Sc Thesis Title: Molecular and electrophysiological study of the remyelination process in rat hippocampus following lysolecithin-induced demyelination

Ph.D Dissertation Title: The effect of Transcranial Magnetic Stimulation (TMS) on rehabilitation of motor imagery and motor function in patients with multiple sclerosis

Honors:

- Third grade in the Olympiad of Biology Student in 1998;
- The first grade of Ph.D. 's degree in Kerman University of Medical Sciences;
- The first grade of a master's degree in Tarbiat Modarres University.

Teaching experiences:

- ✱ Start teaching from 23 September 2014 to now

Primary and Advanced Neurophysiology (M.Sc.);

Primary and advanced cell physiology (M.Sc.);

General physiology (bachelor);

General Cell physiology (dental students);

Practical Physiology (M.Sc. and Cbachelor);

Neurophysiology (Medical and dental students);

Medical information system (M.Sc.).

Research projects participation:

✓Investigation of visual learning and memory, visual processing speed, and spatial perception in multiple sclerosis patients by age, sex and education; Research administrator.

✓Comparison of motor imagery abilities in male and female multiple sclerosis patients; Research administrator.

✓Exploration of students' experiences and satisfaction of the electronic exam in Rafsanjan University of Medical Sciences in COVID-19 Pandemic; Research administrator.

✓The survey of Divergent and Convergent Thinking, Positive and negative affect, Motivation, Depression and Anxiety of multiple sclerosis patients referred to Special diseases Clinic of Rafsanjan City in 2019; Research administrator.

✓The survey of foot mental rotation and lower-limb function in multiple sclerosis patients; Research administrator.

✓The survey of cognitive function of stroke patients in Rafsanjan in 1397; Research administrator.

✓Reliability and validity study of the mental chronometry of motor imagery in Multiple Sclerosis patients; Research administrator.

✓The effects of repetitive tactile stimulation on upper limb sensory - motor function, hand motor imagery and cognitive function in multiple sclerosis patients; Research administrator.

✓Investigation of the correlation between vertigo and exposure to agricultural pesticides in Rafsanjan in 1396-97; Research administrator.

✓Students' experience mining from e-learning in Rafsanjan University of Medical Sciences in COVID-19 Pandemic; Co-researcher.

✓Effect of propolis on inflammatory factor and neurological disorders in mice; Co-researcher.

✓Faculty members' experience mining from e-exam in Rafsanjan University of Medical Sciences in COVID-19 Pandemic; Co-researcher.

✓The effect of green tea on some inflammatory, antioxidant and cognitive factors in methadone maintenance patients; Triple-blind clinical trial; Co-researcher.

- ✓The Effect of epigallocatechin gallate (EGCG) Enriched Green Tea on some Clinical, quality of life, Biochemical, Inflammatory, Antioxidant and Cognitive Parameters in Patients with Multiple Sclerosis; A Triple-blind Randomized Placebo Clinical Trial; Co-researcher.
- ✓Evaluation the anti-inflammatory and Antioxidant effects of troxerutin on arthritis model in rat; Co-researcher.
- ✓Study the effect of propolis on some clinical, sonography, inflammatory and antioxidant parameters in patients with ischemic stroke- a randomized, double-blind, placebo-controlled clinical trial; Co-researcher.
- ✓ Study the effect of intracerebroventricular (ICV) injection of TRPV1 receptors antagonist on the, Co-researcher.
- ✓Effect of tactile stimulation on creative thinking, memory and motor imagery in 18-30 year-old subjects; Research administrator.
- ✓The study of Oleuropein polyphenol effect on cognitive deficits, brain derived nerve factor (BDNF) and some antioxidant factor levels in hippocampus of morphine treated rats; Co-researcher.
- ✓Study of epigallocatechin gallate (EGCG) effects on cognitive deficits, apoptosis, inflammation, brain derived nerve factor (BDNF) and some antioxidant factors in hippocampus of morphine treated rats; Co-researcher.
- ✓The effect of upper extremity mental imagery exercise on rehabilitation of upper extremity motor imagery and movement in multiple sclerosis patients; Co-researcher.
- ✓Investigation on the effects of Wi-Fi radiations on electrophysiological properties of barrel cortex neurons in male rats, Research administrator.
- ✓The renoprotective effect of troxerutin following unilateral ureteral obstruction in male rats; Co-researcher.
- ✓The effect of oleuropein on renal hemodynamic, histopathologic and functional parameters following unilateral ureteral obstruction in male rats; Co-researcher.
- ✓Survey of the effect of pistachio peptides on the lipid profile in hyperlipidemic male Wistar rat; Co-researcher.
- ✓The effect of peptides separated from pistachio on blood sugar in diabetic Wistar male rats; Co-researcher.
- ✓Evaluation of behavioral dysfunctions due to polycystic ovary syndrome in female rats; Co-researcher.
- ✓Study of the metformin effect on morphine withdrawal syndrome and some antioxidant factors in male morphine dependent rats; Co-researcher.
- ✓Kidney function study of agricultural workers exposed to pesticides in Rafsanjan and Anar cities at 2021-2022; Co-researcher.

