



## Curriculum Vitae Mahdi Goudarzvand

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### I. PERSONAL INFORMATION

Name: Mahdi

Family name: Goudarzvand

Academic Degree: Associate Professor of Physiology

Research field: Physiopathology of Neuroendocrine, Neurodegenerative diseases and Cardiovascular diseases

Date of Birth: December 30, 1975

Place of Birth: Tehran-Iran

Sex: Male

Marital status: Married

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### II. EDUCATIONAL RECORDS

Degree	Institution	Field	Date	Place
B.Sc.	Shiraz University of Medical Sciences	Nursing	1998	Shiraz, Iran
M.Sc.	Ahwaz Joundi Shapour University of Medical Sciences	Medical Physiology	2003	Ahwaz, Iran
Ph.D.	Tarbiat Modares University	Medical Physiology	2009	Tehran, Iran
Assistance Prof. of Physiology	Alborz University of Medical Science	-----	2011	Karaj-Iran
Associate Prof. of Physiology	Alborz University of Medical Science	-----	2017	Karaj-Iran

### III. THESIS AND DESERTATION

**M.Sc.:** Effect of Vitamin E on glutamate release and muscular stiffness in animal model of Parkinson's disease (Supervisor: Prof. Alireza Sarkaki, Ahwaz Jondishapour University of Medical Sciences, 2003)

**Ph.D.:** Vitamins E and D3 attenuate demyelination and potentiate remyelination processes of

#### IV. COURSES TAUGHT:

- 1- Cell and Muscle Physiology (For Medical, Dental, and Pharmacist students) at Alborz UMS (Traditional and Reform educational system, 2011-present), Shahroud UMS (Reform education system, 2007-2011) and Islamic Azad University- Shahroud Branch (2004-2010).
- 2- Cardiac Physiology (For Medical, Dental, and Pharmacist students) at Alborz UMS (Traditional and Reform educational system, 2011-present), Shahroud UMS (Reform education system, 2007-2011) and Islamic Azad University- Shahroud Branch (2004-2010).
- 3- Endocrine Physiology (For Medical, Dental, and Pharmacist s students) at Alborz UMS (Traditional and Reform educational system, 2011-present), Shahroud UMS (Reform education system, 2007-2011) and Islamic Azad University- Shahroud Branch (2004-2010).
- 4- Respiratory Physiology (For Medical, Dental, and Pharmacist students) at Alborz UMS (Reform educational system, 2018-2022) and Islamic Azad University- Shahroud Branch (2004-2010).
- 5- Renal Physiology (For Medical students) at Islamic Azad University- Shahroud Branch (2004-2010).
- 6- Neurophysiology (For Medical students) at Alborz UMS (Traditional educational system 2011-2015), Shahroud UMS (Reform educational system, 2007-2011) and Islamic Azad University- Shahroud Branch (2004-2010).
- 7- Blood Circulation Physiology (for Medical students) at Alborz UMS (Traditional educational system, 2011-2012) and Islamic Azad University- Shahroud Branch (2004-2006).
- 8- Gastrointestinal Physiology for Medical and Pharmacist Students at Alborz UMS (2011-2013) and Shahroud UMS (2007-2011).
- 9- Cell and Muscle, Cardiac, Endocrine, Renal, Gastrointestinal Physiology for Medical and pharmacist students at Zabol UMS and Islamic Azad University- Qesh Branch (2012-2014).
- 10- Membrane physiology for MSc biology students (2011-2016).
- 11- Neurophysiology for MSc biology students (2011-2016).
- 12- **General Physiology for BSc students (2004-present).**
- 13- Animal Lab for MSc Students (2015-2020 and 2024-2025).
- 14- Animal Lab for Medical Students (2015-2020).
- 15- Cellular biology for Lab students at Islamic Azad University- Shahroud Branch (2005-2008).
- 16- Physiology Lab (for Medical, Dental and Pharmacist Students) at Alborz UMS (2011-2020).
- 17- **Pharmacology (for Nursing and Paramedical Students, 2005-2010).**
- 18- Medical terminology (For Medical Lab. and Paramedical students, 2005-2007).
- 19- **Anatomy for BSc (Nursing and Paramedical Students, 2004 - 2007; 2011-2012).**

#### V. ACADEMIC EXPERIENCE:

##### Journal

Reviewer of MDPI Journals (Peer review Journals, ISI) (2022-present).

Reviewer of Naunyn-Schmiedeberg's Archives of Pharmacology, Germany (Peer review Journal, ISI) (2021-present).

Reviewer of IJMBS Iranian Journal of Medical Basic Science, Mashhad, Iran (Peer review Journal, ISI) (2013-present).

Handel of Editor of Basic and clinical neuroscience Journal, Tehran, Iran (2020-2022).

Scientific member and Reviewer of non-contagious diseases research center, Karaj, Iran (2019-present, first ranked research center at ministry of health, treatment and medical education, 1402).

Editorial board and Reviewer of Basic and clinical neuroscience Journal,

Tehran, Iran (2010-present, ISI).

Reviewer of Knowledge and Health Journal, Shahroud Medical Sciences University Shahroud –

Iran (2010-2020).

Editorial board and Reviewer of Alborz University of Medical Sciences Journal, (2010-2020), Karaj, Iran.

Consulter of neurosurgery department, Shahid Beheshti Medical Sciences University, Tehran, Iran (2010-2012)

Designer Exam Questions of Basic Medical Sciences, Tehran University of Medical Sciences, 2014-2015.

