Curriculum Vitae

Farinaz Nasirinezhad, Ph.D

Education:

Undergraduate school: B.Sc. in biology, Jondishahpour university, Ahwaz, Iran, (1984-1987)

Graduate school: M.Sc in human physiology, Shiraz medical university, Shiraz, Iran (1991-1994)

Doctoral degree: Ph.D in human physiology, Beheshti medical university, Tehran, Iran (1997-2002)

Exchange visitor: Miami project to cure paralysis, university of Miami, Miami, USA (2002-2003)

Postdoctoral research: Miami project to cure paralysis, university of Miami, Miami, USA (2009-2012)

Top scientist one percent in neuralgia based on Expertscape's PubMed-based algorithms (https://expertscape.com/ex/neuralgia/c/us)

Present research interest: Neuropathic pain, spinal cord injury, cell transplantation

Present working status:

1) Lecturer & researcher in Iran University of medical sciences, Tehran, Iran (from 1993 until now)

2) Head of the Research Center for Experimental and Comparative Studies

3) Topic editor of Frontiers in pain research (gene therapy and cell transplantation in neuropathic pain management)

4) Chief editor of Journal of medical physiology

5) head of the Specialized Committee on Ethics in Working with Laboratory Animals

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Lectures and poster presentations:

1. antinociceptive effect of conotoxin delivery to the spinal cord in a central neuropathic pain model, 8th Congress of the European Federation of IASP® Chapters (EFIC®) Florence, Italy, 2013

2. Spinal transplantation of schwann cells engineered to express the conopeptides, ω-conotoxin and conantokin G, alleviate chronic pain after spinal cord Injury, SFN, 2011, Washington D.C, USA

3. Use of viral vectors encoding endomorphins and histogranin for pain alleviation in a rodent spinal cord injury model, INTR, 2011, Clearwater, USA

4. Viral constructs encoding conopeptides for suppression of pain in spinal cord injured rats, abstract number 263.7, SFN meeting San Diego 2010

5. Development of conopeptide gene therapy tools for rodent chronic spinal cord injury pain. ASNTR meeting, Clearwater, USA, 2009

6. Intraperituneal administration of ascorbic acid attenuates hyperalgesia in a rat model of neuropathic pain. (Second international congress of neuropathic pain, Berlin, Germany, 2007)

7. Dose dependant effect of ascorbic acid in chronic pain alleviation (18 th International congress of physiology and pharmacology, Iran, 2007

8. Involvement of NMDA receptors in antinociceptive effects of ascorbic acid (11th congress of EFNS, Brussels, Belgium, 2007).

9. Effect of 1,25 dihydroxy vitamin D3 on Neuropathic pain following chronic constriction injury of sciatic nerve. (Physiotherapy in the Ergonomic Era, Singapore 2006)

10. Neuropathic pain, Pain society, 2006 (invited speaker)

11. Analgesic effect of intrathecal transplantation of cultured calf chromaffin cells in neuropathic pain (The 4 th scientific annual meeting of the Iranian pain society, Iran, 2005)

12. Synergism effect of noradrenalin and histogranin in alleviation of neuropathic pain in male rats. (5 th congress of Iranian pain society, Iran 2005)

13. Alleviation of neuropathic pain behavior by intrathecal injection of histogranin and noradrenalin in adult rat. (4 th world congress of cellular and molecular biology, Poitiers, France 2005)

14. The effect of intrathecal transplantation of chromaffin cells on sciatic nerve histology in neuropathic rats (The 3rd scientific annual meeting of the Iranian pain society, Iran, 2004)

15. Analgesic effect of intrathecal injection of a NMDA antagonist and adrenal medulla transplantation in neuropathic rats. (3rd word congress world institute of pain, Barcelona, Spain, 2004)

16. The effect of spinal transplantation of chromaffin cells on pain behavior in neuropathic rats (14 th international congress of geographic medicine, Iran, 2003)

17. Is there any correlation between anterior hypothalamus and hunger center? (12th international congress of geographic medicine, Iran, 1999)

18. The study of unilateral and bilateral vagotomy on serum testosterone concentration on male rats (13th international congress of physiology and pharmacology, Iran 1998)

19. The differences between right and left anterior hypothalamic nuclei in regulation of gonadal function (12 th international congress of physiology and pharmacology, Iran, 1995)

