

CV

Reza Soltani (Ph.D)

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- **Nationality:** Iranian
- **Date of Birth:** 15 March 1995
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EDUCATION

- Doctor of Philosophy (Ph.D) in **Anatomical Sciences**, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran (Jan 2021-Feb 2024).
Thesis title: Sertoli cell-conditioned medium restores spermatogenesis in mice induced by scrotal hyperthermia.
- Master of **Anatomical Sciences**, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran (Jan 2017-Sep 2020).
Thesis title: The effects of tramadol on the male rat's striatum: histopathological and electrophysiology studies.
- Bachelor of **Radiology**, School of paramedicine, Hamedan University of Medical Sciences, Hamedan, Iran. (Sep 2013-Jan 2017).

HONORS AND AWARDS

- The **Second Rank** of the Country in the **Entrance Exam of Anatomical Sciences** in 2020.
- A **talented student** of Shahid Beheshti University of Medical Sciences (2021-2024).
- The **Second Rank** of the Oral Presentation at the Congress of Neuroscience 2023 (**Ahwazi Young Investigator Award**).
- The **Best Poster Award** at the Covid Achievements Congress 2024.

AREAS OF EXPERTISE

- Processes of fixing and dissecting the cadaver
- Animal models (field of neuroscience and reproductive system)
- Behavioral tests in the field of neuroscience
- Stereotaxy
- General staining
- Cell culture
- Sperm analysis
- Stereology
- IHC
- Anthropometry

RESEARCH INTERESTS

- Medical Imaging
- Antropology
- Reproductive system
- Infertility
- Addiction
- PNS

TEACHING INTERESTS

- Anatomy (Gross Anatomy, Radiologic Anatomy, Surface Anatomy)
- Histology
- Embryology

PUBLICATIONS

1. Moeinian N, Fathabadi FF, Norouzian M, Abbaszadeh HA, Nazarian H, Afshar A, **Soltani R**, Aghajanpour F, Aliaghaei A, Farahani RM, Abdollahifar MA. The effects of vitamin C and vitamin B12 on improving spermatogenesis in mice subjected to long-term scrotal heat stress Alternative title (right-running-head): Vitamin C and vitamin B12 on improving spermatogenesis. clinical and experimental reproductive medicine.