Designer Exam Questions of Basic Medical Sciences, Zanzan University of Medical Sciences, 2015-2021.

## Books

Authorship the new models for problem-base basic medical sciences (Persian version, 2024).

Authorship the Bio - environment Encyclopedia (Water chapter), Recommended by ministry of science and technology, 2018, (Persian version).

Translation of Integrated Medical Sciences' book, 2016 (Persian version).

Translation of Pharmacology at glance's book 2016 (Persian version).

Authorship the Medical Encyclopedia, Recommended by ministry of science and technology, 2015, (Persian version).

Authorship the Physiology for dental and BSc students, 2015 (Persian version).

Collecting and Answering to the Basic Medical Sciences Exams (Reform education) (2013).

## VI. INTERNATIONAL COLLABORATION:

Evaluating the rate of primacy and recency in learning word series in neglect patients with right posterior parietal lobe lesion (Collaboration among University Hospital Zurich and Alborz university of Medical Sciences and Shohada-e-Tajrish Hospital (Neurosurgery Center of Excellence).

No horizontal numerical mapping in a culture with mixed-reading habits (Collaboration between University Hospital Zurich and Alborz university of Medical Science, Prof. Peter Burugger and Dr. Mahdi Goudarzvand).

## VII. MEMBERSHIP OF SCIENTIFIC SOCIETIES:

International Brain Research Organization (IBRO)

Japanian Neurosciences Society

Iranian Society of Physiology and Pharmacology

Iranian Cell Death Society

Iranian Society of Neurosciences

## VIII. RESEARCH EXPERIENCES:

Western blot, RT- PCR and primer designing, Immunohistochemistry and histology techniques, Stereotaxic surgery of rat brain and cannulation, Hormone Assay, Animal model of Neurodegenerative diseases and Behavioral- related tests (Animal models of MS, AD and PD), Microdialysis in animal, Formalin Test, Learning and memory techniques (Morris water maze and shuttle box), Familiar to SiRNA delivery system, Familiar to cell culture, Animal model of Pain and stress, Familiar to Animal model of global brain ischemia, Familiar to animal model of Heart failure, Familiar to animal model of Spinal cord Injury, Familiar to Python software, Familiar to TEM.

## IX. RESEARCH PROJECTS:

**1 -Title of Project:** Studying the acute and chronic toxicities and antidiabetic effects of silybum marianum, melissa officinalis , vaccinium arctostaphylos, trigonella foenum, urtica dioica and citrullus colocynthis extracts mixtures in animal model of diabetics' rat (**Finished: 2023**).

- 2 -Title of Project:** Evaluation of the effect of Butachlor on pathological parameters of kidney and liver tissue in rats (Finished: 2023).
- 3 -Title of Project:** In-vitro study of toxicity of trigonella foenum, vaccinium arctostaphylos, silybum marianum, urtica dioica, melissa officinalis and citrullus colocynthis extracts mixtures in normal environment and protective effect of mixtures in High-glucose environment (Finished: 2022).
- 4-Title of Project:** Determining the frequency and function of exhausted natural killer cells in the peripheral blood of patients with COVID-19 (Finished: 2022)
- 5 -Title of Project:** Evaluating oxidant and antioxidant determinants in febrile seizure patients hospitalizing at Karaj's Bahaonar hospital (Finished: 2019).
- 6 -Title of Project:** Investigating the preventive and therapeutic effect of injection of Toxocarachnis parasite larvae in the experimental . . . (Finished: 2018).
- 7 -Title of Project:** Evaluating apoptotic miRNAs expressions in pateints's serum with multiple sclerosis (Finished: 2016).
- 8-Title of Project:** The effect of Plantago major extract on adult male bulb-c spermatogenesis (Finished: 2015).
- 9-Title of Project:** Select the appropriate probiotics to replace antibiotics in burn wounds caused by resistant pathogens .... (Finished: 2014).
- 10-Title of Project:** Effect of agonist and antagonist of CB1 receptore on tau protein expression and spatial memory .... (Finished: 2013).
- 11 -Title of Project:** Evaluation of ovarian morphometric and pathologic changes in female rats following exposure to .... (Finished: 2013).
- 12. Title of Project:** Isolation, biochemical and molecular identification of Lactobacillus and Bifidobacteria from fecal sample of healthy breast-fed infants and milk of their mothers, evaluation of probiotic properties..... (Finished: 2013).
- 13 -Title of Project:** Comparison the level of sensory blockage in spinal anesthesia with bupivacaine %0.5 and lidocaine %5 in surgical patients in Karaj Shahid madani and Bahaonar hospital (Finished: 2013).
- 14 -Title of Project:** Evaluation of probiotic bacteria (L. acidophilus) effect on iron bioavailability... (Finished: 2013).
- 15 -Title of Project:** Studying the Bcl2 and Bax proteins expressions in three cancer cell lines treated with an active derivative of 4-aryl-4 Hchromenes family (Finished: 2013).
- 16- Title of Project:** Evaluation of neuroprotective/neurodegenerative potential of metformin pretreatment in the rat model of global cerebral ischemia : focusing on mitochondrial biogenesis signaling pathway (Finished: 2013).
- 17-Title of Project:** In vitro evaluation of the adhesion to Caco-2 cells and growth inhibition of 4 entric pathogen among 15 lactobacilli and bifidobacteria isolated from tropical area of Iran (Finished: 2013).
- 18-Title of Project:** Investigation of the effect of probiotics Lactobacillus and Bifidobacteria on spatial learning and memory in local demyelination of hippocampus of rat (Finished: 2012).
- 19-Title of Project:** Application of mesenchymal stem cell intended to improve remyelination and reward response of accumbense nucleus in a local demyelination model of MS (Finished: 2011).
- 20-Title of Project:** Vitamins E and D3 attenuate demyelination and potentiate remyelination processes of hippocampal formation of rats following local injection of ethidium bromide (Finished: 2007).
- 21-Title of Project:** Effect of adenylyl cyclase inhibitor injection on synaptic facilitation-hyperalgesia in rostral ventromedial medulla of rat (Finished: 2006).

