

CURRICULUM VITAE

Hossein Azizi

Born: March 28, 1976
Citizenship: Iran
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Address: Department of Physiology, School of Medical Sciences, Tarbiat Modares University, P.O. Box 14115-331, Tehran, Iran.
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Assistant professor at Department of Physiology, School of Medical Sciences, Tarbiat Modares University, Tehran, Iran.

Education:

- 2012-2014 Post-doctoral research fellow, Neuroscience Research Laboratory, Department of Anesthesiology, Pharmacology and Therapeutics (Prof. Sastry's lab), Faculty of Medicine, The University of British Columbia, Vancouver, British Columbia, Canada
- 2011-2012 Post-doctoral research fellow, Department of Physiology (Prof. Semnanian's lab), School of Medical Sciences, Tarbiat Modares University, Jalale Ale Ahmad Street, Tehran, Iran.
- 2007-2011 PhD of physiology at Tarbiat Modares University, Iran
(Mean score: 18.08 from 20, Graduated with distinction)
Title of thesis: The effect of orexin receptor type 1 of locus coeruleus neurons in morphine dependent rats: behavioral and electrophysiological approaches
- 2001-2004 M.S. in Medical Physiology at Tarbiat Modares University, Iran
(Mean score: 17.70 from 20).
Thesis: Effect of cAMP on unit activity of paragigantocellularis neurons and withdrawal signs in morphine dependent rats.
(Behavioral studies and single unit recording electrophysiology)
- 1994-1998 B.Sc. in Nursing at Tehran University of Medical Sciences
(Mean score: 17.34 from 20).

Research Experience:

In vivo Extracellular Single Unit Recording
Whole cell patch clamp recording
In vitro Field potential recording
Pressure microinjection
Stereotaxic surgery of rat brain and cannulation
Animal model of addiction to morphine
Making multibarrel, glass micropipettes
Slice preparation from rat brain

Scientific organization membership:

Iranian Society of Physiology and Pharmacology 2001
International Brain Research Organization (IBRO) 2002

Teaching Experience:

1999-2001 Teaching general physiology and anatomy at high school level
2003-2005 Teaching general physiology at medical university
2007-2012 Teaching general physiology at Tehran medical university

Professional Service:

2011 to present: FAOPS newsletter editorial board (www.foaps.org.my)

4 – 8 May, 2003: Organized and participated in patch clamp pre-congress workshop, lead by Dr. Gibb from UCL. Tarbiat Modares University. Tehran, Iran.

10 – 12 May, 2003: Organized and participated in developmental neurobiology pre-congress workshop, lead by Dr. Nicholls. Tarbiat Modares University. Tehran, Iran.

5 May 2011: Organized and participated in patch clamp pre-congress workshop. Tarbiat Modares University, Tehran, Iran.

12 May 2011: Organized and participated in Electrophysiology workshop. Tarbiat Modares University, Tehran, Iran.

24-25 May 2011: Organized and teaching in whole cell patch clamp workshop. Tarbiat Modares University, Tehran, Iran.

8-9 March 2012: Teaching in single unit recording workshop. Science beam, Tehran, Iran.

Honors:

1. Second grade in research on addiction by Presidency Drug Control Headquarters, 2004
2. Second grade in research on addiction by Presidency Drug Control Headquarters, 2011
3. Best presentation award, IBRO APCR Neuroscience School, October 26-November 4, 2009, Shanghai, China
4. Best paper award for paper presented at the poster session, 5th congress of FAONS, Lucknow, India, 25-28 November 2010.
5. Graduated with distinction in PhD course, Tarbiat Modares University, Tehran, Iran, 2011

Short Course participation:

Workshop in teaching physiology, January 14, 2004, Tarbiat Modares University, Tehran, Iran
Workshop in neuroscience, February 15-17, 2004, Tarbiat Modares University, Tehran, Iran
2nd FAONS satellite workshop in Electrophysiology, 16-17 May, 2004, Tehran, Iran
IBRO APCR Neuroscience School, 26 - 30 March, 2007, Karachi, Pakistan
IBRO APCR Neuroscience School (electrophysiology), 6 - 17 January, 2009, Hong Kong
IBRO APCR Neuroscience School, October 26 - November 4, 2009, Shanghai, China
IBRO APCR Neuroscience School, January 27 - February 2, 2010, Bangkok, Thailand
ISN/APS School (School Theme: Drug Addiction), October 11-15, 2010, Bangkok, Thailand

Abstracts:

1. Azizi H, Semnanian S, Mirnajafi-Zadeh J, Rohampour K, Azhdari Zarmehri H; Orexin-A potentiates excitatory synaptic transmission to the locus coeruleus neurons; 8th IBRO World Congress of Neuroscience, Florence, Italy, poster presentation, 14-18 July 2011.
2. Azizi H, Semnanian S, Mirnajafi-Zadeh J, Rohampour K, Azhdari Zarmehri H; The Orexin-1 Receptor Antagonist SB-334867 Attenuates Signs of Naloxone-Precipitated Morphine Withdrawal in Rats; 5th congress of FAONS, Lucknow, India, poster presentation, 25-28 November 2010 (Best paper at the poster session).
3. H. Azizi, S. Semnanian, J. Mirnajafi-Zadeh, K. Rohampour; Microinjection of orexin-a into the locus coeruleus area induces opioid withdrawal behaviors in morphine dependent rats; the 10th Biennial Meeting of the Asia-Pacific Society of Neurochemistry (APSN), Phuket, Thailand, poster presentation, 18-20 October 2010.
4. H. Azizi, S. Semnanian, Y. Fathollahi, F. G. Pakdell, H. A. Zarmehri, K. Rohampour; Effect of rolipram, a type 4-specific phosphodiesterase inhibitor, on unit activity of paragigantocellularis neurons and withdrawal signs in morphine dependent rats; the 6th symposium of the Asian biophysics association and the 27th annual meeting of the Hong Kong society of neurosciences, poster presentation, 2009.
5. H. Azizi, S. Semnanian, Y. Fathollahi, F.G. Pakdell, H. A. Zarmehri, K. Rohampour; Effect of cAMP on unit activity of paragigantocellularis neurons and withdrawal signs in morphine dependent rats; oral presentation, 17th Iranian Congress of Physiology and Pharmacology, 2005.
6. Rohampour K., Semnanian S., Fathollahi Y. and H. Azizi, Effect of C-fiber destruction on responsiveness to noxious stimulus; an electrophysiological and behavioral study, 17th Iranian congress of physiology and pharmacology, 2005.
7. H. A. Zarmehri, S. Semnanian, Y. Fathollahi, F. G. Pakdell, H. Azizi, Forskolin precipitates withdrawal syndrome in paragigantocellularis nucleus neuron on morphine dependent rats: single unit recording, 17th Iranian Congress of Physiology and Pharmacology, 2005.
8. H. A. Zarmehri, S. Semnanian, Y. Fathollahi, H. Azizi, Localization of the Brain Stem Antinociceptive Effects of Orexin-A on Formalin Induced Nociceptive Behaviors, 19th Iranian Congress of Physiology and Pharmacology, 2009.

Publications:

1. Fakhari M, Azizi H, Semnanian S. Central antagonism of orexin type-1 receptors attenuates the development of morphine dependence in rat locus coeruleus neurons. *Neuroscience*. 2017; 363:1-10.
2. Ahmadi-Soleimani SM, Azizi H, Gompf HS, Semnanian S. Role of orexin type-1 receptors in paragiganto-coerulear modulation of opioid withdrawal and tolerance: A site specific focus. *Neuropharmacology*. 2017; 126:25-37.

