

Curriculum Vitae

Personal Information

First name: Ali
Surname: Rafati

Date of birth: 30/03/1959 **Nationality** Iranian

Marital status: Married (three children)

Title: Full Professor

Gender: Male

Work address: Physiology Dept. Medical School
Shiraz Medical Sciences University
Shiraz, Iran

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Educational Background

1977-1984 DVM, School of veterinary medicine, Shiraz University, Shiraz, Iran

1995-2001 PhD in Physiology, School of Medicine, Esfahan Medical University, Esfahan, Iran

Employment / Professional Experience

1988-2001 Faculty Member (lecturer), School of Medicine, Shaheed Sadooghi University of Medical Sciences and Health Services Yazd, IRAN

1994-2007 member of education development centre (EDC) of Yazd medical university

2001-2007 member of cardiovascular research centre of Yazd medical University

2001-2007 Assistant Professor, School of Medicine, Shaheed Sadoughi University of Medical Sciences and Health Services Yazd, Iran
Teaching medical physiology to the students of medicine, Para-medicine and dentistry.
Research supervision of medical students in medical education

2002-2007 Director of post graduate office of Yazd medical science university

2002-2007 member of drug abuse research centre of Yazd medical university

2003-2007 Director of strategy planning committee of Yazd medical science university

2003-2005 Head of physiology department. Yazd medical school

2003-2005 member of research committee of Yazd medical school

2005-2007 member of university counselling committee

2006-2007 member of research committee of Yazd medical university

2008-2108 Associate professor, School of Medicine, Shiraz University of Medical Sciences Shiraz, Iran

2008-2011 Dean of Research, Physiology Department, Shiraz University of medical Sciences

2009-2011 Dean of Gifted Talents Office, Shiraz University of medical Sciences

2010-2013 Dean of Education, International branch of Shiraz University of medical Sciences

2013-2014 Head of physiology department. Shiraz medical school

2013-2019 Dean of Education of Medical School, Shiraz University of Medical Sciences, Shiraz, Iran

2018-Present Full professor, School of Medicine, Shiraz University of Medical Sciences Shiraz, Iran

THESIS: Supervisor:

Medical student's thesis:

1-The determination of dextromethorphan effect on chronic pain in rat and in comparison with analgesic effect of morphine (2004)

2- Role of NTS nucleus on baroreflex control in morphine addicted rat (2005)

3- Comparison of drug dependence between Tramadol and morphine in rat (2005)

4-Comparison of the efficiency of levastatin and Seed Dill extract in reduction of serum lipid levels in rat (2005)

5-Effect of chronic Morphine consumption on IL-6 & IL-10 serum levels &allograft rejection rate in Rat (2009)

6-Survey of working memory and prefrontal structure after chronic Morphine consumption and abstinence period in rat (2012)

7-Assessment of the role of insulin signaling pathway in nucleus tractus solitaries on baroreceptor reflex sensitivity, cardiovascular parameters and structural changes following chronic consumption of high fructose solution in mail rat (2014)

8-Determination of magnetic static field of 1.5 tesla MRI on Caraginan induced inflammation in feet palm of male Rats (2015)

9-Evaluation of the protective effects of Pioglitazone on the Memory &structure of medial prefrontal cortex in Alzheimer induced by Aluminum Chloride in Rats (2015)

10-Evaluating the effects of bumetanide administration during pregnancy and neonatal period on learning memoryand behavioral processes in rats (2016)

11-Protective effects of curcumin and Carvacrol on The Doxorubicine-induced cardiotoxocity in Rats: Aphysiological and structural study (2017)

12-The effect of curcumin on hyperhomocysteinemia- induced cardiotoxicity: physiological and stereological study (2019)

13- The effect of intra-nasal administration of insulin & growth factor rich plasma on memory, hippocampal oxidative stress & morphological changes in STZ-induced Alzheimer in male Rats (2020)

Advisor:

1-Evaluation of serum Malondialdehyde and its relationship with coronary artery disease (2006)

2-Role of Disaccharides, Fructose, Lactose and Sucrose in nonalcoholic fatty liver in Rat (2007)

3-The effect of intraCA1 agmantine microinjection on learning and spatial memory of mail rat (2009)

4-Evaluation the effect of C-peptide injection on beta amyloid (1-42) induced learning and memory deficits in Sterptozosin (STZ) diabetic rats (2009)

5-Evaluation of stimulatory effect of Teucriumpolium extract on Insulin secretion of Line-C187 (2014)

