

Dr Parvin Babaei

Full Professor in physiology
Head of Dept. of Physiology (2004-2006), 2014-2019
Faculty of Medicine
Cellular & molecular Research Center
Neuroscience Research Center
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Academic Training

- **Ph.D., Physiology (Neuromolecular biology)**, Russian Academy of Medical Sciences, Anokhin Institute of Normal Physiology, Moscow, Russia, 1993-1997.
- **M.Sc., Human Physiology**, University of Tarbiat Modares, School of Medical Sciences, Tehran, Iran, 1987-1991.
- **B.Sc., Biology**, University of Guilan, Rasht, Iran, 1983-1987.

Academic Promotion

Full Professor	2014
Associate professor:	2010 -2013
Assistant Professor:	1997-2010
Head of Dept. of Physiology:	2004-2006, 2014-2019
Lecturer in Physiology:	1991-continues
Animal Lab manager	2018-continues

Memberships:

- 1- Member of Iranian Physiological and Pharmacological Society (IPPS).
- 2- European Neuroscience society (2000-2004).
- 3-Obesity society (2009 -2012)
- 4-Iranian neuroscience society

Technical skills:

Gene expression (Immunohistochemistry)

Memory and learning assessments in animal and human (Morris Water Maze, passive avoidance, shuttle box, MMSE, Digit Span),
Noldus system tracking with Ethovision

Stereotaxic surgery
Pain (tail flick)
Rat Alzheimer model
Rat Parkinson model
Stroke model

Supervisor and Advisor:

- 1- Effect of aerobic training on serum IgG and IgA of male students. , M.S.c thesis, Guilan University. 1383.
2. Effect of acute supplementation of vitamine C on exercise –induced lipid peroxidation and muscle damage. Ph.d thesis , 7/8/85: t/d/3460, Faculty of Physical education. Guilan University
- 3 Effect of a single sub maximal training on serum IgA, IgG of female student. , M.S.c thesis , Faculty of Physical education, Guilan University,1383.
- 4-The effect of endocannabinoid palmitoylethanolamid and its possible receptor on PTZ-induced kindling in male rats, M.S.c thesis, 2006, Guilan Univ of med Sciences
- 5- Acute phase response to one and two session endurance- resistance training: ph.D thesis, Faculty of Physical education, Guilan University 7/8/85: t/d/3459
- 6- Plasma Adiponectin level after 8 months endurance exercise training in ovariectomized rats. Ph.d thesis, Guilan university (in progress).
- 7- Effect of dopamine elevation of prefrontal cortex on fear conditioning in rats, medical student thesis, 1384.
- 8- The effect of endocannabinoid and adrenergic system interaction on passive avoidance learning in hippocampus of male rats, ph.D thesis, 2008, Guilan Univ of med Sciences
- 9- The effect of Astrocytes' s100 B protein injection into the hippocampal on passive avoidance learning. M.S.c thesis, 2008-2010, Guilan Univ of med Sciences.
- 10-The effect of progesteron on size of infarct and locomotor recovery in isckemic rats
- 11- The effect of aerobic exercise on plasma BDNF and memory performance in obese men
- 12- Gender difference in spontaneous functional recovery in cryo-injured spinal cord in male and female Rats

Publication:

A) Papers:

1-Babaei P., Dolgov, O. N., Sudakov, K.V. and Anokhin, K.V: Stress induced expression of c-fos in the rat brain: A comparison of averaging and individual analyses, **Neuroscience research** (2000), vol(27), 95-102.

2-Babaei P. K.V Sudakov: Stress-induced c-fos expression in the rat brain is individual typological dependent. Journal of the international society of **Pathophysiology** (1998),vol (5) 221.

3-P. Babaei, O.N. Dolgov, K.V. Sudakov, K.V. Anokhin. Apamine increases excitability of CA1 hippocampal pyramidal neurons, **Neuroscience research communication**.2000.27(2)135-142.

4-Babaei P, Anokhin KV, Dolgov ON, Sudakov c-fos Gene expression in the brain of rats with various exploratory and defensive behaviour **Zh Vyssh Nerv Deiat Im I P Pavlova**. 2000 Nov-Dec;50(6):966-73. [Article in Russian]

5-Babaei P. K.V. Anokhin, O.N. Dolgov and K.V. Sudakov: Characteristics of c-fos gene expression in the brains of rats with different investigative and defensive behaviors. **Neuroscience and Behavioral physiology** (2001), vol(31), No 6, 583-588.

6 -Babaei P.: Mapping pattern of c-fos expression after seizure using immunoperoxidase staining, **Iranian Journal of Physiology and Pharmacology**, 2003, 51-56.

7-Babaei P, Damirchi A, Assarzadeh M: Effect of the aerobic training on serum IgG and IgA of male students, Journal of Medical faculty, **Guilan University of Medical Sciences**, 2003,vol (46) 23-30.

8- Babaei P, Haery A. Fajrak, H and Khoshbaten A. The effect of Atrial Natriuretic Peptide (ANP) on spontaneous activity of rat uterian smooth muscle. **J of Medical Sciences HAKIM**. (2000) ,3 No, (2)109-115.

9 - Arazi H, Damirchi A and Babaei P, Acute phase response to one and two session training: **Olympic** 1386, vol3 67-80.

10- Babaei P., Soltani B: Pentylentetrazol- induced seizure induces immediate early gene c-fos in rat brain. Journal of Medical faculty , **Guilan University of Medical Sciences** 2005, vol 13, No. 52, 7-14.