3. Mohammad Ahmadi Soleimani S, Azizi H, Pachenari N, Mirnajafi-Zadeh J1, Semnanian S. Enhancement of μ -opioid receptor desensitization by orexin-A in rat locus coeruleus neurons. *Neuropeptides*. 2017; 63:28-36.
4. Salmanzadeh H, Azizi H, Semnanian S. Adolescent chronic escalating morphine administration induces long lasting changes in tolerance and dependence to morphine in rats. *Physiol Behav*. 2017; 174:191-196.
5. Rohampour K, Azizi H, Fathollahi Y, Semnanian S. Peripheral nerve injury potentiates excitatory synaptic transmission in locus coeruleus neurons. *Brain Res Bull*. 2017 Jan 16;130:112-117.
6. Ghaemi-Jandabi M, Azizi H, Ahmadi-Soleimani SM, Semnanian S. Intracoeular microinjection of orexin-A induces morphine withdrawal-like signs in rats. *Brain Res Bull*. 2017 Jan 16;130:107-111.
7. Hooshmand B, Azizi H, Javan M, Semnanian S. Intra-LC microinjection of orexin type-1 receptor antagonist SB-334867 attenuates the expression of glutamate-induced opiate withdrawal like signs during the active phase in rats. *Neurosci Lett*. 2016 Nov 2. pii: S0304-3940(16)30807-2. doi: 10.1016/j.neulet.2016.10.051.
8. Abdollahi H, Ghaemi-Jandabi M, Azizi H, Semnanian S. The role of orexin type-1 receptors in the development of morphine tolerance in locus coeruleus neurons: An electrophysiological perspective. *Brain Res*. 2016 Sep 1;1646:91-7.
9. Davoudi M, Azizi H, Mirnajafi-Zadeh J, Semnanian S. The blockade of GABAA receptors attenuates the inhibitory effect of orexin type 1 receptors antagonist on morphine withdrawal syndrome in rats. *Neurosci Lett*. 2016 Mar 23;617:201-6.
10. Kaeidi A, Azizi H, Javan M, Ahmadi Soleimani SM, Fathollahi Y, Semnanian S. Direct Facilitatory Role of Paragigantocellularis Neurons in Opiate Withdrawal-Induced Hyperactivity of Rat Locus Coeruleus Neurons: An In Vitro Study. *PLoS One*. 2015;10(7):e0134873.
11. Mohammad-Pour Kargar H, Azizi H, Mirnajafi-Zadeh J, Ali Reza M, Semnanian S. Microinjection of orexin-A into the rat locus coeruleus nucleus induces analgesia via cannabinoid type-1 receptors. *Brain Res*. 2015;1624:424-32.
12. Mohammad Ahmadi Soleimani S, Azizi H, Mirnajafi-Zadeh J, Semnanian S. Orexin type 1 receptor antagonism in rat locus coeruleus prevents the analgesic effect of intra-LC met-enkephalin microinjection. *Pharmacol Biochem Behav*. 2015;136:102-6.
13. Ghaemi-Jandabi M, Azizi H, Semnanian S. Blockade of orexin type 1 receptors inhibits the development of morphine tolerance in lateral paragigantocellularis nucleus: An electrophysiological approach. *Brain Res*. 2014 Jul 8. pii: S0006-8993(14)00878-6. doi: 10.1016/j.brainres.2014.06.033.
14. Mousavi Y, Azizi H, Mirnajafi-Zadeh J, Javan M, Semnanian S. Blockade of orexin type-1 receptors in locus coeruleus nucleus attenuates the development of morphine dependency in rats. *Neurosci Lett*. 2014 Aug 22;578:90-4.
15. Ahmadi-Soleimani SM, Ghaemi-Jandabi M, Azizi H, Semnanian S. Orexin type 1 receptor antagonism in Lateral Paragigantocellularis nucleus attenuates naloxone precipitated morphine withdrawal symptoms in rats. *Neuroscience Letters* volume 558, 2014, Pages 62–66.

16. Hossein Azizi, Yadollah Ranjbar-Slamloo, Saeed Semnanian, Height-dependent difference in the expression of naloxone-induced withdrawal jumping behavior in morphine dependent rats. *Neurosci Lett*. 2012 Mar 24 (*Accepted*).
17. Yadollah Ranjbar-Slamloo, Hossein Azizi, Yaghoub Fathollahi, Saeed Semnanian, Orexin receptor type-1 antagonist SB-334867 inhibits the development of morphine analgesic tolerance in rats. *Peptides*, 2012 (*Accepted*).
18. 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. Epub 2011 Oct 10.
19. Hossein Azizi, Javad Mirnajafi-Zadeh, Kambiz Rohampour, Saeed Semnanian, Antagonism of Orexin Type 1 Receptors in the Locus Coeruleus Attenuates Signs of Naloxone-Precipitated Morphine Withdrawal in Rats, *Neuroscience letters*, 482 (2010) 255–259.
20. Azhdari Zarmehri H, Semnanian S, Fathollahi Y, Erami E, Khakpay R, Azizi H, Rohampour K. Intra-periaqueductal gray matter microinjection of orexin-a decreases formalin-induced nociceptive behaviors in adult male rats. *J Pain*. 2011; 12(2):280-7.
21. Hossein Azizi, Saeed Semnanian, Seyed Javad Mirnajafi-Zadeh; Microinjection of Orexin-A into the Locus Coeruleus Area Induces morphine withdrawal-like behaviors in Morphine Dependent Rats. *Iranian J Physiology and Pharmacology* (article in press).
22. Kambiz Rohampour, Homa Manaheji, Saeed Semnanian, Hossein Azizi. Microinfusion of TNF α and its antibody into locus coeruleus modifies nerve injury induced thermal hyperalgesia and mechanical allodynia. *Iranian J Physiology and Pharmacology* (article in press).
23. H. Azizi, S. Semnanian, Y. Fathollah, F. G. Pakdell, H. A. Zarmehri, K. Rohampour, Effect of rolipram, a type 4-specific phosphodiesterase inhibitor, on unit activity of paragigantocellularis neurons and withdrawal signs in morphine dependent rats: single unit recording, *Yakhteh Journal*, 25(2005), 35-42.
24. K. Rohampour, S. Semnanian, F. Fathollahi, H azizi, Responsiveness of PGI neurons to noxious stimulus in capsaicin treated morphine dependent rats, *Yakhteh Journal*, 29(2006), 31-38.
25. Safari F., Hajizadeh S., Fathollahi Y., Azizi H., The role of Nitric oxide in skin blood flow of morphine dependent rats, *Iranian J Physiology and Pharmacology*, 10 (winter, 2006), 267-274.