6-The effect of FTY720 on impairment of learning, memory and synaptic plasticity following brain ischemia in the rat (2016)

7-Effect of partial portal vein ligation or common bile duct ligation with or without ovariectomy on lung histology, and pulmonary hemodynamic in rats(2017)

Publications

Books:

1. Introduction to Addiction and Management of Drug abuse, Published by Yazd medical sciences university, ISBN: 964-8444-04-8, 2002
2. Neurophysiology of Addiction, published by Esfahan medical science university, ISBN: 978-964-524-408-6, 2012
3. Secrets of invention, published by khoshamehr, ISBN: 978-964-974-132-1, 2012
4. Creativity, published by khoshamehr, ISBN: 978-964-974-136-9, 2012

Papers in Journals:

1. A.A. Pourshanazari, HA. Alaei, **A .Rafati**, Effects of Microinjection of 5-7 dihydroxy tryptamine into dorsal and median raphe nuclei on morphine dependence in rats. Journal of Kerman University of Medical Sciences (6) 184- 190 1999(In Persian)
2. **A .Rafati**, HA. Alaei, A.A. Pourshanazari, Role of Nucleus accumbens lesion by 6-hydroxy dopamine(6-OHDA) on morphine dependence in rat, Journal of hahid Sadughi Med.Sci, (7:4) 54-59 2000. (In Persian)
3. A.A. Pourshanazari, HA. Alaei, **A .Rafati**, Effect of electrical stimulation of dorsal nucleus on prevention of morphine dependence in rat Medical Journal of Islamic Academy of Sciences (13:2) 63-67 2000.
- 4.H.Alaei, A.A.Pourshanazari, **A,Rafati**, Electrical stimulation of nucleus raphe dorsalis changes morphine self-administration and withdrawal syndrome sign in rats Pathophysiology (9) 1-5, 2002.
5. M. H. Dashti, A Morshedi and **Ali Rafati**: The effect of Kombucha tea on learning and memory in rats. Medical Journal of Islamic Academy of Sciences 14:1, 15-19, 2004.
6. **A.Rafati**, M.H.Dashti, A.A.Pourshanazari, the effect of Nitric Oxide Synthetase Inhibitor (L-NAME) on prevention of Morphine dependence in Rats. Scientific journal of Hamadan University of Medical Sciences& Health Services , 11(3)16-23 2004 .(in Persian)

7. A.A Pourshanazari, HR Rashidinejhad, **A.Rafati**, M Mirza, Effect of Estrogen and Progesterone on baroreflex sensitivity in acute hypertensive rats. Scientific journal of rafsanjan University of Medical Sciences& Health Services, 4(2)85-92 2005.(in Persian)
8. **A.Rafati**, S.Moradi, M. Islami, Comparison of the efficiency of levastatin and Seed Dill extract in reduction of serum lipid levels in rat. Journal of ShahidSadughiMed.Sci, 13(5) 41-49 2006(in Persian)
9. A.Morshedi, M.H.Dashti, **A.Rafati**, M.H.Mosaddegh and A.S.Salami: The chronic effect of Kombucha Tea and black tea consumption on weight loss in diabetic Rats. Journal of medicinal plants vol: 5, 17-22, March 2006. (In Persian)
10. **Ali Rafati**, Sayed Mojtaba Yasini, Mohammad Hossein Dashti- Rahmatabadi, Saeed Pakdel and ForooghNorani. Tramadol Dependence Rateas Compared with Morphine in Rats. World Journal of Medical Sciences. Volume 1 Number 1: 40-43, 2006
11. M. Yassini, H. KhosravyLarigani and **A. Rafati**, URD and Severity of With drawal Symptoms. World Journal of Medical Sciences. Volume 1 Number 2: 86-89, 2006
12. Mohamad Hossein Dashti, Hassan Hejazian, Abbas Morshedi, **Ali Rafati**, The analgesic effect of cariumcopticum extract and morphine on phasic pain in mice.journal of Ethnopharmacology 109(2007) 226-228.
13. **Rafati.A**, Dashti.M.H. Role of esterogen on prevention of morphine addiction in ovariectomized female rats. Journal of Yasuj University of Medical Sciences vol.13.No.1 .PP.55-61, spiring 2008(in Persian)
14. Zarifkar.A, **Rafati.A**, Jamei.A. Effect of testestron on carrageenone induced inflammation in gonadectomized male Rat. Journal of Yasuj University of Medical Sciences vol.14.No.2 .PP.7-16, summer 2009(in Persian)
15. Abedinzadeh.M, Rastegar.K, Zarifkar.A, **Rafati.A**, Monabati.A. Khakpour.B. Effect of C-peptide on cognitive dysfunction in type 1 diabetic rat. Journal of Guilan University of Medical Sciences vol.18.No.71 .PP.12-18, Automn 2009(in Persian)
16. Karim Rastegar, Hassan Roosta, AsadollahZarifkar ,**Ali Rafati** , , Maryam Moosavi. The effect of intra-CA1 agmatine microinjection on water maze learning and memory in rat. IRCJ vol.13,No.5 :316-322 May 2011