11-Damirchi A, Babaei P and Madadi T:Effect of a single sub maximal trining on serum IgA, IgG of female student. **Exercise of university revolution**, 1385, vol2, 19-24

12-Nakhostin roohi. B., Babaei P, Rahmaninia F and Bohlooli Sh: Effect of acute vitamine c

(1000mg) supplementation on lipid peroxidation, muscle damage and inflammation after 30 min exercise at 75% vo₂ max. **J. Sport Medicine Phys**, 2008, 48 ., 217-224

13- Nakhostin roohi. B. , Rahmaninia F, Babaei P and Bohloli Sh. Effect of vit C (500mg) on training- induced lipid peroxidation and inflammation . **pazhuhesh dar varzesh**, in 1387, vol 19, 110--125.

14-Arazi, H, Damirchi A and Babaei P. Effect of one and two session training on leucocyte redistribution in male students, **Haracat** , 1387, No 36., 107-128.

15-Babaei P, damirchi A, Honarmand F and Mehdizade R. effect of training on visceral fat in ovariectomized rats, **Endocrine and metabolism**, 1388, vol 11, No 1, 89-95.

16- Nakhostin roohi. B., Babaei P, Rahmaninia F and Bohloli Sh: Effect of acute vitamine c (1000mg) supplementation on lipid peroxidation, muscle damage and inflammation induced by training in young sportsmen. **Olympic**, 1387, No4, 49-57.

17- Babaei P, damirchi A, and Mehdizade R. effect of training on visceral fat in ovariectomized rats, **Olympic**, 1388, Vol47, No3,

18 Damirchi A-, Arazi, H and Babaei P. Immunoendocrine responses to a single and repeated physical stress. **Brazilian journal of Biomotricity**, 2009, vol 3No3, 253-260.

19- Babaei P, Nakhostin roohi. B. , Rahmaninia F and Bohloli Sh: The effect of VC on immunoendocrine and oxidative stress responses to exercise. **Journal of clinical and diagnostic research**, 2009(3) 1627-1632.

20-damirchi A Mehdizade, Ansar MM, Soltani B, Babaei P, Effects of Exercise Training on Visceral Adipose Tissue and Serum Adiponectin Concentration in Ovariectomized Rats, **Climactric**,2009, nov, No3, 1-10.

21- Hajizadeh S.* , Faghihzadeh S., Khaksari M, Bosakabadi H., Pezhhan A.,Rostampour M, BABAEI P.,DIANAT M. Measurement of vital; pulmonary parameters of sample Iranian populations to determine reference equations for estimation of these parameters. **KNOWLEDGE AND HEALTH** 2009; 4(1):1-7.

22- Mohamad hadi Bahadori, bahram Soltani, Ebrahim Mirzajani, malek masood Ansar. Cryopreservation of rat bone marrow derived mesenchymal stem cells by two conventional and open-pulled straw verification . **Yakhteh , Yakhteh Medical Journal**, 2009,11(3), 317-326.

23- Parvin Babaei, Bahram Soltani. The role of gender and age in stress induced hyperalgsia in rats. Journal of Medical faculty, **Guilan University of Medical Sciences**, 2009.

24- parvin Babaei, Leyla Jamalzadeh, Keyvan Keramati. The effect of s100b protein on learning and memory. **Physiology and pharmacology**,1389: vol 14.

- 25- Parvin Babaei,*Rahimeh Mehdizadeh,, Malek Moein Ansar and Arsalan Damirchi. Effects of ovariectomy and estrogen replacement therapy on visceral adipose tissue and serum adiponectin levels in rats. **Menopause International** 2010; 16; 100-104. DOI: 10.1258/mi.2010.010028
- 26- Azam Moshfegh, Parvin Babaei, Shahrbanoo Oryan, Bahram Soltani, Mohammad-Reza Zarrindast. Involvement of dorsal hippocampal α 1-adrenergic receptors WIN55,212-2 on memory retrieval in inhibitory avoidance. **Neuroscience Letters** 489 (2011) 69-73.
- 27- Babaei P, Soltani, Alizadeh A, Nakhostin M. The role of dopamine in mPFC on fear conditioning. **Acta Medica Iranica** 2011; 49 (7): 433-437.
- 28- Leila Jamalzadeh , Parvin Babaei. THE EFFECTS OF ASTROCYTIC S100B PROTEIN AND ITS ANTIBODY ON ACQUISITION AND CONSOLIDATION OF MEMORY IN MALE RATS. **Pharmacologyonline** 1 (2011) 92-104
- 29- Parvin Babaei, Bahram Soltani Tehrani, and Arsalan Alizadeh . Transplanted Bone Marrow Mesenchymal Stem Cells Improve Memory in Rat Models of Alzheimer's Disease. Hindawi Publishing Corporation. **Stem Cells International**. Volume 2012, Article ID 369417, pages doi:10.1155/2012/369417.
- 30- Toloo Zavol Deylami**, Samane Rahimi, Parvin Babaei, Bahram Soltani . Effects of progesterone on brain infarct size and locomotor activity in transient focal cerebral ischemic male rats. **Pharmacologyonline** Volume 3, 2012, Pages 199-205
- 32- Nakhostin roohi. B.**, , Rahmaninia F and Bohloli Sh, Babaei P. Influence of vit C moderate dose on exercise induced muscle damage, lipid peroxidation and inflammation. *Medicina dello Sport* 2012 June;65(2);187-97.
- 33- Parvin Babaei, Bahram Soltani Tehrani. Effect of BDNF and Adipose Derived Stem Cells Transplantation on Cognitive Deficit in Alzheimer Model of Rats, **Journal of Behavioral and Brain Science**, 2013, 3, 156-161 doi:10.4236/jbbs.2013.31015 Published Online February 2013
- 34- Babaei P, Azali Alamdari K, Soltani Tehrani B, Damirchi A. Effect of six weeks of endurance exercise and following detraining on serum brain derived neurotrophic factor and memory performance in middle aged males with metabolic syndrome. **J Sports Med Phys Fitness**. 2013 Aug;53(4):437-43.
- 35- Parvin Babaei** 1, 2 and Bahram Soltani Tehrani 2,. Intrahippocampal cannabinoid administration induces antinociceptive and amnesic response. **Journal of Applied Pharmaceutical Science** Vol. 3 (8 Suppl 1), pp. S1-S5, September, 2013.
- 36- Babaei P, Damirchi A, Azali Alamdari K . Effects of Endurance Training and Detraining on Serum BDNF and Memory Performance in Middle Aged Males with Metabolic Syndrome Vol 15 No.2 July, 2013 **Iranian Journal of Endocrinology and Metabolism** 132-142.