- ✓Prediction of opium use and some related health outcome in adult population of Rafsanjan: A cross-sectional study based on Rafsanjan adult cohort data using data mining technique; Co-researcher.
- ✓Evaluation of the Frequency of exposure to pesticides and their relationship with some health variables in adult population of Rafsanjan: A cross-sectional study based on Rafsanjan persian cohort data; Co-researcher.
- ✓Evaluation of Ceftriaxone effects on kidney and liver complication of aging model induced by D-galactose in male mice; Co-researcher.
- ✓Investigation of the effects of hydroalcoholic achillea millefolium extract against cisplatin-induced nephrotoxicity in male mice; Co-researcher.
- ✓Evaluation of hot and cold temperament with Thyroid advantage tests in healthy students of Rafsanjan University of Medical Sciences in 2020; Co-researcher.
- ✓The relationship between employees' temprament, blood types, and reaction to change; Co-researcher.
- ✓Evaluation of liver enzymes and oxidative stress in agricultural workers in Rafsanjan and Anar cities at 2020-2021; Co-researcher.
- ✓Evaluation of pulmonary function in agricultural workers in Rafsanjan and Anar cities at 2020-2021; Co-researcher.
- ✓Effects of Wi-Fi radiations (emitted from small Wi-Fi devices) (2/4 GH) on electrophysiological properties of barrel cortex neurons in male rats; Co-researcher.
- ✓Study of the neurological Symptoms, parameters of electroencephalography, electromyography and visual evoked potential in Rafsanjan and Anar agricultural workers; Co-researcher.
- ✓The study of fertility ability of male agricultural worker in Rafsanjan and Anar city at 2020-2021 years; Co-researcher.
- ✓Study of cognitive function among Rafsanjan and Anar agricultural workers; Co-researcher.
- ✓Study of thyroid gland function among agricultural workers in Rafsanjan and Anar; Co-researcher.
- ✓Study the effects of metformin in development of morphine-induced antinociceptive tolerance in mice, possible role of nitrenergic system; Co-researcher.

Thesis Supervision and Advice:

- ✓ The effect of intravenous injection of TRPV1 receptor antagonists on binding process (convergence of different sensory information) in male rats, Advisor, Master's Thesis.
- ✓Effect of tactile stimulation on creative thinking ,memory and motor imagery in 18-30 year-old subjects; Supervisor II, Master's Thesis.

- ✓The survey of cognitive function of CVA patients in Rafsanjan in 1397, Supervisor I, Medical Student Thesis.
- ✓ The effects of repetitive tactile stimulation on upper limb sensory - motor function, hand motor imagery and cognitive function in multiple sclerosis patients; Supervisor I, Medical Student Thesis.
- ✓ Investigation of the correlation between vertigo and exposure to agricultural pesticides in Rafsanjan city in 1396-97, Supervisor I, Medical Student Thesis.
- ✓Investigation on the effects of Wi-Fi radiations on electrophysiological properties of barrel cortex neurons in male rats, Advisor, Master's Thesis.
- ✓ Study of Thyroid Function Index of Agricultural Workers Exposure to Pesticides in Rafsanjan and Anar cities at 2020-2021; Supervisor I, Medical Student Thesis.
- ✓Kidney function study of agricultural workers exposed to pesticides in Rafsanjan and Anar cities at 2021-2022; Supervisor I, Medical Student Thesis.
- ✓Evaluation of some hepatic enzyme activity and oxidative stress in agricultural workers with exposed to pesticides in Rafsanjan and Anar during 2021-2022; Supervisor I, Medical Student Thesis.
- ✓Evaluation of pulmonary function in agricultural workers with exposure to pesticides in Rafsanjan and Anar cities at 2020-2021; Supervisor I, Medical Student Thesis.
- ✓Study of fertility rate of farmer's men with pesticides exposure in Rafsanjan and Anar city at 2020-2021 years; Supervisor I, Medical Student Thesis.
- ✓A Survey of the Psychological function among Rafsanjan and Anar agricultural workers to Pesticides Exposure in 2020-2021 Years; Supervisor I, Medical Student Thesis.
- ✓Study of the neurological Symptoms, parameters of electroencephalography, electromyography and visual evoked potential in Rafsanjan and Anar agricultural workers at 2020-2021; Supervisor II, Medical Student Thesis.
- ✓The Effect of epigallocatechin gallate Enriched Green Tea on some Clinical, Inflammatory, Antioxidant and Cognitive Parameters in Patients with Multiple Sclerosis; A Triple-blind Randomized Placebo Clinical Trial; Supervisor II, Master's Thesis.
- ✓Estimation of opium use and some related risky health outcome in adult population of Rafsanjan: A cross-sectional study based on Rafsanjan adult cohort data using data mining technique; Supervisor II, Medical Student Thesis.
- ✓The effect of green tea enriched with EGCG on some inflammatory, antioxidant and cognitive factors in methadone maintenance patients; Triple-blind clinical trial; Supervisor II, Medical Student Thesis.