- 17-**Ali Rafati**, SommayeHamzehie Taj, Negar Azarpira, AssadollahZarifkar, Ali noorafshan, ParvanehNajafizadeh. Chronic morphine consumption increase allograft rejection rate in rat through inflammatory reaction. Iranian Biomedical journal 15(3):85-91 July 2011
- 18-A GhaeiniHesarooih. M Haddad. A Azimifar. KhZarrabi, **A Rafati**, N zare, the correlation between the blood group A and coronary artery disease. The Iranian journal of Cardiac surgery; Vol.4 No.3 august 2012
- 19-**A Rafati**, E Anvari, A Noorafshan. High fructose solution induces neuronal loss in the nucleus of the solitary tract of rats. Folia Neuropathol 51 (3): 214-221, 2013
- 20- **Ali Rafati**¹, Ali Noorafshan¹, NihadTorabi. Stereological study of the effects of morphine consumption and abstinence on the number of the neurons and oligodendrocytes in medial prefrontal cortex of rats. Anat Cell Biol. 2013 Sep;46(3):191-197
- 21- Khoshnoud MJ, Moein MR, **RafatiA**, Memar-KermaniAH. The effect of essential oil of *Salvia mirzayanii* on learning and memory in mice using the passive avoidance learning methods. Feyz, Journal of Kashan University of Medical Sciences October, 2014; Vol. 18, No 4, Pages 317-324
- 22- Ali Noorafshan Saied Karbalay-DoustHajarKhazraei**Ali Rafati** Hossein Mirkhani. Spatial arrangement of the heart structure: Application of second- order stereology in diabetic rats. Annals of Anatomy 196 (2014) 20– 25
23. EnaiatAnvari, Keshtgar Sara, Ali Noorafshan, **Ali Rafati**. Induction of type 2 diabetes with high concentration and long term fructose intake in male Sprague-Dawley rats. J Bas Res Med Sci2014; 1(4):42-50.
24. **Ali Rafati**, Mahboobeh Erfanizadeh, Ali Noorafshan, Saied Karbalay- Doust. Effect of benzene on the cerebellar structure and behavioral characteristics in rats. Asian Pac J Trop Biomed 2015; 5(7): 568–573
- 25.**Ali Rafati**, Leila Hoseini, Ali Babai, Ali Noorafshan, Hossein Haghbin, and Saied Karbalay-Doust.Mitigating Effect of Resveratrol on the Structural Changes ofMice Liver and Kidney Induced by Cadmium; A StereologicalStudy. Prev. Nutr. Food Sci. 2015;20(4):266-275
- 26.**Ali Rafati**, HajarYazdani, and Ali Noorafshan. Pioglitazone Ameliorates Neuron Loss in the Cortex after Aluminum-Treatment in Rats. Neurology Research InternationalVolume 2015, Article ID 381934, 8 pages<http://dx.doi.org/10.1155/2015/381934>