37- Damirchi A, Babaei P, Azali Alamdari K. Effects of aerobic training on metabolic risk factors and BDNF in midlife males. **Journal of Sport in Biomotor Sciences, Volume 6, Number 2, 2012-2013**

38-Parvin Babaei , Arsalan Damirchi, Mohammad Mehdipoor, Bahram Soltani Tehrani. Long term habitual exercise associated with lower resting level of serum BDNF. **Neuroscience Letters ; 566 (2014)304-308**

39- Babaei P, Damirchi A, Azali Alamdari K . Effects of Endurance Training and Detraining on Serum BDNF and Memory Performance in Middle Aged Males with Metabolic Syndrome Vol 15 No.2 July 2013 **Iranian Journal of Endocrinology and Metabolism** 132-142

40 – Mohammad Mehdipoor, Parvin Babaei , Arsalan Damirchi, comparison of an intensive aerobic and anaerobic exercise on platelets , serum BDNF and cognition performance in middle aged men.**Applied sport physiology.**1391(10) No 20, 23-34..

41- Babaei P, Vahdati S, Soltani B. BDNF pretreatment attenuates morphine-induced amnesia. **Caspian neurological sciences,** 2015; 1(1):12-18.

42- A. Pourrahim Ghouroughchi A. Damirchi B. Soltani ,P. Babaei . The effect of estrogen replacement therapy on visceral adipose tissue, plasma omentin- 1 level and insulin resistance in ovariectomized rats. **Metabolism and Exercise ,Vol 4, Number 2, 2014-2015**

43- P. Babaei, A. Damirchi, A. Pourrahim Ghouroughchi, S. Ghorbani shirkoochi and B. Soltani. The interactive effect of aerobic-resistance training and estrogen therapy on metabolic syndrome indices and omentin-1 **Physiol Pharmacol** 19 (2015) 200-207 .

44 - Seifi-Skishahr F ,Damirchi A, Farjaminezhad M, Babaei P. The Comparison of One-Session Intensive Aerobic Exercise Effects on Glutathione Redox State of Red Blood Cells in Professional, Recreational Athletes and Nonathletes و Journal of Ardabil University of Medical Sciences Vol.15, No.1, Spring 2015, Pages 25- 38.

45- Pourrahim Ghouroughchi A, Babaei P, Damirchi A, SoltaniTehrani B, Ghorbani Shirkoohi S . The Effect of 8-week Aerobic- Resistance Training Accompany with Estrogen Replacement Therapy on Visceral Fat and Cardiovascular Risk Factors in Ovariectomized Rats .Journal of Ardabil University of Medical Sciences. Vol.15, No.3, Autumn 2015, Pages 265 – 276.

46 - Rastegar Hoseini, Arsalan Damirchi, Parvin Babaei: The Interaction Effect of Aerobic Training and Different Doses of Intramuscular Vitamin D on Body Weight, Visceral Fat and Food Intake in Female Wistar Rats. **Arak Medical University Journal , 2015; 18(100): 24-33**

47- Hajar yazdani, Bahram Soltani, Parvin Babaei. Effect of Kiss peptin 13 on spatial memory in Streptozotocin-induced Alzheimer disease in rats. **Journal of Guilan University of Medical Sciences** Vol.24, No.93, Spring 2015, Pages 54- 62.

48- Parvin Babaei, Arsalan Damirchi and Rastegar Hoseini. The interaction effects of aerobic exercise training and vitamin D supplementation on plasma lipid profiles and insulin resistance in ovariectomized rats. **J. Exerc. Nutr. Biochem.** 2015;19 : 173-182

49- Damirchi, Arsalan; Tehrani, Bahram Soltani; Alamdari, Karim Azali. Babaei Parvin, Influence of Aerobic Training and Detraining on Serum BDNF, Insulin Resistance, and Metabolic Risk Factors in Middle-Aged Men Diagnosed With Metabolic Syndrome . **Clinical Journal of Sport Medicine.** 2014; 24(6):513-518.

50- Farnaz Seifi-skishahr., Arsalan Damirchi, Manoochehr Farjaminezhad, Parvin Babaei Comparison of different levels of physical activity on oxidative stress markers of plasma RBC. Journal of Guilan University of Medical Sciences Vol.24, No.95, Spring 2015, Pages 63- 7.

51- Mohammadreza Emamhadi, Bahram Soltani, Parvin Babaei, Hossein Mashhadinezhad, Shervin Ghadarjani, Influence of Sexuality in Functional Recovery after Spinal Cord Injury in Rats. **Arch Bone Jt Surg.** 2016; 4(1): 56-59.

52- Farnaz Seifi-skishahr., Arsalan Damirchi, Manoochehr Farjaminezhad, Parvin Babaei Physical Training Status Determines Oxidative Stress and **Redox Changes in Response to an Acute Aerobic Exercise . Biochemistry Research International** Volume 2016, Article ID 3757623,9 pages <http://dx.doi.org/10.1155/2016/37576231,2>.

53- Maryam Pourmir, Parvin Babaei Bahram Soltani Tehrani , Kisspeptin-13 Ameliorates Memory Impairment Induced By Streptozotocin In Male Rats Via Cholinergic System. Iranian physiology & pharmacology. **Physiol Pharmacol 20 (2016) 38-47.**

54- Rastegar Hoseini, Arsalan Damirchi and Parvin Babaei, Vitamin D increases PPAR γ expression and promotes beneficial effects of physical activity in metabolic syndrome, DOI: 10.1016/j.nut.2016.06.010 Reference: **NUTRITION** 36 (2017), 54-59.