20. The possibility of hypothalamic anterior nuclei function in asymmetric control of testicular function (Forth IBRO congress of neurosciences, Japan, 1995)

21. Are anterior hypothalamic nuclei as a thermoregulatory center? (III FAOPS congress, China, 1994)

22. The dominancy of the right testicule to the left in testosterone secretion (satellite symposium of III FAONS congress, China, 1994)

Publications:

- Sertoli cell transplantation inhibits microglial proliferation and TRPC6 receptor-mediated neuropathic pain in the spinal cord injury model. Submitted to physiology and behavior journal

- Exercise as a potential modulator of inflammation on astrocyte cell culture: the role of cerebrospinal fluid and serum. Submitted to j of neurophysiology

- Time-dependent Photobiomodulation management of neuropathic pain induced by spinal cord injury in male rats. Submitted to j of lase in medicine

- Intraspinal injection of platelet-rich plasma promots regeneration of the spinal cord and improves locomotor function by modulating the apoptosis and wnt signaling pathways. Under review in molecular neurobiology

- Pain alleviating effect of adipose-derived stem cells transplantation in injured spinal cord: a behavioral and electrophysiological evaluation. Under review in journal of neurochemical research

1) Protective and anti-inflammatory effect of selenium nano-particles against bleomycin-induced pulmonary injury in male rats. Drug and Chemical Toxicology 44(1), pp. 92-100, 2021

2) Platelet-rich plasma in umbilical cord blood reduces neuropathic pain in spinal cord injury by altering the expression of ATP receptors: PRP, a new window for pain reduction post spinal cord injury. Physiology and Behavior. 228,113186, 2021

3) Chronic nanocurcumin treatment ameliorates pain-related behavior, improves spatial memory, and reduces hippocampal levels of IL-1beta and TNFalpha in the chronic constriction injury model of neuropathic pain. Psychopharmacology, 238(3), pp. 877-886, 2021

4) The CA1 hippocampal serotonin alterations involved in anxiety-like behavior induced by sciatic nerve injury in rats. Scandinavian Journal of Pain, 21(1), pp. 135-144. 2021

5) Minocycline mitigation of tremor syndrome and defect of cognitive and balance induced by harmaline. Basic and Clinical Neuroscience. 12(2), pp. 255-268, 2021

6) Injection of Cerium Oxide Nanoparticles To Treat Spinal Cord Injury In Rats

preprint available, 2021

7) Photobiomodulation for spinal cord injury: A systematic review and meta-analysis. Physiology and Behavior. 224,112977, 2020

8) The role of CGRP receptor antagonist (CGRP8-37) and Endomorphin-1 combination therapy on neuropathic pain alleviation and expression of Sigma-1 receptors and antioxidants in rats. Journal of Chemical Neuroanatomy, 106,101771, 2020

9) Simultaneous intrathecal injection of muscimol and endomorphin-1 alleviates neuropathic pain in rat model of spinal cord injury. Brain and Behavior 10(5),e01576, 2020

10) High-intensity interval training increases myocardial levels of Klotho and protects the heart against ischaemia-reperfusion injury. Experimental Physiology

105(4), pp. 652-665, 2020

11) Preliminary study of analgesic effect of bumetanide on neuropathic pain in patients with spinal cord injury. Journal of Clinical Neuroscience. 81, pp. 477-484, 2020

12) The effect of preconditioning with high-intensity training on tissue levels of G-CSF, its receptor and C-kit after an acute myocardial infarction in male rats. BMC Cardiovascular Disorders. 20(1),75, 2020

13) The effect of chondroitinase ABC and photobiomodulation therapy on neuropathic pain after spinal cord injury in adult male rats. Physiology and Behavior, 227,113141, 2020

14) The effect of insular cortex lesion on hyperacusis-like behavior in rats. International Journal of Neuroscienc. 130(11), pp. 1071-1081, 2020

15) Co-administration of human adipose-derived stem cells and low-level laser to alleviate neuropathic pain after experimental spinal cord injury. Stem Cell Research and Therapy. 10(1),183, 2019

16) Transplantation of miR-219 overexpressed human endometrial stem cells encapsulated in fibrin hydrogel in spinal cord injury. Journal of Cellular Physiology. 234(10), pp. 18887-18896, 2019