**22-Title of Project:** Effect of Vitamin E on glutamate release in striatum and muscular stiffness in animal model of Parkinson's disease (**Finished: 2004**).

## X. International Papers

-Mostafa Kalvandi, Seyed Ali Hashemi, Bahareh Tavakolifar, Gholamreza Bayat, **Mahdi Goudarzvand**. The Histological Effects of Diazinon on the Liver and Kidneys of Rats. *Pathobiology Research*. **2025**, **28**, 1.

-Azadeh Khalili, Hossein Karim, **Mahdi Goudarzvand**, Gholamreza Bayat. Drug-drug interactions in pharmacotherapy of heart failure: Risk of electrolyte abnormalities. *Pathobiology Research*. **2025**, **28**, 2.

-Bahareh Tavakoli-Far, Maryam Zeraati, Samira choopani, Parviz fallah, Parisa darabi, Roham Mazloom, Gholamreza Bayat, Marjan Hosseini, **Mahdi Goudarzvand\***. Cannabinoid Type 1 Receptor Antagonist Impaired Spatial Memory and Increased the Tau Gene Expression in Animal Model of the Alzheimer's disease. *Archives of Razi Institute*. **2024**, 79, 5: 1169-1175.

-Ghazale Molaverdi, Mohadeseh Zarei Ghobadi, Sayed Hamidreza Mozhgani, Mahshid Safavi, Mojtaba Hedayat Yaghoobi, Sepehr Aghajanian, **Mahdi Goudarzvand\***. Associated neurological manifestations with COVID-19: A Systematic Review, *eNeurologicalSci* 33, 2023: 100485.

-Nasim Saeidi, Hadi Goudarzvand, Hamed Mohammadi, Amirhossein Mardi, Shadi Ghoreishizadeh, Navid Shomali, **Mahdi Goudarzvand\***. Dysregulation of miR-193a serves as a potential contributor to MS pathogenesis via affecting RhoA and Rock1. *Mult Scler Relat Disord*. **2023** Jan;69:104468. doi: 10.1016/j.msard.2022.104468.

-Nasim Niki Saeidi , Arezou Dabiri, Reza Mansouri, Alireza Moomivand and **Mahdi Goudarzvand\***. miRNAs as Valuable Diagnostic Biomarkers in Patients with Multiple Sclerosis *Journal of Biomedical Research & Environmental Sciences*. **2023**, 4(4): 773-778. doi: 10.37871/jbres1735.

Fatemeh Karami, Faezeh Abdolmalek Maryam Azizi, Negin Vali Nejad, Maryamalsadat Hosseini Parsa, Arman Vasighmehr, **Mahdi Goudarzvand\***, Jalal Solati. Pycnogenol Improves the Destructive Results of Prenatal Bacterial Lipopolysaccharide Exposure in Adult Male Pups NMRI Mice. *Pathobiology Research*. 2022;25 (4): 23-29.

-Farajollah Jafari, **Mahdi Goudarzvand\***, Ramin Hajikhani, Mostafa Qorbani, Jalal Solati. Pycnogenol ameliorates motor function and gene expressions of NF- $\kappa$ B and Nrf2 in 6-hydroxydopamine- induced experimental model of Parkinson's disease in male NMRI mice. *Naunyn-Schmiedeberg's Archives of Pharmacology*, **2022** Mar; 395(3):305-313.

-Elaheh Gholami Roudmajani, **Mahdi Goudarzvand\***, Nasim Hayati Roodbari, Kazem Parivar. Astaxanthin ameliorates the impairment consequence of prenatal bacterial lipopolysaccharide exposure in adult male offspring NMRI mice. *Physiology and Behavior*, **2022**, DOI: 10.1016/j.physbeh.2022.113993.

-Zahra Ataie, Samira Choopani, Forough Foolad, Fariba Khodagholi, **Mahdi Goudarzvand\***. Vitamin D3 mediates spatial memory improvement through nitric oxide mechanism in demyelinated hippocampus of rat. *Brazilian Journal of Pharmaceutical Sciences*, 58 (12), 2022, doi:10.1590/s2175-97902022e20245

- Hasan Namdar Ahmadabad, Allireza Abbaspour, Yaser Panahi, Saeed Tahmasebi, Nikoo, Hossein-Khannazer, Sanaz Afraei, Hosein Miladi, **Mahdi Goudarzvand**, Ali N. Kamali, Yasser Bagheri, Reza Yazdani, Maria Maddalena Di Fiore and Gholamreza Azizi\*. Anti-Inflammatory Effect of KW-2449 on Autoimmune Encephalomyelitis: An Experimental Study on Mice Endocrine, Metabolic & Immune Disorders - Drug Targets, **2021**, 21, 1-00.