2. Afshar A, Aghajanpour F, **Soltani R**, Kasmaie FM, Masteri-farahani R, Abbaszadeh H, Nourozian M, Amini A. Asymmetric bilateral radial artery variations with embryological view: A case report. Accepted.
3. Aghajanpour F, **Soltani R**, Afshar A, Abbaszadeh HA, Fathabadi FF, Moeinian N, Aliaghaei A, Nejad AD, Farahani RM, Norouzian M, Abdollahifar MA. Sertoli cell-conditioned medium can improve blood-testis-barrier function and spermatogenesis in azoospermia mice induced by scrotal hyperthermia: An experimental study. *International Journal of Reproductive BioMedicine (IJRM)*. 2024 Feb 18;17-30.
4. Tabatabaee F, Darabi S, **Soltani R**, Aghajanpour F, Afshar A, Abbaszadeh HA, Rajabi-Maham H. Therapeutic Effects of Exosome Therapy and Photobiomodulation Therapy on the Spermatogenesis Arrest in Male Mice After Scrotum Hyperthermia. *Journal of Lasers in Medical Sciences*. 2024;15.
5. Aryan A, Aghajanpour F, Dashtdar M, Hejazi F, Salimi M, Afshar A, **Soltani R**, Hasani AH, Aliaghaei A, Abbaszadeh HA, Mahmoodi H. Exploring Intercellular Dynamics: Ultra-Weak Biophoton Emission as a Novel Indicator of Altered Cell Functions and Disease in Oligospermia Mice. *Journal of Lasers in Medical Sciences*. 2023;14.
6. Balani MM, Novin MG, Alvani MS, Raei P, Afshar A, Aghajanpour F, **Soltani R**, Moghaddam MH, Fathi M, Vakili K, Salimi M. An elderberry-supplemented diet improves spermatogenesis in mice with busulfan-induced azoospermia. *Reproduction, Fertility and Development*. 2022 Sep 21;34(17):1078-88.
7. Ghaffari NM, Sabbagh AM, Mafi BM, Aliaghaei A, Afshar A, Aghajanpour F, **Soltani R**, Nazarian H, Salimi M, Seyed HA, Abdi S. Therapeutic Effects Of Edar Avone On Azoospermia: Free Radical Scavenging And Autophagy Modulation In Testicular Tissue Of M.
8. Khatmi A, Boroujeni ME, Ezi S, Mirbehbahani SH, Aghajanpour F, **Soltani R**, Meftahi GH, Abdollahifar MA, Moghaddam MH, Toreyhi H, Khodaghali F. Combined molecular, structural and memory data unravel the destructive effect of tramadol on hippocampus. *Neuroscience Letters*. 2022 Feb 6;771:136418.
9. Ezi S, Boroujeni ME, Khatmi A, Vakili K, Fathi M, Abdollahifar MA, Aghajanpour F, **Soltani R**, Mirbehbahani SH, Khodaghali F, Aliaghaei A. Chronic exposure to tramadol induces neurodegeneration in the cerebellum of adult male rats. *Neurotoxicity research*. 2021 Aug;39:1134-47.
10. Aghajanpour F, **Soltani R**, Afshar A, Abbaszadeh HA, Mastery Farahani R, Nourozian M. Variation in median nerve nutritional artery at the distal end of forearm: case report. *Tehran University of Medical Sciences Journal*. 2021 Jul 10;79(4):319-23.
11. Farhadi M, Boroujeni ME, Kamrava SK, Bagher Z, Tehrani AM, Aghajanpour F, Ezi S, Soltani R, Khatmi A, Alizadeh R. Implantation of human olfactory ecto-mesenchymal stem cells restores

- locomotion in a rat model of Parkinson's disease. *Journal of Chemical Neuroanatomy*. 2021 Jul 1;114:101961.
12. Bayat AH, Saeidikhoo S, Ebrahimi V, Mesgar S, Joneidi M, **Soltani R**, Aghajanpour F, Mohammadzadeh I, Torabi A, Abdollahifar MA, Bagher Z. Bilateral striatal transplantation of human olfactory stem cells ameliorates motor function, prevents necroptosis-induced cell death and improves striatal volume in the rat model of Huntington's disease. *Journal of Chemical Neuroanatomy*. 2021 Mar 1;112:101903.
 13. **Soltani R**, Aghajanpour F, Norozian M, Hasanzadeh G, Abbaszadeh H, FADAEI FF. Variation in the forearm extensor muscle: case report.
 14. **Soltani R**, Boroujeni ME, Aghajanpour F, Khatmi A, Ezi S, Mirbehbahani SH, Abdollahifar MA, Akhlaghpasand M, Aliaghaei A, Heidari MH. Tramadol exposure upregulated apoptosis, inflammation and autophagy in PC12 cells and rat's striatum: An in vitro-in vivo approach. *Journal of Chemical Neuroanatomy*. 2020 Nov 1;109:101820.
 15. Aghajanpour F, Boroujeni ME, Jahanian A, **Soltani R**, Ezi S, Khatmi A, Abdollahifar MA, Mirbehbahani SH, Toreyhi H, Aliaghaei A, Amini A. Tramadol: a potential neurotoxic agent affecting prefrontal cortices in adult male rats and PC-12 cell line. *Neurotoxicity research*. 2020 Aug;38:385-97.
 16. Saeidikhoo S, Ezi S, Khatmi A, Aghajanpour F, **Soltani R**, Abdollahifar MA, Jahanian A, Aliaghaei A. Effect of Sertoli cell transplantation on reducing neuroinflammation-induced necroptosis and improving motor coordination in the rat model of cerebellar ataxia induced by 3-acetylpyridine. *Journal of Molecular Neuroscience*. 2020 Jul;70:1153-63.
 17. Akhlaghpasand M, Tizro M, Raoofi A, Meymand AZ, Farhadieh M, Khodaghali F, Khatmi A, **Soltani R**, Hoseini Y, Jahanian A, Boroujeni ME. Grafted human chorionic stem cells restore motor function and preclude cerebellar neurodegeneration in rat model of cerebellar ataxia. *Metabolic Brain Disease*. 2020 Apr;35:615-25.
 18. **Soltani R**, Aghajanpour F, Torabi A, Afshar A, Kolivand M, Dehghani nejad A, Movassaghi M, Mohammadzadeh I, Kaedi H, Norouzian M. Investigating the volume of hippocampus and corpus callosum in Iranian multiple sclerosis patients using magnetic resonance imaging: a retrospective study. *European journal of anatomy*.
 19. **Soltani R**, Aghajanpour F, Afshar A, Abbaszadeh HA, Norouzian M, *Moeinian N*, Aliaghaei A, Dehghani Nejad A, Fadaei Fathabadi F, Abdollahifar MA. Sertoli cell-conditioned medium restores spermatogenesis in azoospermia mice induced by scrotal hyperthermia. *Physiology and Pharmacology*. Accepted.
 20. Afshar A; Nazarian H; Fadaefathabadi F; Aghajanpour F; **Soltani R**; Abdollahifar MA; Hassanzadeh GR; Norozian M. Maternal exposure to Phenanthrene can induce apoptosis in testicular tissue and Sertoli cell dysfunction in F1 adult male mice: a histology and molecular study. *clinical and experimental reproductive medicine*.