55- Parvin Babaei, Arsalan Damirchi, Bahram Soltani Tehrani, Yazgeldi Nazari, Reyhaneh Sariri Rastegar Hoseini. Effect of exercise training on saliva brain derived neurotrophic factor, catalase and vitamin c. Med J Islam Repub Iran (2016)Vol. 30:452.

56- Arsalan Damirchi, Fatemeh hosseini, Parvin Babaei. Mental Training Enhances Cognitive Function and BDNF More Than Either Physical or Combined Training in Elderly Women With

MCI. **American Journal of Alzheimer's Disease & Other Dementias** (2017) 1-10 . DOI: 10.1177/1533317517727068

57- Hussein F, Damirchi A, Babaei P. Effect of Brain Training on Cognitive Performance in Elderly Women Diagnosed with Mild Cognitive Impairment. **Caspian J Neurol Sci** 2016; 2(7):25-31

58- Rastegar Hoseini, Arsalan Damirchi and Parvin Babaei . The effect of different doses of Vitamin D supplementation on insulin resistance . **Journal of Birjand University** 16 ; 23 (1):

59- Iraj Aghaei, Mohammad Rostampour, Mohammad Shabani, Nima Naderi, Fereshteh Motamedi, Parvin Babaei, Behrooz Khakpour-Taleghani Palmitoylethanolamide attenuates PTZ-induced seizures through CB1 and CB2 receptors . **Epilepsy Research** 117 (2015) 23–28

60- Parvin Babaei, Shiva Poorali, Adeleh Dadras, Bahram Soltani. The effect of estrogen replacement therapy on visceral fat, serum glucose, lipid profiles and apelin level in ovariectomized rats. **J Menopausal Med** 2017;23:182-189.

61- Bentolhoda Amirshabani^{1,2}, Mohammad Rostampour^{1,2}, Parvin Babaei³
PKM ζ contributes in consolidation, retrieval and maintenance of Amygdala dependent fear memory in rats. **Physiol Pharmacol** 21 (2017) 206-215

63- Parvin Babaei , Samaneh Ghorbani, Bahram Soltani,. The Interaction of Vitamin D Serum Supplementation and Aerobic Training on Spatial Memory and levels of BDNF and Irisin in female Rats with Metabolic Syndrome. **Diabetol Metab Syndr** (2017) 9:91 DOI 10.1186/s13098-017-0288-z

64- Babaei P, Damirchi A, Soltani Tehrani B, Nazari Y, Sariri R, Hoseini R. Effect of exercise training on saliva brain derived neurotrophic factor, catalase and vitamin c. **Med. J. Islam. Repub. Iran** 2016(12 December). Vol.30:452.

65- Kouhestani S, Zare S, Babaei P. Effects of Pure Flavonoid of Medlar Leaves on Passive Avoidance Learning and Memory In Alzheimer Model of Ovariectomized Rats. **J of Guilan Univ of Med Sci.** 2017; 25(99):1-9. [Text in Persian]

67- Kouhestani S, Jafari A, Babaei P . Kaempferol attenuates cognitive deficit via regulating oxidative stress and neuroinflammation in an ovariectomized rat model of sporadic dementia. **Neural Regen Res** 13(10):1827-1832. doi:10.4103/1673-5374.238714.

68- Kouhestani S, Zare Samad, Babaei P. Flavonoids fraction of *Mespilus Germanica* alleviates insulin resistance in metabolic syndrome model of ovariectomized rats via reduction in TNF- α . **Journal of Menopausal Medicine** 2018;24:169-175.

69- Fatemeh Davoudzadeh, Parvin Babaei, Adele Jafari. Mespilus germanica leaves flavonoids improve passive avoidance memory and apoptosis in a rat model of amyloid- β neurotoxicity *Physiol Pharmacol* 22 (2018) 219-227.

70- Parvin Babaei, Samaneh Ghorbani Shirkouhi, Rastegar Hosseini and Bahram Soltani Tehrani. Vitamin D is associated with metabotropic but not neurotrophic effects of exercise in ovariectomized rats. *Diabetol Metab Syndr* (2017) 9:91.

71-Elham Fayaz, Arsalan Damirchi, Nozhat Zebardast, Parvin Babaei. Cinnamon extract combined with high-intensity endurance training alleviates metabolic syndrome via non-canonical WNT signaling. *Nutrition* 65(2019) 173-178.

72- Parvin Babaei, Kurosh Mojtavavi, M.D. , Somayeh Kouhestani The Effect of Intrahippocampal Injection of Insulin-like Growth Factor-1 on Morphine-Induced Amnesia in Wistar Rats . *Journal of Kerman University of Medical Sciences*, 2019; 26 (3): 185-191

72- Marzieh Jalilzad, Adele Jafari, Parvin Babaei . Neuregulin1 β improves both spatial and associative learning and memory in Alzheimer model of rats possibly through signaling pathways other than Erk1/2 . *78(2019) 101963*

73- Parvin Babaei, Arsalan Damirchi, Zahra Hoseini, Rastegar Hosseini. Co-Treatment of Vitamin D Supplementation and Aerobic Training Improves Memory Deficit in Ovariectomized Rat. *Int Jour of Neuroscience*, <https://doi.org/10.1080/00207454.2019.1699082>

75- Bita Azimi Rashti , Javad Mehrabani , Arsalan Damirchi , Parvin Babaei The influence of concurrent training intensity on serum irisin and abdominal fat in postmenopausal women. *Menopause Rev* 2019; 18(3): 166-173.