-Elaheh Gholami Roudmajani, Nasim Hayati Roodbari\*, **Mahdi Goudarzvand** and Kazem Parivar. Protective Effect of Astaxanthin on Prenatal Bacterial Lipopolysaccharide Exposed Behavioral Deficits in Adult Mice. Iran Red Crescent Med J. **2020**, 22(2):e97600.

-**Goudarzvand M**, Panahi Y, Yazdani R, Miladi H, Tahmasebi S, Sherafat A, Afraei S, Abouhamzeh K, Jamee M, Al-Hussieni KJMR, Mohammadi H, Mohebbi A, Hossein-Khannazer N, Zaki-Dizaji M, Di Fiore MM, D'Aniello A, Azizi G. The Effects of D-aspartate on Neurosteroids, Neurosteroid Receptors, and Inflammatory Mediators in Experimental Autoimmune Encephalomyelitis. Endocr Metab Immune Disord Drug Targets. **2019**; 19 (3): 316- 325. doi: 10.2174/1871530318666181005093459.

- Abbas Azadmehr, **Mahdi Goudarzvand**, Payam Saadat, Hadi Ebrahimi, Reza Hajiaghaee. Immunomodulatory and Anti-Inflammatory Effects of Scrophularia megalantha Ethanol Extract on an Experimental Model of Multiple Sclerosis. Research Journal of Pharmacognosy (RJP), **2019**, 6(1): 43-50.

- Farahnaz Nikdoust, Elham Bolouri, Seyed Abdolhussein Tabatabaei, **Mahdi Goudarzvand**, and Seyedeh Tahereh Faezi. Early diagnosis of cardiac involvement in systemic lupus erythematosus via global longitudinal strain (GLS) by speckle tracking echocardiography. J Cardiovasc Thorac Res. **2018**, 10 (4): 231-235.

-Ghorbangol Ashabi, Alireza Sarkaki, Fariba Khodagholi, Shima Zareh Shahamati, **Mahdi Goudarzvand**, Yaghoob Farbood, Mohammad Badavi, and Leila Khalaj. Subchronic metformin pretreatment enhances novel object recognition memory task in forebrain ischemia: behavioural molecular, and electrophysiological studies. Can. J. Physiol. Pharmacol. **2017** Apr; 95 (4):388-395. doi: 10.1139/cjpp-2016-0260.

-**Mahdi Goudarzvand**, Sanaz Afraei, Somaye Yaslianifard, Saleh Gheyasi, Ghazal Sadri, Mustafa Kalvandi, Tina Alinia, Ali Mohebbi, Reza Yazdani, Shahin Khadem Azarian, Abbas Mirshafiey, Gholamreza Azizi. A manuscript titled Hydroxycitric acid ameliorates inflammatory and oxidative stress determinants in experimental model of multiple sclerosis Neural Regeneration Research, **2016**, 11 (10): 1610-1616.

-**Mahdi Goudarzvand**, Samira Rasouli koohi, Zohreh Khodaii. Somayeh Soleymanzadeh Moghadam. Probiotics Lactobacillus plantarum and Bifidobacterium B94: cognitive function in demyelinated model. Med J Islam Repub Iran, **2016** July, 30:391.

-Negin Garoosi, Hussein Rasi, **Mahdi Goudarzvand**. Molecular analysis of G1691A Mutation in the 5 factor Leiden and its relation with mtDNA common deletion in human recurrent pregnancy loss. International Journal of advanced Biotechnology and research. **2016**; 7:50-53.

-Gholamreza Bayat, Mohammad Javan, Fatemeh Safari, Azadeh Khalili, Saeed Shokri, **Mahdi Goudarzvand**, Mehdi Salimi, and Sohrab Hajizadeh. Nandrolone decanoate negatively reverses the beneficial effects of exercise on cardiac muscle via sarcolemmal, but not mitochondrial K<sub>ATP</sub> channel. Can. J. Physiol. Can. J. Physiol. Pharmacol. **2016**: 94: 324–331. dx.doi.org/10.1139/cjpp-2015-0040.

- **Mahdi Goudarzvand**, Samira Choopani, Alireza Shams, Mohammad Javan, Zohreh Khodaii, Farhad Ghamsari, Naser Naghdi Piryaee Abbas, Abbas Haghparast Focal injection of ethidium bromide as simple model to study cognitive deficit and improvement. Basic and clinical neuroscience. **2016**, 7: 63-73.

-Mohamad Hassan Naseri, Majid Mahdavi, Jamshid Davoodi, Saeed Hesami Tackallou, **Mahdi Goudarzvand** and Shima Hallaj Neishabouri. Up regulation of Bax and down regulation of Bcl2 during 3-NC mediated apoptosis in human cancer cells. Cancer Cell international. **2015**; 15: 155.

-Gholamreza Azizi, **Mahdi Goudarzvand**, Sanaz Afraei, Reza Sedaghat and Abbas Mirshafiey. Therapeutic effects of dasatinib in mouse model of multiple sclerosis. Immunology and immunotoxicology. **2015**; 37(3): 287-294.

