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Personal Data:

Date of Birth: 1985, February 1

Place of Birth: Khorram Abad

Nationality: Iran

Marital Status: Married

Education:

- Bachelor of Animal Biology, Shahid Chamran University, Ahwaz, Iran. (2003-2007)
- Master of Animal Physiology, Ferdowsi University, Mashhad, Iran. (2007-2010)
- PhD in Neuroscience, Shahid Beheshti University of Medical Sciences, Tehran, Iran. (2012-2017)

Fields of Research:

- Cellular, Molecular, and Behavioral Neuroscience
- Neurodegenerative diseases; Parkinson's disease

Publications:

1. Neda Valian, Abolhassan Ahmadiani and Leila Dargahi. "Escalating methamphetamine regimen induces compensatory mechanisms, mitochondrial biogenesis, and GDNF expression, in substantia nigra." *Journal of cellular biochemistry* 118.6 (2017): 1369-1378. doi: 10.1002/jcb.25795
2. Neda Valian, Abolhassan Ahmadiani and Leila Dargahi. "Does Repeated Methamphetamine Exposure at Different Regimens Cause Parkinsonian-Like Behavior in Rats?" *Iranian journal of pharmaceutical research: IJPR* 17.2 (2018): 543-552. PMID: 29881412, PMCID: PMC5985172

3. Neda Valian, Abolhassan Ahmadiani and Leila Dargahi. "Increasing methamphetamine doses inhibit glycogen synthase kinase 3 β activity by stimulating the insulin signaling pathway in substantia nigra." *Journal of cellular biochemistry* 119.10 (2018): 8522-8530. doi: 10.1002/jcb.27082
4. Neda Valian, Mansooreh Heravi, Abolhassan Ahmadiani and Leila Dargahi. "Effect of methamphetamine on rat primary midbrain cells; mitochondrial biogenesis as a compensatory response." *Neuroscience* 406 (2019): 278-289. doi: 10.1016/j.neuroscience.2019.03.016
5. Leila Mohaghegh Shalmani, Neda Valian, Safura Pournajaf, Fatemeh Abbaszadeh, Leila Dargahi, Masoumeh Jorjani. "Combination therapy with astaxanthin and epidermal neural crest stem cells improves motor impairments and activates mitochondrial biogenesis in a rat model of spinal cord injury". *Mitochondrion* 52 (2020): 125–134. <https://doi.org/10.1016/j.mito.2020.03.002>
6. Pournajaf, Safura, Neda Valian, Leila Mohaghegh Shalmani, Pariya Khodabakhsh, Masoumeh Jorjani, and Leila Dargahi. "Fingolimod increases oligodendrocytes markers expression in epidermal neural crest stem cells." *European Journal of Pharmacology* (2020): 173502.
7. Neda Valian, Mansooreh Heravi, Abolhassan Ahmadiani and Leila Dargahi. "Comparison of Rat Primary Midbrain Neurons Cultured in DMEM/F12 and Neurobasal Mediums." *Basic and Clinical Neuroscience* 12 (2021): 2; 205-212. <http://dx.doi.org/10.32598/bcn.12.2.1568.1>.
8. Neda Valian, Marziyeh Sorayya, Sareh Asadi, Fatemeh Sherafati, Ali Ershad, Sara Savaheli, Abolhassan Ahmadiani. "Preconditioning by ultra-low dose of tramadol reduces the severity of tramadol-induced seizure: contribution of glutamate receptors". *Biomedicine & Pharmacotherapy* 133 (2021) 111031.
9. Farideh Iravanpour, Leila Dargahi, Mohsen Rezaei, Masoud Haghani, Reza Heidari, Neda Valian, Abolhassan Ahmadiani. "Intranasal insulin improves mitochondrial function and attenuates motor deficits in a rat 6-OHDA model of Parkinson's disease". *CNS Neuroscience & Therapeutics* (2021): 00:1–12.
10. Sara Chavoshinezhad, Mohammad Ismail Zibaii, Mir Hossein Seyed Nazari Abdolaziz Ronaghi, Afsaneh Asgari Taei, Ahmad Ghorbani, Sareh Pandamooz, Mohammad Saied Salehi, Neda Valian, Fereshteh Motamedi, Abbas Haghparast, Leila Dargahi. "Optogenetic stimulation of entorhinal cortex reveals the implication of insulin signaling in adult rat's hippocampal neurogenesis". *Progress in Neuro-Psychopharmacology and Biological Psychiatry* 111 (2021) 110344.
11. Mehri Salari, Masoud Etemadifar, Leila Dargahi, Neda Valian, Malihe Rezaee. "Manganese-induced parkinsonism responsive to intranasal insulin: A case report". *Clinical Case Reports* (2022): 10(3); e05562.
12. Seyedeh Masoumeh Seyedhosseini Tamijani, Neda Valian, Mansooreh Heravi, Abolhassan Ahmadiani, Elmira Beirami, Leila Dargahi. "Implication of thyroid hormone receptors in methamphetamine neurocognitive effects". *NeuroToxicology* (2022) 90; 130-135.
13. Neda Valian. Putative Role of Trace Elements Deficiency in Psychiatric Disorders Including Depression. Trace Elements in Brain Health and Diseases (Book), *Springer Nature Singapore* (2023) 71-93. <https://link.springer.com/book/10.1007/978-981-99-1513-2>
14. Fatemeh Hemmati, Neda Valian, Abolhassan Ahmadiani, Zahurin Mohamed, Raymond Azman Ali, Norlinah Mohamed Ibrahim, Seyed Farshad Hosseini Shirazi. "Insulin and TLR4 Inhibitor Improve Motor Impairments in a Rat Model of Parkinson's Disease". *Iranian Journal of Pharmaceutical Research* (2024): 23(1): e144200.