21. Afshar A, Aghajanpour F, **Soltani R**, Vafaei-Nezhad S, Ezi S, Azad N, Aliaghaei A, Fridoni MJ, Tavakoli N, Abdollahifar MA, Heidari MH. Upregulation of heat shock proteins 70 and 90 induced by transient scrotal hyperthermia in mice. *Physiology and Pharmacology*.
22. **Reza Soltani**, Hojjat-Allah Abbaszadeh, Hamid Nazarian, Faraj Tabeie, Hasan Akbari, Ibrahim Mohammadzadeh, Azar Afshar, Fakhroddin Aghajanpour, Fatemeh Fadaei Fathabadi, Mohsen Norouzian. The Impact of Photobiomodulation Therapy on Enhancing Spermatogenesis and Blood-Testis Barrier Integrity in Adult Male Mice Subjected to Scrotal Hyperthermia. *journal of lasers in medical sciences*.
23. Fakhroddin Aghajanpour, Hojjat-Allah Abbaszadeh, Hamid Nazarian, Azar Afshar, **Reza Soltani**, Homayoon Bana Derakhshan, Fatemeh Fadaei Fathabadi, Mohsen Norouzian. Photobiomodulation improves testicular tissue and sperm parameters in adult mice exposed to scrotal hyperthermia in the prepubertal phase. *journal of lasers in medical sciences*.
24. Atefeh Shirazi tehrani, Hojjat-Allah Abbaszadeh, Aliaghaei *Abbas*, Hamid Nazarian, Azar Afshar, Fakhroddin Aghajanpour, **Reza Soltani**, Pouria Raei, Fatemeh Fadaei Fathabadi, Mohammad-Amin Abdollahifar. Conditioned medium of Wharton's jelly-derived mesenchymal stem cells restores spermatogenesis in scrotal hyperthermia-induced azoospermia. *Physiology and Pharmacology*. Accepted.
25. Azam Sabbaghi, Parsa Ghorbanifaraz, Samira Ezi, Saeed Vafaei-Nezhad, Gholam-Reza Mahmoudiasl, Abbas Aliaghaei, Amirhosein Hasani, **Reza Soltani**, Mohammad Hossein Heidari, Mohammad-Amin Abdollahifar. SARS-CoV-2 induced inflammation of testicular tissue mediated cytokine storm and micro-RNAs involved in apoptosis. *Physiology and Pharmacology*. Accepted.
26. **Soltani R**, Aghajanpour F, Shahrbafe MA, Pouriran R, Fadaei F, Abbaszadeh HA, Farahani RM. Investigating neurocranial sizes and cephalic indices of male newborns in North of Tehran using millimetric cephalometry. *School of Medicine Students' Journal*. 2019;1(1):3-6.
27. **Soltani R**, Aghajanpour F, Afshar A, Abbaszadeh H, Mastery Farahani R, Norozian M. A case report of a left testicular artery variation. *medical journal of mashhad university of medical sciences*. 2021 Oct 23;64(4):3884-8
28. **Soltani R**, Aghajanpour F, Afshar A, Torabi A, Mohammadzadeh E, Farahani RM, Norouzian M. Evaluation of the proximal ulna dorsal angulation part and its related factors in radiology images of patients referred to Tehran Hospital in 2018. *Res Med*. 2020 Oct 1;44(4):549-3.