- Ghorbangol Ashabi, Leila Khalaj, Fariba Khodaghohi, **Mahdi Goudarzvand**, Alireza Sarkaki. Pre-treatment with metformin activates Nrf2 antioxidant pathway and inflammatory responses through induction of AMPK after transient global cerebral ischemia. *Metabolic Brain Disease*. 24435937, **2015**, 30(3):747-54.
- Yazdi-Ravandi S, Razavi Y, Haghparast A, **Goudarzvand M**, Haghparast A. Orexin A induced antinociception in the ventral tegmental area involves D1 and D2 receptors in the nucleus accumbens. *Pharmacol Biochem Behav*. 2014 Nov;126:1-6. doi: 10.1016/j.pbb.2014.08.009. Epub **2014** Aug 30.
- Reza Vazirinejad, Fateme Ayoubi, Mohammad Kazemi Arababadi, Mohammad Mahdi Eftekharian, Ali Darekordi, **Mahdi Goudarzvand**, Gholamhossein Hassanshahi, Mohammad Mohsen Taghavi, Behzad Nasirahmadabadi, Derek Kennedy, Ali Shamsizadeh. Effect of aqueous extract of *Achillea millefolium* on the development of experimental autoimmune encephalomyelitis in C57BL/6 mice, *Indian Journal of Pharmacology*, **2014**, 46 303-308.
- Neda Rashidi-Ranjbar, **Mahdi Goudarzvand**, Sorour Jahangiri, Peter Brugger and Tobias Loetscher. No spatial-numerical mapping in cultures with mixed-reading habits, *Front. Hum. Neurosci*. doi: 10.3389/fnhum. **2014**.00072
- Parisa Darabi, **Mahdi Goudarzvand**, Mahboobeh Mehrabani, Zohreh Khodaii. Antibacterial activity of Probiotic bacteria isolated from Broiler feces and commercial strains. *Int J Enteric Pathg*. **2014**, 2(3):e18877.
- Nazila Aazami, Gholamreza Salehi Jouzani, Zohreh Khodaei, Amir Meimandipour, Mohammad Safari and **Mahdi Goudarzvand**. Characterization of some potentially probiotic *Lactobacillus* strains isolated from Iranian native chickens. *J. Gen. Appl. Microbiol*, **2014**, 60: 215-221.
- Nasibe Akbari, Mahmoud Elahdadi Salmani, **Mahdi Goudarzvand**, Taghi Lashkarboluki, Iran Goudari, Kataneh Abrari. Unilateral hypothalamus inactivation prevents PTZ kindling development through hippocampus orexin receptor 1 modulation. *Basic and clinical neuroscience*, **2014**, 5 (1): 66-73.
- Ghorbangol Ashabi, Fariba Khodaghohi, Leila Khalaj, **Mahdi Goudarzvand**, Masoumeh Nasiri. Activation of AMP-activated protein kinase by metformin protects against global cerebral ischemia in male rats: Interference of AMPK/PGC-1 $\alpha$  pathway, *Metabolic Brain Disease*, **2014**, 29: 47-58.
- Sayyed Mohammad Hossien Ghaderian, Mahboobeh Mehrabani Natanzi, **Mahdi Goudarzvand**, Zohreh Khoaii, Probiotic therapy, what is the most effective method for host protection against enteric pathogen, *Int J Enteric Pathg* **2013**, 1 (2): 37-43.
- Khezri S, Javan M, **Goudarzvand M**, Semnanian S, Baharvand H. Dibutyryl Cyclic AMP Inhibits the Progression of Experimental Autoimmune Encephalomyelitis and Potentiates Recruitment of Endogenous Neural Stem Cells. *J Mol Neurosci*. **2013**, 51 (2): 298. PMID: 23335001.
- Azin M, **Goudarzvand M**, Mirnajafi-Zadeh J, Javan M. Field potential recording from rat hippocampus provide functional evaluation method for assessing demyelination and myelin repair. *Neurol Res*. **2013**, 35 (8): 837-843 PMID: 23676280.
- Zohreh Khodaii, Mahboobeh Mehrabani Natanzi, Mohammad Hassan Naseri, **Mahdi Goudarzvand**, Hillary Dodson, Anna S. Snelling. Phytase activity of lactic acid bacteria from dairy and pharmaceutical products. *Int International Journal of Enteric Pathogens*, **2013**, 1: 12-16.
- Navidhamidi M, Semnanian S, Javan M, **Goudarzvand M**, Rohampour K, Azizi H.. Examining the effect of the CaMKII inhibitor administration in the locus coeruleus on the naloxone-precipitated morphine withdrawal signs in rats. *Behav Brain Res*. **2012** Jan 15; 226 (2):440-4.



- **M. Goudarzvand**, M. Javan, J. Mirnajafi-Zadeh, S. Mozafari, T. Tiraihi. Cellular and Molecular Neurobiology. Vitamins E and D3 attenuate demyelination and potentiate remyelination processes of hippocampal formation of rats following local injection of ethidium bromide, **2010**, 30, 289-299.

## XI. NATIONAL PAPERS

- Bahareh Tavakoli-far, Asieh Hosseini, Hasan Fallah-Huseini, Mahdi Mohammadi, **Mahdi Goudarzvand\***. The Anti-diabetic Effect of the Mixture of Trigonella Foenum-graecum, Vaccinium Arctostaphylos, Silibum Marianum, dioica Urtica, Melissa Officinalis and Citrullus colocynthis Extracts in the Diabetic Rat Animal Model and Evaluation of Possible Liver Complications, Alborz University of Medical Sciences Journal., **2024**, 13, 4: 242-253.