27. Mortazavi S. M. J., Rahimi S., Talebi A., Soleimani A., **Rafati A.** Survey of the Effects of Exposure to 900MHz Radiofrequency Radiation Emitted by a GSM Mobile Phone on the Pattern of Muscle Contractions in an Animal Model. *J Biomed Phys Eng* 2015; 5(3)
28. **Rafati A.**, Rahimi S., Talebi A., Soleimani A., Haghani M., Mortazavi S. M. J. 2,4 Exposure to Radiofrequency Radiation Emitted from Common Mobile Phone Jammers Alters the Pattern of Muscle Contractions: an Animal Model Study. *J Biomed Phys Eng* 2015; 5(3)
29. Masoud Haghani, Somaye Keshavarz, Maryam Nazari and Ali Rafati. Electrophysiology of Cerebral Ischemia and Reperfusion: First Evidence for the Role of Synapse in Ischemic Tolerance. *SYNAPSE* 70:351–360 (2016)
30. Maryam Nazari, Somaye Keshavarz, **Ali Rafati**, Mohammad Reza Namavar, Masoud Haghani. Fingolimod (FTY720) improves hippocampal synaptic plasticity and memory deficit in rats following focal cerebral ischemia *Brain Research Bulletin* 124 (2016) 95–102.
31. Ali Noorafshan, Behnam Niazi, Masoomah Mohamadpour, Leila Hoseini, Najmeh Hoseini, Ali Akbar Owji, **Ali Rafati**, Yasaman Sadeghi, Saied Karbalay-Doust. First and second order stereology of hyaline cartilage: Application on mice femoral cartilage. *Annals of Anatomy* 208 (2016) 24–30
32. Noorafshan A, Hoseini L, Karbalay-doust S, Mahmoodian H, Bazrafkan Land **Rafati A.** Make a Personal Anatomical Atlas in Your Mind with Mental Imagery and Improve Your Active Learning of Human Anatomy. *Austin J Anat - Volume 3 Issue 2* – 2016
33. **Ali Rafati**, Zahra Jafarinezhad, Saied Karbalay-Doust, Leila Hosseini, Ali Noorafshan. Microscopic evaluation of the ventricular tissue using stereological and Voronoi tessellation methods: Application on doxorubicin-induced cardiotoxicity in rats. *Micron* 101 (2017) 1–7
34. Ali Noorafshan, **Ali Rafati**, Saied Karbalay-Doust, . CURCUMIN'S EFFECTS ON THE REPRODUCTIVE AND NERVOUS SYSTEMS. *EXCLI Journal* 2017;16:712-713 – ISSN 1611-2156
- 35- **Ali Rafati**, Nasrin Nourzei, Saied Karbalay-Doust, Ali Noorafshan. Using vitamin E to prevent the impairment in behavioral test, cell loss and dendrite changes in medial prefrontal cortex induced by tartrazine in rats. *Acta Histochemica* 119 (2017) 172–180
36. **Rafati A**, Noorafshan A, Jahangir M, Hosseini L, Karbalay-Doust S. Vitamin E can improve behavioral tests impairment, cell loss, and dendrite changes in rats' medial prefrontal cortex induced by acceptable daily dose of aspartame. *Acta Histochem.* 2018 Jan;120(1):46-55.

37. Karimi, F., **Rafati, A.**, Noorafshan, A., Hosseini, L., Karbalay-Doust, S. Sinoatrial node remodels in chronic sleep-restricted rats .Chronobiology International, 2019, 36(4), pp. 510-51
38. Jafarinezhad, Z., **Rafati, A.**, Ketabchi, F., Noorafshan, A., Karbalay-Doust, S. Cardioprotective effects of curcumin and carvedilol in doxorubicin-treated rats: Stereological study .Food Science and Nutrition, 2019, 7(11), pp. 3581- 3588
39. Sepehrinezhad A; Dehghanian A; **Rafati A**; Ketabchi F. Impact of liver damage on blood-borne variables and pulmonary hemodynamic responses to hypoxia and hyperoxia in anesthetized rats. BMC cardiovascular disorders, 2020,20(1),13.
- 40- Atefeh Rahimi; **Ali Rafati** ;Ali Noorafshan ;Narges Karbalaei ;Saied Karbalay-Doust ;Maryam Naseh. Stereological and Biochemical Effects of Curcumin on the L-Methionine-Induced Cardiotoxicity in Rats. Iran J Sci Technol Trans Sci (2021) 45:841–847
- 41- Atefeh Rahimi; **Ali Rafati** ;Ali Noorafshan ;Narges Karbalaei ;Saied Karbalay-Doust . Curcumin can prevent the loss of sinoatrial node cells in methionine treated rats: A stereological study. Saudi Journal of Biological Sciences 28 (2021) 3448–3452
- 42- Maryam Naseh; Jafar Vatanparast; **Ali Rafati**; Mahnaz Bayat; Masoud Haghani. The emerging role of FTY720 as a sphingosine 1-phosphate analog for the treatment of ischemic stroke: The cellular and molecular mechanisms. Brain and Behavior. 2021; 00:e02179. <https://doi.org/10.1002/brb3.2179>

PRESENTATIONS

1. Sulpiride Reduce both morphine dependence and intending in rats. Poster Presentation in III International Congress of Pathology, Poster presentation in FINLAND 1998
2. Effects of clonidine and Idazoxan on morphine dependence in Rats. Poster presentation in III International Congress of Pathology, Poster presentation in FINLAND 1998
3. Activation of orexin neurons by hyperosmotic stimuli. Poster presentation in 30th annual meeting of Neuroscience, New Orleans, USA 2000
4. Effects of chemical lesion of nucleus Raphe dorsalis on initiation of nicotine self-administration in rats oral presentation in 9th APCCB, New Delhi, India 2002.