76- Sara Sayad-Fathi^{1,2}, Arash Zaminy² , Parvin Babaei³ , Fatemeh Yousefbeyk⁴ , Nasibeh Azizi⁵ , Ebrahim Nasir, The metanolic extract of cinnamon *Zeylanium bark* improves formal-induced neurotoxicity through reduction of phosphor-tau inflammation and apoptosis *EXCLI Journal* 2020;19:671-686 – ISSN 1611-2156.

77- Mohammad Mehdipoor¹ & Arsalan Damirchi¹ & Seyed Mohammad Taghi Razavi Tousi & Parvin Babaei Concurrent vitamin D supplementation and exercise training improve cardiac fibrosis via TGF- β /Smad signaling in myocardial infarction model of rats, *Journal of Physiology and Biochemistry* [https://doi.org/10.1007/s13105-020-00778-](https://doi.org/10.1007/s13105-020-00778-6)

78-Hamid Arazi1* , Parvin Babaei2,3, Makan Moghimi4 and Abbas Asadi. Acute effects of strength and endurance exercise on serum BDNF and IGF-1 levels in older men. Arazi et al. BMC Geriatrics (2021) 21:50 <https://doi.org/10.1186/s12877-020-01937-6>

79- Zeynab Nikseresht a,b,c , Nematollah Ahangar d , Mahshid Badrikoohi , Parvin Babaei. Synergistic enhancing-memory effect of D-serine and RU360, a mitochondrial calcium uniporter blocker in rat model of Alzheimer's disease Behavioural Brain Research Behavioural Brain Research 409 (2021) 113307

80- Parvin Babaei, Arsalan Damirchi, Zahra Hoseini & Rastegar Hoseini International Journal of Neuroscience Co-treatment of vitamin D supplementation and aerobic training improves memory deficit in ovariectomized rats. International journal of neuroscience

81-Parvin Babaei · Kimia Eyvani, · Somayeh Kouhestani1 Sex-Independent Cognition Improvement in Response to Kaempferol in the Model of Sporadic Alzheimer's Disease. ,Neurochemical Research <https://doi.org/10.1007/s11064-021-03289-y> ORIGINAL

82-Fatemeh Ashourpour , Adele Jafari & Parvin Babaei Co-treatment of AMPA endocytosis inhibitor and GluN2B antagonist facilitate consolidation and retrieval of memory impaired by β amyloid peptide International Journal of Neuroscience 2020, <https://doi.org/10.1080/00207454.2020.1837800>

83- Fatemeh Ashourpour1,2,3 & Adele Jafari3 & Parvin Babaei. Chronic administration of Tat-GluR23Y ameliorates cognitive dysfunction targeting CREB signaling in rats with amyloid beta neurotoxicity *Metabolic Brain Disease* **volume 36**, pages701–709(2021).

84- Maedeh Mohammad Alizadeh1 , Seyed Reza Kazemi Nezhad1 , Parvin Babaei2 , Parvaneh Keshavarz. Comparing *Oprm1* Gene Promoter Methylation in the Lymphocytes of Male Rats Addicted to Nicotine, Morphine, Methadone, and Buprenorphine

85- Parvin Babaei, Arsalan Damirchi, Zahra Hoseini & Rastegar Hoseini Co-treatment of vitamin D supplementation and aerobic training improves memory deficit in ovariectomized rat. ISSN: 0020-7454 (Print) 1543-5245 (Online) Journal homepage: <https://www.tandfonline.com/loi/ines2>.

86- Mohammad Rostampour Bahram Soltani ParvinBabaei Effect of Ibotenic Acid and Colchicine Infusion into the Rat Hippocampus on Retention of Associative Memory. ISSN: 2538-5887; Pathobiology Research. 2021;24(1):37-43

87- Babaei P. NMDA and AMPA receptors dysregulation in Alzheimer's disease. European Journal of Pharmacology 908 (2021) 174310

88- ParvinBabaei^{abc}RastegarHosseini. Exercise training modulates adipokines dysregulations in metabolic syndrome. Sports Medicine and Health Science, January 2022.
<https://doi.org/10.1016/j.smhs.2022.01.001>

89- Mahshid badri kouhi a,b, Aaghil Esmaeli c,d, Parvin Babaei. Simultaneous administration of bromodomain and histone deacetylase I inhibitors alleviates cognition deficit in Alzheimer's model of rats. Brain Research Bulletin 179 (2022) 49–56.

90- M. Farzin,1 P. Babaei, and M. Rostampour Intrahippocampal Injections of Ghrelin and Aerobic Physical Exercise: Effects on Learning and Passive Avoidance Memory in Rats., *Neurophysiology* 2,3 Vol. 53, No. 1, January, 2021

91- Parvin Babaei, Helya Bolouki Azari. Exercise training improves memory performance in older adults: A Narrative review of evidence and possible mechanisms . Frontiers in human Neuroscience. In press.

92- Jafari A, Babaei P, Rohampour K, Rashtiani S. The Effect of Kaempferol on Autophagy and Nrf-2 Signaling in a Rat Model of A β 1-42-induced Alzheimer's Disease. *Caspian J Neurol Sci.* 2022; 8(1):7-16. <https://doi.org/10.32598/CJNS.8.28.179.2>.

93- Melina Rafiee a,b,c , Rahim Nosrati a , Parvin Babaei, Protective effect of miR-34c antagomir against STZ-induced memory impairment by targeting mTOR and PSD-95 in the hippocampus of rats . *Neuroscience Letters* 789 (2022) 136881

94- Parvin Babaei,· Fatemeh Hosseini,· Arsalan Damirchi, · Mohammad Mehdipoor. Mediatory role for irisin/BDNF signaling in the protective effects of combined MSROM and aerobic training against metabolic risk factors in postmenopausal women . *Sport Sciences for Health*
<https://doi.org/10.1007/s11332-022-00994-1>.

Books:

1-Rahmaninia F, Babaei P and Nakhostin B: Muscle scorers, prevention and treatment, published by Shomal University (2006).