17) The greater effect of high-intensity interval training versus moderate-intensity continuous training on cardioprotection against ischemia-reperfusion injury through Klotho levels and attenuate of myocardial TRPC6 expression. BMC Cardiovascular Disorders. 19(1),118, 2019

18) The association of obesity and serum leptin levels with complete blood count and some serum biochemical parameters in Iranian overweight and obese individuals. Medical Journal of the Islamic Republic of Iran. 33(1),72, 2019

19) Does 5, 7-Dihydroxytryptamine injection into nucleus accumbens cause hyperacusis? Neuroscience Letters 705, pp. 246-250, 2019

20) Comparative Efficacy of GABAA and GABAB Receptor Agonists in Pain Alleviation in a Spinal Cord Injury Model of Neuropathic Pain. Neurophysiology

51(5), pp. 322-331, 2019

21) The Effect of Four Weeks of Low-Level Laser Radiation (660 nm) on Movement Recovery and Fibroblasts Invasion. Archives of Neuroscience 6 (4), 2019

22) Ascorbic acid eliminated pain-induced peripheral neuropathy by modulation of nitric oxide pathway in rats. Nutrire 44 (2), 1-9, 3, 2019

23) Short-term exercise training increases plasma levels of klotho and total antioxidant capacity in male Wistar rats. Journal of Shahrekord University of Medical Sciences 21 (1), 25-30, 2019

24) Nanocurcumin as a radioprotective agent against radiation-induced mortality in mice. Nanomedicine Journal 6 (1), 43-49, 2019

25) The Effect of Alpha-Tocopherol on Morphine Tolerance-induced Expression of c-fos Proto-oncogene from a Biotechnological Perspective. Recent patents on biotechnology 13(2), pp. 137-148, 2019

26) The Effect of High Intensity Interval Training on the Levels of Myocardial G-CSF, G-CSFR and C-Kit Proteins in Male Rats. Journal of Applied Exercise Physiology 15 (29), 73-87, 2019

27) Histological Survey of the Effect of Granulocyte‐colony‐stimulating Factor (G-CSF) on Bacterial Translocation and Wound Healing in Burned Mice. ARCHIVES OF TRAUMA RESEARCH 8 (3), 149-154, 2019

28) The alteration of hippocampal BDNF expression is associated with anxiety-like behavior following the injury to the sciatic nerve. Archives of Neuroscience 6 (1), 2019

29) Transplantation of olfactory ensheathing cells on functional recovery and neuropathic pain after spinal cord injury; Systematic review and meta-analysis. Scientific Reports. 8(1),325, 2018

30) The effect of two weeks of severe periodic training on SDF-1α protein, its receptor (CXCR4) and C-Kit in the heart of male rats. Armaghane danesh 23 (3), 317-333, 2018

31) PO224 Is High Waist Circumference and Body Weight Associated With High Blood Pressure In Iranian Primary School Children? Global Heart 13 (4), 429, 2018

32) The effect of preconditioning with high intensity interval training on cardioprotection and left ventricular function against Ischemia-reperfusion injury in male rats. Daneshvar Medicine 26 (2), 1-10, 2018

33) Effects of Olive Leaf Extract on Myoclonic and Tonico-Clonic Seizures in Mice. Neurophysiology 50 (5), 378-381, 2018

34) The role of low level laser therapy on neuropathic pain relief and interleukin-6 expression following spinal cord injury: An experimental study. Journal of Chemical Neuroanatomy. 87, pp. 60-70, 2018

35) The effect of intrathecal injection of irisin on pain threshold and expression rate of GABAB receptors in peripheral neuropathic pain model. Journal of Chemical Neuroanatomy 91, pp. 17-26, 2018

36) Effects of Olive Leaf Extract on Myoclonic and Tonico-Clonic Seizures in Mice. Neurophysiology 50(5), pp. 378-381, 2018

37) Combine effect of Chondroitinase ABC and low level laser (660 nm) on spinal cord injury model in adult male rats. Neuropeptides 65, pp. 90-99, 2017

38) In vivo evaluation of the hippocampal glutamate, GABA and the BDNF levels associated with spatial memory performance in a rodent model of neuropathic pain. Physiology and Behavior. 175, pp. 97-103, 2017

39) Chronic administration of [Pyr1] apelin-13 attenuates neuropathic pain after compression spinal cord injury in rats. Neuropeptides 61, pp. 15-22, 2017