5. Effects of ear electrical stimulation on response of nucleus accumbens cells in nicotine-addicted rats. Poster presentation in 3rd Forum of European Neuroscience, Paris, France, 2002

6. Electrical stimulation of Nucleus accumbens changes basal firing rate of dopaminergic neurons as a criterion for dependence to morphine in rat. Poster presentation in Sixth IBRO World congress of Neuroscience, Prague, 20

7. Electrical Stimulation Of Nucleus NtractusSolitarii Act On GABAA Receptor To Increase Baroreflex Sensitivity In Rats , Poster presentation in Sixth IBRO World congress of Neuroscience, Prague, 2003.

8. Comparison between interactive tutorial and computer-assisted instruction in physiology education. Poster presentation in 4th GCC Medical Education Conference, UAEU, 2004

9. Effect of SyzygumAromaticum and vitamin C on learning and memory in Rats, Poster presentation in 5th international congress of phathophysiology, China 2006

10. Role of ascorbate on prevention of morphine addiction in Rats. Poster presentation in 5th international congress of phathophysiology, China 2006

11. Antinociceptive effects of dextromethorphan on chronic pain in rats comparison with the morphin sulfate. Poster presentation in 5th international congress of phathophysiology, China 2006

12. Effect of choronic morphine consumption on allograft rejection, IL-6and IL-12 serum level in rat. Poster presentation in 7Th Forum of Neuroscience July 3-7 2010 Netherland, Amsterdam

13. Study of the effect of chronic morphine consumption on learning and memory during treatment and withdrawal in male rats. Poster presentation in 20th Iranian congress of physiology and pharmacology, Iran 2011

14. Stereology: A valuable tool for the nervous system quantification. Oral presentation. Basic and clinical neuroscience congress, Iran 2012

15-High fructose induces neuronal loss in the nucleus of the solitary tract of rats. Oral presentation. 21st international Iranian congress of physiology and pharmacology, Tabriz, Iran August 2013

16. Evaluation of the chronic consumption of fructose on induction of insulin resistance in male rats. 21st international Iranian congress of physiology and pharmacology, Tabriz, Iran August 2013

17. Vascular contractility in response to phenylephrine reduces in fructose –drinking insulin resistance rats. 21st international Iranian congress of physiology and pharmacology, Tabriz, Iran August 2013

18-Stereological study of the effect of morphine consumption and abstinence on the number of the neurons and oligodendrocytes in medial prefrontal cortex of rats (oral). 2nd Basic and clinical neuroscience congress, Iran 2013

19-Stress modifies the spatial arrangement of neurons and glial cells of medial prefrontal cortex. 2nd Basic and clinical neuroscience congress, Iran 2013

20-Dendritic length loss in the rat medial prefrontal cortex after sulfate treatment. 2nd Basic and clinical neuroscience congress, Iran 2013

Awards:

1-A one year awarded scholarship for completion my PhD degree in University of Western Ontario London Canada 2000

2- First rank researcher in Yazd University of Medical Sciences 1993

3- First rank lecturer in teacher day in Yazd University of Medical Sciences 1992

4- First rank lecturer in teacher day in Shiraz University of Medical Sciences 2013

5-First rank lecturer in teacher day in Shiraz University of Medical Sciences 2016

Professional Memberships:

Member of Iranian Society of Physiology and Pharmacology

Trainings Passed:

I. Courses

1-Microinjection

2-Intracellular recording

3-Extracellular single unit recording

4-Field potential recording from brain slices

5-Immunohistochemistry Techniques

6-Stereology

II. Workshops

1- Article writing in English

2-Problem base learning (P.B.L)

3-CV Writing, short letter recommendation

4-Research methodology

5-Evaluation and test assessment

6-Methodology of teaching

7-Medical education fellowship

Research Interests and Activities

Electro physiology (Extra cellular recording, EEG, Micro-injection)

Cardiovascular regulation

Neurobiology of addiction

Stereology

Referee

Professor J.Ciriello western Ontario university Medical school Dept. of physiology

Professor H. Alaei Esfahan medical science university Dept of Physiology