15. Fatemeh Hemmati, Neda Valian, Abolhassan Ahmadiani, Zahurin Mohamed, Raymond Azman Ali, Norlinah Mohamed Ibrahim, Seyed Farshad Hosseini Shirazi. "Insulin and toll-like receptor 4 interaction in the rat model of Parkinson's disease induced by lipopolysaccharide". *Physiology and Pharmacology* (2024): 28; 128-140.
16. Mohsen Farhangian, Forouzan Azarafrouz, Neda Valian, Leila Dargahi. "The role of interferon beta in neurological diseases and its potential therapeutic relevance". *European Journal of Pharmacology* (2024): 981; 176882.
17. Pooya Baghaee, Mohammad Yoonesi, Delaram Eslimi Esfahani, Elmira Beirami, Leila Dargahi, Fatemeh Sadat Rashidi, Neda Valian. "Yttrium oxide nanoparticles alleviate cognitive deficits, neuroinflammation, and mitochondrial biogenesis impairment induced by streptozotocin". *Neuroscience Letters* (2024): 837; 137895.
18. Nahid Sarahian, Fariba Khodagholi, Neda Valian, Abolhassan Ahmadiani. "Interplay of MeCP2/REST/Synaptophysin-BDNF and intranasal oxytocin influence on A β -induced memory and cognitive impairments". *Behavioural Brain Research* (2025): 476; 115235.
19. Neda Valian, Leila Dargahi, Mansooreh Heravi, Abolhassan Ahmadiani. "Insulin and SB-216763, a GSK3 β inhibitor, reduce methamphetamine toxicity in human neuroblastoma and rat primary midbrain cells". *Physiology and Pharmacology* (2025).
20. Maedeh Tavakoli, Negin Mohammadi, Mohsen Barzegar, Neda Valian, Narges Hosseinmardi, Mohammad Ali Sahari, Sabereh Saremi. "Therapeutic Potential of Pistachio Green Hull Extract in Treating Parkinson's Disease: A Comprehensive In Vivo and In Vitro Investigation". *Food Science & Nutrition* (2025): 13: e70204.
21. Arezoo Karimzadeh, Samaneh Nabavifard, Elmira Beirami, Neda Valian. "Intranasal insulin administration improves anxiety- and depressive-like behaviors in PTSD-exposed rats". *Journal of Psychiatric Research* (2025): 190; 84-91.

Ongoing projects:

1. Evaluating the effect of intranasal insulin administration on motor and non-motor symptoms in Parkinson's disease patients; a randomized double-blinded placebo-controlled clinical trial
2. Evaluating the effect of mirtazapine on anxiety in Parkinson's disease patients; a randomized double-blinded placebo-controlled clinical trial
3. Effect of Donepezil on freezing of gait in Parkinson's disease: an fMRI study
4. Evaluating the effect of *Ficus carica* Linn. fruit extract on learning and memory impairments in an animal model of Alzheimer's disease
5. Evaluating the effect of intranasal insulin administration on long-noncoding RNAs expression in animal model of Parkinson's disease

6. Evaluation of the therapeutic effect of intranasal administration of interferon-beta in an animal model of Parkinson's disease
7. Evaluating the effect of interferon beta on long-noncoding RNAs related to Parkinson's disease in 6-hydroxy dopamine model
8. Evaluating the effects of oral administration of magic mushroom on insulin signaling pathway in the brain of male rat

Presentations:

1. The 19th Iranian Congress of Physiology and Pharmacology, 2009, Tehran, Iran. "The effect of *Hypericum perforatum* L. aqueous extract on pentylenetetrazol-induced kindling in the rat" (poster)
2. The 1st International and 22nd Iranian Congress of Physiology and Pharmacology, 2015, Kashan, Iran. "Repeated administration of different methamphetamine doses has no effect on motor performance of rat" (poster)
3. The 5th Congress of Basic and Clinical Neuroscience, December 2016, Tehran. "The effect of repeated escalating methamphetamine regimen on tyrosine hydroxylase, alpha-synuclein and neuroinflammation in substantia nigra and striatum" (poster)
4. The 13th International Conference on Alzheimer's & Parkinson's, 2017, Vienna, Austria. Abstract No: ADPD7-0543 "Increasing methamphetamine doses up-regulated genes involved in mitochondrial biogenesis and GDNF expression in substantia nigra" (poster)
5. The 7th Congress of Basic and Clinical Neuroscience, December 2018, Tehran. "Effect of methamphetamine on mitochondrial biogenesis and alpha-synuclein in rat primary dopaminergic neurons" (poster)
6. The 23rd National and 11th International Iranian Biology Congress. September 2024, Tehran. "Investigating the effect of sleep deprivation on motor functions in male Wistar rats" (poster)
7. The 23rd National and 11th International Iranian Biology Congress. September 2024, Tehran. "Investigating the effect of sleep deprivation on motor functions in male Wistar rats" (poster)
8. National and 11th International Iranian Biology Congress. September 2024, Tehran. "The effect of sleep deprivation on neurogenesis and synaptic plasticity in rat hippocampus" (oral)
9. The 23rd National and 11th International Iranian Biology Congress. September 2024, Tehran. "Investigating the effect of sleep deprivation on anxiety in male Wistar rats" (poster)
10. The 23rd National and 11th International Iranian Biology Congress. September 2024, Tehran. "Effect of Magic Mushroom (*Psilocybe Azurescens*) on passive avoidance memory and working memory in rats" (poster)

Professional qualifications:

1. The 1st Tehran International Congress of Basic and Clinical Neuroscience, 2012 (Student Committee)
2. The 2nd Tehran International Congress of Basic and Clinical Neuroscience, 2013 (Student Committee)
3. Brain Dissection Workshop, Iran University of Medical Sciences, 2013 (Participation)

4. Methods of Search in Scientific Websites, Shahid Beheshti University of Medical Sciences, 2013 (Participation)
5. The 1st Tehran Cell Death Symposium, 2014 (Executive Committee)
6. The 4th Tehran IBRO School of Neuroscience, 2014 (Taught in Behavioral animal lab)
7. The 1st Tehran Neuroscience Summer School, 2015 (Taught in Histological lab)
8. The 5th Tehran IBRO School of Neuroscience, 2016 (Taught in Behavioral animal lab & Executive Committee)
9. The 6th Tehran IBRO School of Neuroscience, 2017 (Taught in Molecular lab & Cell culture lab)
10. Author Workshop by Elsevier; Introduction to scholarly publishing, Shahid Beheshti University of Medical Sciences, Tehran, 2018 (Participation)
11. Good Clinical Practice in Clinical Trials, Iran University of Medical Sciences, Tehran, 2019 (Participation)
12. E-Teacher, Shahid Beheshti University of Medical Sciences, 2020 (Participation)
13. Bioinformatics, Tehran University of Medical Sciences, 2021 (Participation)
14. Ethics in Researches- Plagiarism, Sport Sciences Research Institute of Iran, 2021 (Participation)
15. Mendeley Data, Birjand University of Medical Sciences, 2021 (Participation)
16. Scopus, ScienceDirect and ScienceDirect Topics, Birjand University of Medical Sciences, 2021 (Participation)
17. Ethics in Researches- Publishing, Birjand University of Medical Sciences, 2021 (Participation)
18. Bioinformatics, Elites Foundation, 2022 (Participation)
19. Basics of Systematic Bioinformatics, Medical Research Committee of Shiraz University of Medical Sciences, 2022 (Participation)
20. The Application of Neuroscience in Parkinson's Disease, Students' Neuroscience Association of Iran Elites Network, 2024 (Taught)
21. System Biology, Neuroscience Research Center of Shahid Beheshti University of Medical Sciences, 2024 (Participation)
22. Key Tips for Preparing Your Article for Publication in Reputable Journals, Shahid Beheshti University of Medical Sciences, 2025 (Participation)
23. Application of AI in Research, Urmia University of Medical Sciences, 2025 (Participation)
24. Application of AI in Teaching, Tehran University of Medical Sciences, 2025 (Participation)

Professional memberships:

- Member of cell death in Iran, since 2011.
- Iranian Society of Neuroscientists, since 2011.