40) Functional interaction between N-methyl-D-aspartate receptor and ascorbic acid during neuropathic pain induced by chronic constriction injury of the sciatic nerve. Journal of Basic and Clinical Physiology and Pharmacology 28(6), pp. 601-608, 2017

41) Review of cell therapy in spinal cord injury; effect on neuropathic pain. Journal of Medical Physiology 2 (2), 34-44, 2017

42) A rapid and cost-effective protocol for isolating mesenchymal stem cells from the human amniotic membrane. Galen Medical Journal 6 (3), 217-225, 2017

43) Sensorimotor gating deficit in a developmental model of schizophrenia in male Wistar rats. Journal of Medical Physiology 2 (1), 15-19, 2017

44) Association between the circulating leptin levels and the biomarkers of oxidative stress and inflammation among Iranian overweight and obese adults. Medical Journal of the Islamic Republic of Iran 31(1),81, pp. 472-477, 2017

45) Human bone marrow-derived and umbilical cord-derived mesenchymal stem cells for alleviating neuropathic pain in a spinal cord injury model . Stem Cell Research and Therapy. 7(1),36, 2016

46) The efficacy of Schwann cell transplantation on motor function recovery after spinal cord injuries in animal models: A systematic review and meta-analysis. Journal of Chemical Neuroanatomy 78, pp. 102-111, 2016

47) Photobiomodulation therapy reduces apoptotic factors and increases glutathione levels in a neuropathic pain model. Lasers in Medical Science, 31(9), pp. 1863-1869, 2016

48) Spinal 5-HT3 receptor mediates nociceptive effect on central neuropathic pain; Possible therapeutic role for tropisetron. Journal of Spinal Cord Medicine, 39(2), pp. 212-219, 2016

49) A review of nanotechnology strategies for neuron regeneration after spinal cord injury. Journal of Medical Physiology 1 (2), 42-54, 1, 2016

50) Effects of the alcoholic extract of Ruta graveolens on spermatogenesis and sex hormones in immature Balb/C mice. Journal of Medical Physiology 1 (2), 78-83, 2016

51) Intraperitoneal administration of ascorbic acid attenuates hyperalgesia in a rat model of neuropathic pain. Journal of Medical Physiology 1 (2), 60-66, 2016

52) Serum leptin, insulin, and inflammatory cytokines in overweight and obese individuals: an analysis based on gender differences. Journal of Medical Physiology 1 (1), 17-24, 2016

53) Editorial first issue: Letter from the Editor , Journal of Medical Physiology 1 (1), 1 , 2016

54) Comparing the analgesic effect of hydroalcoholic extract of green tea and sodium salicylate in the formalin test in rats. Journal of Medical Physiology 1 (1), 31-35 , 2016

55) The relationship between creatine and whey protein supplements consumption and anesthesia in rats. Anesthesiology and Pain Medicine 6(1),e32648 , 2016

56) Neural stem/progenitor cell transplantation for spinal cord injury treatment; A systematic review and meta-analysis. Neuroscience. 2016.

57) Human bone marrow-derived and umbilical cord-derived mesenchymal stem cells for alleviating neuropathic pain in a spinal cord injury model. Stem Cell Research & Therapy. 2016; 7(1):1.

58) The Effect of Bone Marrow–Derived Mesenchymal Stem Cell Transplantation on Allodynia and Hyperalgesia in Neuropathic Animals: A Systematic Review with Meta-Analysis. Biology of Blood and Marrow Transplantation. 2015;21(9):1537-44.

59) Attenuation of persistent pain-related behavior by fatty acid amide hydrolase (FAAH) inhibitors in a rat model of HIV sensory neuropathy. Neuropharmacology 95. 2015; 100-109, 2015.

60) Designing CGRP (8-37) Recombinant Peptide Construct to Evaluate Model of Nerve Injury-Induced Pain in Rats. CELL TRANSPLANTATION. 2015;24 (4): 754-5.

61) Effect of coenzyme Q10 on neuropathic pain threshold resulting from spinal cord injury in male rats. Physiology and Pharmacology. 2014;18: 204-14.

62) Neuroprotective Effect of Coenzyme Q10 in Chronic Constriction Injury-Induced Neuropathic Pain in Rat. Thrita. 2014; 3 (1).

63) Anti-allodynic Efficacy of NMDA Antagonist Peptide and Noradrenaline Alone and in Combination in Rodent Neuropathic Pain Model. The Korean journal of pain. 2015; 28 (2): 96-104.