-Saman Afrasiabi, **Mahdi Goudarzvand**, Amir Saeid Sedighi, Yazdan Shafikhani, Behrooz Ghanbari. Evaluating the Rate of Primacy and Recency in Learning Word Series in Neglected Patients with Right Posterior Parietal Lobe Lesion. Journal of Arak University of Medical Sciences. **2024**, 27, 1.

-Bahareh Tavakoli-Far, Marjan Hosseini, Hadi Goudarzvand, Samira Choopani, Mahdi Goudarzvand\*. GABA Signaling in Spatial Memory changes in Animal Model of Alzheimer's disease. Alborz University of Medical Sciences Journal. **2024**, 13, 3:194-203.

- Elaheh Gholami Roudmajani , **Mahdi Goudarzvand \*** , Nasim Hayati Roodbari , Kazem Parivar. Evaluation of the Protective Effect of Astaxanthin Against Undesired Effects of Prenatal Bacterial Lipopolysaccharide (LPS) Exposure on Maternal Behaviors and Neuronal Changes of Adult Male Offspring in NMRI Mice. Alborz University of Medical Sciences Journal, **2022**, Vol. 11, No. 3: 339 -348.

-Niloofer Amirzadeh Dana, Kumars Pourrostami, Morteza Heidari, Maliheh Farid, **Mahdi Goudarzvand\***. Evaluating Oxidant and Antioxidant Determinants in Febrile Seizure Patients Hospitalizing at Karaj's Bafonar Hospital Alborz University of Medical Sciences Journal, **2021**, Vol. 10, No. 4: 385-393.

-Hannaneh Roshanbakhsh, Mahmoud Elahdadi Salmani, **Mahdi Goudarzvand**, Fereshteh Pourabdolhossein. Effects of Piperine Pretreatment on Antioxidant Capacity and Spatial Memory Impairment Induced by Local Injection of Lysolecithin in Rat Hippocampus. J Mazandaran University of Medical Sciences. **2020**, 30 (188): 1-16.

-**Mahdi Goudarzvand**, Zahra Ataie. Nano Drug Delivery Systems and Liposomes. Alborz University of Medical Sciences. **2018**, 7(3):220-232.

-Safra Saffari, Mohammad Hadi Bahadori, Hajar Sharami, Parvin Torab Zadeh, **Mahdi Goudarzvand**. Association of vitamin E level in follicular fluid with morphology of oocyte and quality of embryo in IVF patients, Alzahra hospital Rasht. Zanzan University of Medical Sciences Journal. **2015**, Vol. 24, 102: 21-31.

-Somayeh Soleymanzadeh Moghadam, Zohreh Khodae, Azar Sabokbar, **Mahdi Goudarzvand**, Evaluating the effect of probiotics on serum Fe and vitamin D following ethidium bromide- induced demyelination in hippocampus of rat. Razi Journal of Medical Sciences. **2015**, 22: 131.

-**M. Goudarzvand**, S. Choopani, N. Naghdi, Z. Khodaii. Co-administration of vitamin E and D3 on spatial learning and memory of hippocampal formation of rat following ethidium bromide-induced demyelination, Alborz University Medical Journal. **2012**; 1 (3): 137-142.



- Bayat Gh, Hajizadeh S, Javan M, Safari F, **Goudarzvand M**, Shokri S, Pourkhalili Kh, Alavian F. Effect of exercise and chronic nandrolone decanoate administration on ATP -sensitive K channel of cardiac sarcolemma in rat, Fez, Kashan, **2011**; 16 (2): 102-111.
- **M. Goudarzvand**, H. Azhdari, R. Khakpay. Effect of adenylyl cyclase inhibitor injection on synaptic facilitation- hyperalgesia in rostral ventromedial medulla of rat. Shahrood University of Medical Sciences Journal. **2010**; 4 (4): 11-17.
- **M. Goudarzvand**, M. Javan, J. Mirnajafi-Zadeh, T. Tiraihi. Studying of combined administration of vitamins E and D3 on demyelination and remyelination of rat's hippocampus. Sabzevar University of Medical Sciences. **2009**; 16: 62-71.
- M. Badavi, A.R. Sarkaki, **M. Goudarzvand**: Effect of Vitamin E on glutamate release in striatum and muscular stiffness in animal model of Parkinson's disease. Ahwaz Jundishapour University of Medical Sciences Journal. **2006**; 5: 614-620.

## XII. ABSTRACTS IN CONGRESS

**Mahdi Goudarzvand**, Elham Bolouri, Roham Mazloom. The Heart- Brain Dysfunction: Cardiogenic Dementia. 10<sup>th</sup> International of cognitive sciences conference, **2024**, Tehran.

Elaheh Gholami Roudmajani, **Mahdi Goudarzvand**, Nasim Hayati Roodbari, Kazem Parivar. Evaluation of the Protective Effect of Astaxanthin Against Undesired Effects of Prenatal Bacterial Lipopolysaccharide (LPS) Exposure on Maternal Behaviors and Neuronal Changes in Adult Male Offspring in NMRI Mice. 26<sup>th</sup> International Physiology and Pharmacology Congress, **October 2023, Semnan, Iran (As Poster)**.