29. **Soltani R**, Aghajanpour F, Fard HA, Afshar A, Arab N, Farahani RM, Norouzian M. Morphometric Parameters of the Mandibular Ramus an Indicator for Sex Determination: A Radiographic Study. Research in Medicine: Journal of Research in Medical Sciences. 2021 Jun 1;45(2).
30. Aghajanpour F, **Soltani R**, Safiloo S, Afshar A, Torabi A, Norouzian M, Farahani RM. Measurement of the Distal End Radius Morphometric Pa-rameters using Radiography in Iranian Population. Research in Medicine: Journal of Research in Medical Sciences. 2021 Jan 1;45(1).
31. Aghajanpour F, **Soltani R**, Nourozian M, Fadaei F, Abbaszadeh HA, Farahani RM. Investigating the normal dimensions and sizes of human eye orbit by MRI in Labafinejad Hospital patients in 2016 in Tehran. School of Medicine Students' Journal.;1(1):13-8.
32. Aghajanpour F, **Soltani R**, Afshar A, Farahan RM, Abbaszadeh HA, Norouzian M. A case report of variation in the left renal arterial pattern. Research in Medicine: Journal of Research in Medical Sciences. 2021 Jan 1;45(1).
33. Mohammadzadeh I, Niroomand B, Shahnazian Z, Ghanbarnia R, Nouri Z, Tajerian A, Choubineh T, Najafi M, Mohammadzadeh SH, Soltani R, Keshtkar A, Mousavinejad SA. Machine learning for predicting poor outcomes in aneurysmal subarachnoid hemorrhage: A systematic review and meta-analysis involving 8,445 participants. Clinical Neurology and Neurosurgery. 2024 Dec 5.

PROJECTS

1. Morphometric evaluation of proximal femur and its relationship with Body Mass Index (BMI) and bone densitometry in patients with unilateral total hip arthroplasty referred to Taleghani Hospital in Tehran in 2024: **Project manager.**
2. The effect of low power pulsed laser in inducing antioxidant and anti-inflammatory activity in testicular tissue of adult male mice receiving cisplatin: **Project manager.**
3. Investigating the volume of the hippocampus and corpus callosum in the male patients with multiple sclerosis referred to Sina Hospital in Tehran in 2021: **Project manager.**
4. Investigating the volume and relationship between calcification of intracranial arteries in patients with acute ischemic stroke referred to Tajrish Shohada Hospital in 2023: **Project manager.**
5. Investigating the therapeutic effect of black seed in inducing antioxidant and anti-inflammatory activity in the testicular tissue of adult male mice following transient scrotal hyperthermia: **Project manager.**
6. The effects of tramadol on the hippocampus of adult male rats: genomic sequencing and pathway analysis, histopathological study and behavioral study: **Project collaborator.**