2- Babaei P and Alizadeh A . Clinical Neuroanatomy , Richard Snells, published by Guilan University of Medical Sciences, 2006).translated to persion.

3-Characteristic of c-fos expression in rats with different resistance to stress, 1997, Moscow, published by dialog-MGU, LRN063999(in russion).

4-Babaei P, Nabavizadeh, Rostampoor. M. Medical physiology of Guyton, 2011, 2016 published by Arjmand .

5-The endocrine system. 2011, Joy hinson . translated to persian . published by Arjmand.

6- Medical physiology for paramedical undergraduate students, 2011,published by Arjmand .

7- Damirch I A, Babaei P, Gholamali M, The skeletal Muscle from myogenesis to clinical relations , InTechopen, 2012, August , Doi: 10.5772/2961. Under CCBY3.0 licence, ISBN: 978-953-51-0712-5 .

8- Esmaeili,M Babaei p. Physiology for medical students. Ghazvin university. Andishe Rafi publication, 2014.

9- Babaei P . Badanara Aydin. Medical physiology for paramedical undergraduate students, 2011,published by Arjmand .

11- Babaei P and et al., Medical physiology 2016, published by Arjmand .

B) Abstracts and conferences:

1- Haeri. A., **Babaei. P:** Effect of Atriopeptine II on rat uterine smooth muscle, Abstract book of 10th congress of physiology and pharmacology, 1991, (No243) 218.(9-12 Dec, Ahvaz, Iran).

2- **Babaei. P,** Haeri. A, Khoshbaten A: Response of rat uterine smooth muscle to Atriopeptin II in the presence and absence of steroidal hormones. Abstract book of 11th congress of physiology and pharmacology, 1993,(17-20May, Tabriz, Iran).

3- **Babaei. P.,** Khoshbaten. A, Haeri. A: Relaxant effect of Atrial Natriuretic Peptide on rat uterine smooth muscle in comparison with Isopropanol ,XXXII IUPS congress(1993), supplement 1(boardk13)(1-7 August, Glasgow, United Kingdom).

4-**Babaei P:** Expression of gene c-fos in the rat brain following learning and memory, (1996, 28th of January, Moscow Russia,),(in Russian).21st congress of scientific academies of Russia).

5- **Babaei. P,** Dolgov. O.N, Anokhin K.V. Pattern of c-fos immediate early gene expression in the rat brain after passive avoidance training XXXIII IUPS international congress of physiological sciences (1997), P092.13 (30jun-5July, St. Petersburg, Russia).

6- **Babaei. P,** Anokhin K.V: Study of c-fos expression in rat hypothalamic nuclei after emotional stress, Abstract book of 14th Iranian congress of physiology and pharmacology (1999), 259 (16-20 may, Tehran,Iran).

7-**Babaei P.,** Mapping pattern of c-fos expression after seizure using immunoperoxidase

staining, Iranian Journal of physiology and pharmacology, Abstract book of 16th congress, 2003, page 31.

8- **Babaei. P**, Dolgov. O.N, Anokhin K.V: c-fos expression in the limbic system in two types of wistar rats Proceedings of the Australian Physiological and Pharmacological society/ Faops, 1998,(29)2, 124 P (October, Brisbane, Australia).

9-**Babaei. P** Cortical C-fos expression following passive avoidance training in Wistar rat is symmetrical: Forum of European Neurosciences Society, 24th -25th June 2000. Brighton, England.

10- Damirchi, A., **Babaei. P** and Assarzadeh, M: Effect of the aerobic training on serum IgG , IgA of male students, 4th congress of physical education, 2000(23-24 Dec), Rasht- Iran.

11-**Babaei, B.** Soltani. Individual. Typological Characteristics of rat behavior in open –field and passive avoidance learning. Iranian Journal of pharmaceutical Research (2004): vol3, supplement 1, page 33.

12-Ansar MM, Bahadori MH, **Babaei P**, Soltani B.. Isolation , culture and proliferation of adult rat bone marrow mesenchymal stem cells. 7th Iranian congress of Anatomical sciences, (1384), p7

14 Soltani., B, Bahadori MH, **Babaei P** and Ansar, MM-Identification of Surface molecules CD44,CD34 and CD45 stem cells in rat bone marrow. The fourth national congress on improving the quality in clinical laboratories.(1383) P-54.

15- **Babaei P**, Soltani B, Ansar MM, Bahadori MH,.. Isolation , culture and proliferation of human bone marrow mesenchymal stem cells. 7th Iranian congress of Anatomical sciences, (1384), p 62.

16-**Babaei p.**, Nakhostin M, Alizade A and Soltani B. Effect of dopamine elevation of prefrontal cortex on fear conditioning in rats 17th Iranian Congress of Physiology and Pharmacology, May 9-13, 2003, kerman-Iran, page 33, No. 163

17- Alizade A, **Babaei p.**, Nakhostin M and Soltani B. Effect of dopamine decrease in prefrontal cortex on fear conditioning in rats 17th Iranian Congress of Physiology and Pharmacology, May 9-13, 2003, kerman-Iran ,page 223, No. 541

18-Khakpoor B, Rostampoor M, Bozorgi F, **Babaei P** . Effect of saffron extract on morphine induced sensitization in rats 17th Iranian Congress of Physiology and Pharmacology, May 9-13, 2003, kerman-Iran, page 124, No. 344.

19-Aghaei I, Rostampoor, Motamedi F , **Babaei p** and khakpoor B. Effect of endocannabinoids palmithoilethanolamid on PTZ-induced scizure in rats. Abstract book of Iranian Congress of Physiology and Pharmacology(2007), mashhad-Iran, page 50, No. 197

20-**Babaei parvin**, Soltani Bahram ,_and Rostampoor Mohamad. Effect of aging on stress-induced hyperalgesia. Iranian Congress of Physiology and Pharmacology(2007), mashhad-Iran, page 255, No. 1015.