**Mahdi Goudarzvand**, Bahareh Tavakoli-Far, Elaheh Gholami Roudmajani, Parviz fallah, Parisa Darabi, Roham Mazloom Cannabinoid Type 1 Receptor Antagonist Impaired Spatial Memory and Increased the Tau Gene Expression in Animal Model of the Alzheimer's disease. 26<sup>th</sup> International Physiology and Pharmacology Congress, **October 2023, Semnan, Iran**.

**Mahdi Goudarzvand**, Elham Bolouri, Sajad Shayesteh. The Future of Artificial Intelligence (AI) in the quality of life of older adults: Advantages and disadvantages. 2<sup>th</sup> interdisciplinary conference on aging medicine. **2023**, Karaj.

**Mahdi Goudarzvand**, Farajollah Jafari. Pycnogenol ameliorates motor function and genes expressions of NF- $\kappa$ B and Nrf2 in 6 hydroxydoamine- induced experimental model of Parkinson's disease in male NMRI mice. 10<sup>th</sup> Basic and clinical Neuroscience, **2021, Tehran, Iran**.

**Mahdi Goudarzvand**, Zahra Ataie, Samira Choopani. Role of vitamin D<sub>3</sub> in memory improvement and nitric oxide level in demyelinated hippocampus of rat. 24 International Physiology and Pharmacology Congress. **October 2019, Tehran, Iran**.

Roham Mazloom, Gholamreza Bayat, **Mahdi Goudarzvand**, Azadeh Khalili. Heart rate viability in sinus bradycardia: A case study. National congress on clinical case reports, December **2018, Karaj, Iran**.

**Mahdi Goudarzvand**, Ghorbangol Ashabi, Leila Khalaj, Fariba Khodaghali, Alireza Sarkaki. Pre-treatment with metformin activates Nrf2 antioxidant pathway and inflammatory responses through induction of AMPK after transient global cerebral ischemia. 14<sup>th</sup> International Athens/Springfield Symposium on Advanced in Alzheimer Therapy, March 9-12, **2016, Athens, Greece**.

**M. Goudarzvand**, M. Javan, J. Mirnajafi-Zadeh, T. Tiraihi. Local injection of ethidium bromide into the hippocampus can be modeled to study of demyelination and cell death in the gray matter of the brain, July 13-18, **2011**, Florence, Italy (8<sup>th</sup> IBRO congress).

**M. Goudarzvand**, M. Javan, J. Mirnajafi-Zadeh, T. Tiraihi. Combined administration of vitamins E and D3 decreases the extent of demyelination and increases remyelination process of rats hippocampus following local injection of ethidium bromide. September 1-4, **2010**, Kobe Japan.

**M. Goudarzvand**, M. Javan, J. Mirnajafi-Zadeh, S. Mozafari, T. Tiraihi. De-myelination, cell death and endogenous re-myelination following ethidium bromide induced insult in rat hippocampal formation. 4<sup>th</sup> ESN Conference on Advanced in Molecular mechanism of Neurological Disorders. July 11-14, **2009**, **Leipzig, Germany**.

**M. Goudarzvand**, M. Javan, J. Mirnajafi-Zadeh, S. Mozafari, T. Tiraihi. Vitamins E and D3 attenuate demyelination and potentiate remyelination processes of hippocampal formation of rats following local injection of ethidium bromide; possible role for endogenous stem cell. 5th Congress on Stem Cell Biology and Technology. September 23-25, **2009**, **Tehran, Iran**.

**M. Goudarzvand**, M. Javan, J. Mirnajafi-Zadeh, T. Tiraihi. Effect of vitamins E and D3 on cell death and remyelination of hippocampal formation of rats following local injection of gliotoxin ethidium bromide. 5<sup>th</sup> international MS congress of Iran, November 13-14, **2008**, **Tehran, Iran**.

**M. Goudarzvand**, M. Badavi, A.R. Sarkaki. Effect of Vitamin E on glutamate release in striatum in animal model of Parkinson's disease. 7<sup>th</sup> Congress of Biochemistry, January 26-29, **2004**, **Ahwaz, Iran**.

### **XIII. SUPERVISORS AND ADVISOR OF DISSERTATION/THESE:**

#### **Supervisors:**

-Evaluation of the protective effect of astaxanthin against negative effects of prenatal bacterial lipopolysaccharide exposure on behavioral and reproductive axis of adult male offspring and expression of genes *gnrh* and *sox9* in NMRI mice (Elahe Gholami, **PhD thesis, 2020**).

-Evaluating the effects of pycnogenol on motor function recovery and Nrf2 and NF- $\kappa$ B gene expressions in 6-hydroxydopamine-induced experimental model of Parkinson's disease in NMRI male mice (Farajollah Jafari, **PhD thesis, 2022**).

-Evaluation the effect of probiotics on Fe<sup>2+</sup> & vitamin D3 serum levels following ethidium bromide - induced demyelination in hippocampus of rat (S. Soleymanzade, **MSc thesis**).

- Effect of probiotics on Ca<sup>2+</sup> & cholesterol serum levels following ethidium bromide - induced demyelination in hippocampus of rat (M. Kamal Zare, **MSc thesis**).

- Effects of cryoprotectants on the viability of *L.reuteri* *B.bifidum* *L.acidophilus* in the freeze-drying process (Z. Takallu, **MSc thesis**).

- Molecular Investigation of Common TLR4 Polymorphism and Mycoplasma Infection in Recurrent Miscarriage (Ali Shafaei, **MSc thesis**).