Professional Membership:

- Member of Physiology-Pharmacology Research Center;
- Member of Occupational Safety and Health Research Center;

- Member of Iranian Scientific Society of Neuroscience;
- Associate member of the Association of Medical Education Specialists
- Referee of clinical rehabilitation journal;
- Referee of Journal of Rafsanjan University of Medical Sciences;
- Referee of Scientific Journal of Jiroft University of Medical Sciences
- Referee of Journal of Holistic Nursing And Midwifery
- Referee of pistachio and health journal
- Referee of Journal of Kerman University of Medical Sciences
- Referee of Journal of Kurdistan University of Medical Sciences
- Referee of Addiction and Health journal
- Referee of Community Health Journal
- Referee of DEVELOPMENTAL PSYCHOBIOLOGY
- Referee of Journal of Mazandaran University of Medical Sciences

Abstract publications in Seminars:

- **Possible involvement of endogenous neural stem cells in remyelination process following local injection of lysolecithin in adult rats hippocampus**, 19th Iranian Physiology and Pharmacology congress, Shahid Beheshti University, 2009.
- **Electrophysiological assessment of demyelination and remyelination processes following local injection of lysolecithin in adult rats**, 19th Iranian Physiology and Pharmacology congress, Shahid Beheshti University, 2009.
- **Comparison of two measures of cognition SDMT and PASAT in MS patients with mild disability**, The 1st International Conference on Challenges in Clinical Neurology, Kerman University of Medical Sciences, 2014.
- **Repetitive transcranial magnetic stimulation of motor cortex improves upper extremity function in patients with multiple sclerosis**, The 2nd Basic and Clinical Neuroscience Congress, Tehran; 2013.
- **Motor imagery ability in multiple sclerosis patients and its relation with upper and lower motor function**, 21st Congress of Neurology & Electrophysiology Clinical of Iran, Tehran; 2014.
- **Is there association between mental rotation ability and cognitive function in multiple sclerosis patients?** 4th Basic and Clinical Neuroscience Congress, Tehran; 2013.
- **The effect of transcranial magnetic stimulation (TMS) on rehabilitation of upper limb dexterity in patients with multiple sclerosis**. 1st Iranian International neurorehabilitation Congress, Shahid Beheshti University, 2016.

- **Is motor imagery ability the same in different gender in multiple sclerosis patients?** 5th Basic and Clinical Neuroscience Congress, Tehran; 2016.
- **Influence of motor imagery practice on upper-extremity function in multiple sclerosis patients.** 6th Basic and Clinical Neuroscience Congress, Tehran; 2017.
- **Evaluation of convergent and divergent thinking in multiple sclerosis patients.** 8th Basic and Clinical Neuroscience Congress, Tehran; 2019.
- **Comparison of Four Cognitive Assessment Tools: MMSE, MoCA, ACE-R and LOTCA inpatients with stroke.** 9th Basic and Clinical Neuroscience Congress, Tehran; 2020.
- **Design, implementation and evaluation of electronic exam in Rafsanjan University of Medical Sciences.** The first Shahid Motahari Festival of Rafsanjan University of Medical Sciences, Rafsanjan; 2021.
- **Measurement of Students' Satisfaction with the Electronic Test: A Study at Rafsanjan University of Medical Sciences in the Covid-19 Pandemic.** 22th Iranian conference on health professions education, Shiraz; 2021.