64) The effect of intrathecal administration of muscimol on modulation of neuropathic pain symptoms resulting from spinal cord injury; an experimental study. Emergency. 2015;2(4): 151.

65) The effect of administration of co Q10 on pain alleviation in a neuropathic pain model of spinal cord injury. Physiology and Pharmacology 18(2):204-214

66) Effects of 660-and 980-nm low-level laser therapy on neuropathic pain relief following chronic constriction injury in rat sciatic nerve. Lasers in medical science. 2014; 29(5):1593-8, 2014

67) Effects of 660 nm Low Level Laser Therapy on Neuropathic Pain Relief Following Chronic Constriction Injury in Rat Sciatic Nerve. Archives of Neuroscience. 2014; 1(2): 76-81, 2014.

68) Antifertility effect of aqueous extract of areal part of Ruta graveolens on immature female Balb/C mice. Journal of physiology and pharmacology. 2010;14(1):168-76.

69) comparison between the effects of gonadal hormones on nociceptive behavior of male rats in two neuroathic pain models. physiology and pharmacology. 2009;13(2):139-50.

70) Does low birth weight predict hypertension and obesity in schoolchildren? Annals in nutrition and metabolism 2013. Published online; August 8.

71) Relationship between breast feeding and obesity in children with low birth weight. Iranian Red Crescent medical journal. 2013;15(3):676-82.

72) Apelin-13 protects the brain against ischemic reperfusion injury and cerebral edema in a transient model of focal cerebral ischemia. J Mol Neurosci. 2012 Sep;48(1):201-8.

73) Development of conopeptide gene therapy tools for rodent chronic spinal cord injury pain cell transplantation. 2010;19: 354.

74) Use of viral vectores encoding endomorphins and histogranin for pain alleviation in a rodent spinal cord injury model cell transplantation. 2011; 20: 57.

75) Concentration-effects Relationship of intraperitoneal adminsitration of of 1,25 dihydroxy vitamin D3 in a chronic constriction model of neuropathic pain. Basic and clinical neuroscience. 2011; 2(3):43-50.

76) Differentiation pain resulting from cervical posterior hisotomy is alleviated by chromaffin cell transplants into the rat spinal subarachnoid space. Neurosurgery. 2007; 60: 919-25.

77) Effect of intrathecal transplantation of adrenal medullary tissue on the sciatic nerve regeneration following chronic constriction injury in the rat. Yakhteh medical journal. 2005; 7 (2); 68-73.

77) NMDA antagonist peptide supplementation enhances pain alleviation by adrenal medullary transplants. Cell transplantation. 2005;14 :203-11.

78) Adrenal medullary transplants show enhanced analgesic effects with NMDA antagonist peptide histogranin. Exp. Neurol. 2004; (187)215.

79) Cumulative effect of intrathecal adrenal medulla transplantation and histogranin injection in alleviation of neuropathic pain in rat Exp. Neurol. 2003; (181) 100.

80) Effect of the aqueous extract of the aerial part of the Ruta graveolens on the spermatogenesis of immature Balb/C mice. Journal of Iran university of medical sciences. 2007; No:56.

81) Effect of alcoholic extract of Ruta graveolens on reproductive system function of immature female Balb/C mice. Journal of Iran university of medical sciences. 2007;No:56.

82) Antinociceptive effect of 1, 25 Dihydroxy vitamin D3 in a neuropathic pain model. Iran university of medical sciences. 2007; (56): 181-90.

83) Effect of intrathecal transplantation of adrenal medulla on sensory and motor behavior in an animal pain model. Iran University of medical sciences, (31), 2002.

84) Effect of vagotomy on testosterone secretion control, Iran University of medical sciences, (1), 1999.

85) Asymmetry in neural structures controlling gonadal function. Pejouhandeh. 1998 (3).

Awards:

1. Award from IASP 2010
2. Award from ASNTR 2009
3. Award from ASNTR 2010
4. Award from SFN 2011

5. INSF grant 2017 for investigating the effect of Sertoli cell transplantaion on pain threshold, axonal regeneration and apoptosis in a rodent model of spinal cord injury

6. INSF grant 2018 for study the effect of intraspinal administration of Platelet-Rich Plasma on pain threshold and neuronal degeneration in male rats with spinal cord injury