21-Rostampour M., Soltani B., Aghae I., Khskpour B., **Babaei P**. Investigation of the effect of hydro-alcoholic extract of matricaria chamomilla on PTZ-induced seizure in male mice. Iranian Congress of Physiology and Pharmacology(2007), mashhad-Iran, page 100, No. 396.

22- **Babaei parvin**, Soltani bahram, Norasfard mohamadreza and Aghaei Iraj. Chronic psychosocial stress induces hyperalgesia in rats of both gender. Iranian Congress of Physiology and Pharmacology(2007), mashhad-Iran, page 241, No. 960.

23-Nakhostin-Roohi B., Rahmaninia F., **Babaei P** and Bohluli S. Effect of acute supplementation of vitamine C on exercise –induced lipid peroxidation and muscle damage. Iranian Congress of Physiology and Pharmacology(2007), mashhad-Iran, page 181, No. 719.

24-Nakhostin-Roohi B., Rahmaninia F., **Babaei P** and Bohluli S. Effect of acute supplementation of vitamine C on exercise –induced lipid peroxidation and muscle damage. International Congress of physical education, (2007cheque republic

25- Nakhostin-Roohi B., Rahmaninia F., **Babaei P** and Bohluli S. Effect of acute supplementation of vitamine C on exercise –induced lipid peroxidation and muscle damage. International Congress of physical education, (2007 Greece)

26- **Babaei P**, damirchi A, and Mehdizade R. Effect of training on visceral fat in ovariectomized rats, Iranian congress of Obesity , Ghazvin

27- **Parvin Babaei**, Azam Moshfegh, Bahram Soltani. Intrahippocampal Cannabinoid administration induces antinociceptive response. The 9th Iranian congress of pain.

28. **Parvin Babaei**, Bahram Soltani, Mohamad Rostampoor. Acute social stress induces hyperalgesia in old rats The 9th Iranian congress of pain. The 9th Iranian congress of pain. The 9th Iranian congress of pain.

29. Bahram Soltani, **Parvin Babaei**, Mohammad Rostampoor. Effects of hydroalcoholic extract of matricaria chamomilla treatment on hyperalgesia induced by acute social stress. The 9th Iranian congress of pain.

30. Mohamad rostampoor, Bahram soltani, **parvin babaei**, Mohamd reza norrasfard. Analgesic effect of pretreatment with alcoholic extract of matrica. The 9th Iranian congress of pain. Rasht, 2009.

31. Mohammad reza norrasfard, **parvin babaei**, mohammad rostampoor, bahram soltani. The Pretreatment effect of hydro alcoholic extract of matricaria chamomilla on social stress –induced hyperalgesia in old rats. The 9th Iranian congress of pain. Rasht 2009

32. Mehdi Nezhad panjeki, **Parvin Babaei**, bahram soltani, , rahime mehdizadeh, mohamad rostampoor The role of high intensity swimming training on pain threshold in young rats. The 9th Iranian congress of pain. Rasht 2009
33. Rahimeh Mehdizadeh, **Parvin Babaei**, Bahram soltani. The role of acute high intensity exercise training on pain threshold in young rats. The 9th Iranian congress of pain. Rasht 2009
34. **Parvin Babaei**, Bahram soltani. Effect of intrahippocampal infusion of mesenchymal stem cells on age-associated memory impairments in rats. 19th Iranian Congress of Physiology and Pharmacology, 2009, Tehran.
35. **Parvin Babaei**, LeylaJamalzadeh, Keyvan Keramati. Effect of intrahippocampal infusion of astrocytic protein s100b on alearning and memory in rats. 19th Iranian Congress of Physiology and Pharmacology. , 2009, Tehran
36. Babaei P, damirchi A, and Mehdizade R . Effect of short-term and long-term ovariectomy on serum adiponectin concentration in fema;le rats. 19th Iranian Congress of Physiology and Pharmacology. , 2009, Tehran
- 37- **Babaei, P.** Damirchi, A. Mehdizadeh, R., Ansar, M. M. Effect of aerobic training on lipid profiles and insulin resistance in ovariectomized rats. annual congress of the European sport science, Antalya, 23-26 june 2010(532).
- 38- **Babaei P**, soltani B Nezhadpanjeki M, Mehdizade R. The effect of sub chronic exhystrive exercise on pain threshold in young rats. 15th annual congress of the European sport science, Antalya, 23-26 june 2010.
- 39- Arazi, H, Damirchi A and **Babaei P**. Effect of one and two sesstion training on leucocyte redistribution in male students. The 6th international congress of sport sciences, Kish university 1386.
- 40- **Babaei P**, Nakhostin-Roohi B., Rahmaninia F., and Bohluhi S. Effect of acute supplementation of moderate dose of vitamine C on exercise –induced lipid peroxidation and muscle damage.. The 6th international congress of sport sciences, Kish university 1386.
- 41- Babaei P, Mehdizad, M, Nezhadpanjeki , Soltani, B. EFFECT OF AEROBIC TRAINING ON LIPID PROFILES AND INSULIN RESISTANCE IN . OVARIECTOMIZED RATS. 15th annual congress of the European sport science. 14-16 june 2010

Antalya

42- Babaei P, Damirchi A, Mehdizad, M, Ansar M. THE EFFECT OF SUB CHRONIC EXHUSTIVE TRAINING ON PAIN THRESHOLD IN YOUNG RATS. 15th annual congress of the European sport science. 14-16 june 2010

Antalya

43-**Babaei P**, Soltani, B. Alizadeh A. Effects of adipose tissue- derived stem cells on learning and memory in Alzheimer model of rats. 8th IBRO congress, Florance, Italy. 2011.

44- Alizadeh A, **Babaei P**, Soltani, B. Effects of BDNF infusion with adipose tissue- derived stem cells on learning and memory in Alzheimer model of rats. 8th IBRO congress, Florance, Italy. 2011.