Full Text Publications:

- **Azin, M.**, Zangiabadi, N., Iranmanesh, F., Baneshi, M. R. (2014). The comparison of information processing speed in the symbol digit modalities test and paced auditory serial addition test in relapse-remitting multiple sclerosis patients, *Pensee Journal*, 76, 227-233.
- **Azin, M.**, Zangiabadi, N., Iranmanesh, F., Baneshi, M. R., Banihashem (2016). S. Effects of intermittent theta burst stimulation on manual dexterity and motor imagery in patients with multiple sclerosis: A quasi-experimental controlled study, *Iranian Red Crescent Medical Journal*, In press.
- **Azin, M.**, Goudarzvand, M., Mirnajafi-Zadeh, J., Javan, M. (2013). Field potential recording from rat hippocampus provides a functional evaluation method for assessing demyelination and myelin repair, *Neurological Research*, 35(8), 837-843.
- Nasiri M, Kaeidi A, Fatemi I, **Azin M**, Bannazadeh M, Allahtavakoli M, Roohbakhsh A, Shamsizadeh A. Modulatory Effects of Memantine on Neuronal Response Properties in Rat Barrel Cortex. *Basic and Clinical Neuroscience*.:0-.
- **Azin, M.**, Mirnajafi-Zadeh, J., Javan, M (2015). Fibroblast growth factor-2 enhanced the recruitment of oligodendrocyte and neural progenitors and myelin repair following lysolecithin induced demyelination in hippocampal formation of rats, *Cell Journal (Yakhteh)*, 17(3), 540-546.
- **Azin, M.**, Zangiabadi, N., Tabrizi, Y. M., Iranmanesh, F., Baneshi, M. R. (2014). Deficiency in mental rotation of upper and lower-limbs in patients with multiple sclerosis and its relation with cognitive functions, *Acta Medica Iranica*, 54(8), 510-517.

- Bannazadeh, M., Fatehi, F., Fatemi, I., Roohbakhsh, A., Allahtavakoli, M., Nasiri, M., **Azin, M.**, Shamsizadeh, A. (2017). The role of transient receptor potential vanilloid type 1 in unimodal and multimodal object recognition task in rats, *Pharmacological Reports*, 69(3), 526–531.
- Shibani F, Sahamsizadeh A, Fatemi I, Allahtavakoli M, Hasanshahi J, Rahmani M, **Azin, M.**, Hassanipour M, Mozafari N, Kaeidi A. Effect of oleuropein on morphine-induced hippocampus neurotoxicity and memory impairments in rats. *Naunyn-Schmiedeberg's archives of pharmacology*. 2019 Nov;392(11):1383-91.
- Iranmanesh, F, Ostad Ebrahimi, H, Mirzazadeh, A , **Azin, M.** Performance Report of Distance Learning at Rafsanjan University of Medical Sciences During the COVID-19 Pandemic. *Journal of Rafsanjan University of Medical Sciences*. 2020 Jul 22;19(4):423-8.
- Hassanshahi E, Asadollahi Z, Azin H, Hassanshahi J, Hassanshahi A, **Azin M.** Cognitive Function in Multiple Sclerosis Patients Based on Age, Gender, and Education Level. *Acta Medica Iranica*. 2020 Dec 8:500-7.
- Rezaeinasab M, Estahbanati MF, Chermahini SA, Shamsizadeh A, Assadollahi Z, Hasanshahi A, **Azin M.** Effect of Tactile Stimulation on Hand Mental Rotation Among Young Healthy Adults: A Randomized Controlled Trial. *Archives of Neuroscience*. 2020;7(2).
- Mohamadi M, Mirzahosseini-pourranjbar A, Bagheri-Hosseiniabadi Z, Dini A, Amiri M, Shojaei A, Mahmoodi M, **Azin M.**, Khanamani Falahati-pour S, Khanamani Falahati-pour S. Protein hydrolysate derived from Pistachio vera regulates blood glucose level in streptozotocin-diabetic and high-sugar diet-fed rats. *Pistachio and Health Journal*. 2019 Sep 1;2(3):1-6.
- Mohammadi M, Fatemi I, Taghipour Z, **Azin M.**, Kaeidi A, Hakimizadeh E, Taghizadeh R, Hassanipour M. Polycystic Ovary Syndrome Can Lead to Neurocognitive Changes in Female Rats Treated with Letrozole. *Archives of Neuroscience*. 2021 Apr 30;8(2).
- Rezaeian M, Assadollahi Z, Azin H, Kaeidi A, **Azin M.** Assessment of Reliability and Validity of the Mental Chronometry Task Based on the Box and Block Test in Multiple Sclerosis Patients. *IRANIAN RED CRESCENT MEDICAL JOURNAL*. 2021 Mar 1;23(3).
- Sistani S, Fatemi I, Shafeie SA, Kaeidi A, **Azin M.**, Shamsizadeh A. The effect of Wi-Fi electromagnetic waves on neuronal response properties in rat barrel cortex. *Somatosensory & motor research*. 2019 Oct 2;36(4):292-7.