-Evaluating the effect of Diazinon exposure on pathological markers of kidney and liver in rats (Mostafa Kalvandi, **Medical student**)

- Evaluating oxidant and antioxidant determinants in febrile seizure patients hospitalizing at Karaj's Bahonar hospital (Niloufar Amirzadeh, **Medical Student**).

- Effect of upper eyelid blepharoplasty on refractive errors, contrast sensitivity and visual field in patients with dermatochalasisreferring to the Bina ophthalmology center from 1393 to 1397 (Ngin Sina, **Medical Student**).

-In-vitro study of toxicity of trigonella foenum, vaccinium arctostaphylos, silybum marianum, urtica dioica, melissa officinalis and citrullus colocynthis extracts mixtures in normal environment and protective effect of mixtures in High-glucose environment (Alireza Momivand, **Medical Student**).

-Investigating the anti-diabetic effect of the mixture of extracts of silybum marianum, melissa officinalis, vaccinium arctostaphylos, trigonella foenum, urtica dioica and citrullus colocynthis in the diabetic rat animal model (Mahdi Mohammadi, **Medical Student**).

Evaluating ratio of Primacy and Recency event in Word List Learning in Neglect patients with right posterior parietal lobe lesion (Saman Afrasiabi, **Medical Student**).

Comparison of physiologic visual indices before and after phacoemulsification surgery: Superior versus Temporal Corneal Incision from 1396-1400 (Razeyeh Alipour, **Medical Student**).

#### Advisors:

- Effect of Lateral Hypothalamus and Orexin on Pentylentetrazol induced seizure in male rat. (Akbari, Nasibeh, **MSc thesis**).

-Effect of exercise and vitamin D3 on pain threshold in diabetic rats (Seyed Jalal Taherabadi, **MSc thesis**).

- Evaluation of Q10 effect on adherence of probiotic bacteria to Hep2 cell line (F. Braznde, **MSc thesis**).

-The effect of calcium on the adhesion of probiotic bacteria Lactobacillus Reuteri to the Hep-2 cell line (F. Kazemani, **MSc thesis**).

- Determine Level of vitamins E and C in follicular fluid with oocyte morphology and embryo quality in IVF patients in rasht alzahra hospital (Safra Saffari, **MSc thesis**).

-Molcular detection of G1691A in the factor 5 Leiden and relation with mitochondrial mutation in recurrent Miscarriage  
(Negin Garoosi, **MSc thesis**)

- Effect of prenatal Maca exposure on reproductive behaviors and serum levels of sexual hormones in adult female offspring (Samira Alimoradi, **MSc thesis**).

- Evaluation of the protective effects of ginseng against effects of prenatal bacterial endotoxins exposure on sexual hormones and spermatogenesis in adult male NMRI mice (Solmaz Rezaie, **MSc student**)

-Evaluation of the effect of Butachlor on pathological parameters of kidney and liver tissue in rats (Nooshin Taherzadeh, **Medical student**).

-Evaluation the effect of saponin on the histological changes of the liver and kidney following the induction of cholestasis by the bile duct obstruction method in laboratory large white rats (Reyhane Ghalekhani, **Medical student**).

#### XIV. Grants and Awards

- 1- ISN/ ESN Summer School on advanced imaging and biomarkers in neurological disorders. July 6-10, 2009, Meissen, Germany.
- 2- First ranked poster of 5th international MS congress of Iran, November 13-14, 2008, Tehran, Iran
- 3- International Brain Research Organization School in Pakistan, 26<sup>th</sup> to 30<sup>th</sup> March 2007, Karachi, Pakistan (the grant was provided from IBRO).
- 4- Travel award of Neuro 2010, September 1-4, 2010, Kobe, Japan.
- 5- First Rank teacher at Alborz University of medical sciences, 2012.
- 6- First Rank teacher at Alborz University of medical sciences, 2013.
- 7- First Rank researcher at Alborz University of medical sciences, 2012.
- 8- Travel award of Advanced Alzheimer Therapy, 2016, March 9-12, 2016, Athens, Greece.
- 9- First Rank researcher in Alborz University of medical sciences, 2021.
- 10- First rank in Shahid Motahari Festival, 2021 (University level).
- 11- Selected Reviewer of Alborz University of Medical Sciences Journal, 2017.
- 12- Scientific member and Reviewer of non-contagious diseases research center, Karaj, Iran (First ranked research center at Ministry of Health, 1402).

#### XV. WORKSHOP TAUGHT

Neuroscience Molecular Methods, Tarbiat Modares University, 2009, Tehran, Iran.

3<sup>rd</sup> Tehran IBRO School, Tarbiat Modares University, October 26 to November 7, 2013, Tehran.

#### XVI. EXECUTIVE EXPERIENCES

Educational and research assistance, School of Medicine, Alborz University of Medical Sciences, 2011-2013.

Head of Physiology and Pharmacology department, School of Medicine, Alborz University of Medical Sciences, 2012-2014 and 2016- 2019.

Manager of Scientific member affair, Alborz University of Medical Sciences, 2019-2020.

#### XVII. ESTABLISHMENT

School of Medicine, Alborz University of Medical Sciences (2011).

Physiology and Pharmacology department, Alborz University of Medical Sciences (2012).

Animal House, School of Medicine, Alborz University of Medical Sciences (2012).

Cell culture, School of Medicine, Alborz University of Medical Sciences (2013).