45-Soltani, A. Soltani, B, Alizadeh A, . **Babaei P**. Ibotenic acid lesion impairs spatial learning, but not passive avoidance in rats, 8th IBRO congress, Florance, Italy. 2011.

46- Leyla Jamalzadeh, **Parvin Babaei**,. Effect of intrahippocampal infusion of astrocytic protein s100b on locomotor activity in rats. 20th Iranian Congress of Physiology and Pharmacology. , , Hamedan, 2011.

47- **Babaei P**. Soltani B. Behavioural analysis of passive avoidance learning following ibotenic acid–damage to NBM or colchicine to dentate gyrus in rats, 20th Iranian Congress of Physiology and Pharmacology , Hamedan, 2011.

48- **Babaei P**. Soltani B. Bone marrow Mesenchymal stem cells in memory improvement. 20th Iranian Congress of Anatomy, Guilan 2012.

49- Babaei p. Neurotrophines and memory.first international Iranian Neuroscience congress. Tehran. Nov 2012.

50- Babaei P, Damirchi A, Azali Alamdari K . Effects of Endurance Training and Detraining on Serum BDNF and Memory Performance in healthy Middle Aged Males . . 21th Iranian physiology & pharmacology congress **Tabriz, shahrivar 1392**

51- Damirchi A, Babaei P, Azali Alamdari K. Effects of aerobic training on metabolic risk factors and BDNF in metabolic syndrome. 21th Iranian physiology & pharmacology congress **Tabriz, shahrivar 1392**

53- Azali Alamdari , Damirchi A, Babaei P Effects of aerobic training on metabolic risk factors and insulin resistance in male diagnosed with metabolic syndrome. 21th Iranian physiology & pharmacology congress **Tabriz, shahrivar 1392**

54- Vahdati S, Babaei P, Soltani P. Effect of intrahippocampal infusion of BDNF on morphine induced amnesia in rats. 21th Iranian physiology & pharmacology congress **Tabriz, shahrivar 1392**

Awards:

1-The best project of 11th Annual Congress of Moscow Academy of Medical Sciences, 28 January -6 February 1997.

3-As a first graduate students among Iranian students studying in Russia in 1997 attended in the first world meeting of Iranian scientists, experts and thinkers holed by president .28th April-10th May, 1997, Tehran, Iran.

4-The excellent degree in basic science exam, 1379, p/3/117/6620.

5- Best researcher of GUMS1383

6- Best researcher of GUMS1386

7-Best researcher of Guilan province 1389

8-Best researcher of GUMS1390

9- Best researcher of GUMS1391

10- Best researcher of GUMS1398

Research projects:

1-Babaei P: The study of brain activated structures during learning process using c-fos expression, Guilan University of Medical Sciences (1999).

2-Damirchi A, Assarzadeh M, Babaei P: The effect of aerobic training on serum IgG, IgA and c3, c4 of complement system of male students) physical education faculty of Guilan University, 1998.

3-Damirchi A, Babaei P and Madadi T: The effect of aerobic training on serum IgG and IgA of female students, physical education faculty of Guilan University, 1999.

4-Babaei P, Soltani B, Khakpoor B, Nakhostin M, Bagheri H and Alizadeh A: The effect of elevated dopamine in prefrontal cortex on fear conditioning in rats (2004). 6/8/86: p/3/132/3812.

5-Babaei P, Soltani B: The effect of social conflict stress (acute and chronic) on pain tolerance with respect to difference in typological characteristics, gender and age in rats.

6-Norasfard M, Babaei P, Shahsavari, Nikookar A, Janati S: The effect of social conflict stress (chronic) on the histology of adrenal, submandibular, paratid and thymus glands in rats.

6-Hajizadeh S, Babaei P and Rostampoor M: Determination of physiological indices of cardiac and respiratory systems of the people of Rasht.

7- Damirchi A, Babaei p and Arazi, H, Acute phase response to a one and two session training.

7/8/85-

8-Effect of vit C on lipid peroxidation and inflammation markers after an aerobic training. Rahmaninia F, Babaei Nakhostin B. 7/8/85-

9- Babaei P, Soltani B, Nakhostin m. Elevation and reduction of dopamine in mPFC on fear conditioning.1385-1388.

10- Babaei P, Soltani B 14/6/85 , p/3/132/4797. Isolation , culture and purification of mesenchymal stem cells and effectiveness on memory impairment.2005-2010.

11- Babaei P, Soltani B,Damirchi, Azali .Effect of exercise on serum BDNF, metabolic risk factors in healthy and metabolic syndrome2010-2013

12- Babaei P, Soltani B, Poorali, Sh, Dadras A. Effect of estrogen therapy on serum Apelin and insulin resistance.2011-2013

13- Damirchi A, Babaei p and Seify F. Effect of exercise training on stress oxidative. 2011-2-14.

14- Damirchi A, Babaei p and Poorrahim A. Effect of exercise training on omentine and insulin resistance in ovarecomized rats. 2011-2013.

15-. Evaluation of BDNF level among professional athlets and response to aerobic and anaerobic exercise.

16- flavonoids on spatial memory deficit in STZ induced Alzheimer

17- Vi tD interaction with PPAR gama in metabolic syndrome

19- Bdnf, Irisin association in metabolic syndrome and spatial memory.

21- Brain training and Cognitive Performance in elderly Women diagnosed with MCI

22- Vitamin D Supplementation and Spatial Memory

23-Different neuropeptides (kisspeptin, neuroglin, Wnt5a ,...) and treatment of AD

24- Rebalancing glutamate neurotransmission and AD

25- Mitochondrial ca channel blockers and AD

26-Astrocytes inhibitors and AD

27-Mir 132 antagomers and AD

28-Histon deacetylase inhibitors and AD