7. The effects of methylphenidate administration on neurotrophic factors and spatial memory of the hippocampus of adult male rats: **Project collaborator.**
8. The evaluation of tramadol neurotoxicity administration on gene expression profile and study of morphological changes of cerebellar cortex of adult male rats: **Project collaborator.**
9. The effect of tramadol on the expression of inflammatory factors and neurodevelopment in the prefrontal cortex of adult male rats: **Project collaborator.**
10. The effects of transient scrotal hyperthermia in the induction of autophagy, necroptosis, ferroptosis and pyroptosis signaling pathways in the testicular tissue of prepubertal male mice: **Project collaborator.**
11. The effects of transient scrotal hyperthermia on spermatogenesis in the testicular tissue of prepubertal male mice: **Project collaborator.**
12. The effects of low power laser on the process of spermatogenesis and testicular tissue in prepubertal male mice following scrotal hyperthermia: **Project collaborator.**
13. The effects of transient scrotal hyperthermia on the expression levels of HSP70 and HSP90 genes in the testicular tissue of prepubertal male mice: **Project collaborator.**
14. The effects of low-power laser on spermatogenesis and blood testis barrier structure in adult male mice following induction of scrotal hyperthermia: **Project collaborator.**
15. The effects of Sertoli cell-derived conditioned medium on the blood-testis barrier structure in adult male mice following the induction of scrotal hyperthermia: **Project collaborator.**
16. The effect of Sertoli cell-derived conditioned medium on the process of spermatogenesis in the testicular tissue of adult male mice following scrotal hyperthermia: **Project collaborator.**
17. The effects of low power laser on the process of spermatogenesis and testicular tissue of adult male mice receiving phenanthrene: **Project collaborator.**
18. A case report of a rare bilateral variation in the brachial artery: case report: **Project collaborator.**
19. The effect of gestational exposure to Phenethrene on spermatogenesis in F1 adult male mice: **Project collaborator.**
20. Investigation of simultaneous effects of low-level pulsed laser therapy and Sertoli cell-derived conditioned medium on spermatogenesis and testicular tissue in adult male mice after scrotal hyperthermia: **Project collaborator.**
21. The effects of honey on germ cells and testicular tissue parameters of adult male mice receiving phenanthrene: **Project collaborator.**

22. A case report of bilateral glioma tumor of the thalamus: Case report: **Project collaborator.**
23. The effects of vitamin C on inflammatory and oxidative stress factors in the testis of adult male mice following receiving phenanthrene: **Project collaborator.**
24. The effects of low-level laser therapy on structure of testis tissue and oxidative stress biomarkers in adult male rats following to testicular torsion: **Project collaborator.**

PRESENTATIONS / ABSTRACTS

1. Tramadol exposure upregulated apoptosis, inflammation and autophagy in PC12 cells and rat's striatum: An in vitro-in vivo approach. **Soltani R**, Aliaghaei A. 11th Basic and Clinical Neuroscience Congress. **Oral Presentation.**
2. Dopaminergic induction of human adipose-derived mesenchymal stem cells is accompanied by transcriptional activation of autophagy. **Soltani R**, Aliaghaei A. 7th Basic and Clinical Neuroscience Congress. **Poster Presentation.**
3. The effect of early exposure to thimerosal on cerebellar tissue structure in rats. **Soltani R**. Tabriz Second Annual Student Congress and the Twenty-second annual congress of the Student Research Committee of Mazandaran University of Medical Sciences. **Poster Presentation.**
4. Investigating neurocranial sizes and cephalic indices of male newborns in North of Tehran using millimetric cephalometry. **Soltani R**, Farahani RM. The 13th Congress of Anatomical Sciences. **Poster Presentation.**
5. Investigating the normal dimensions and sizes of human eye orbit by MRI in Labafinejad Hospital patients in 2016 in Tehran. **Soltani R**, Farahani RM. The 13th Congress of Anatomical Sciences. **Poster Presentation.**
6. SARS-CoV-2 induced inflammation of testicular tissue mediated cytokine storm and micro-RNAs involved in apoptosis. **Soltani R**, Abdollahifar MA. Covid Achievements Congress. **Poster Presentation.**
7. Investigating the volume of hippocampus and corpus callosum in Iranian multiple sclerosis patients using magnetic resonance imaging: a retrospective study. **Soltani R**, Norouzian M. The 14th Congress of Anatomical Sciences. **Poster Presentation.**
8. Sertoli cell-conditioned medium restores spermatogenesis in mice induced by scrotal hyperthermia. **Soltani R**, Abdollahifar MA. The 14th Congress of Anatomical Sciences. **Poster Presentation.**
9. An elderberry-supplemented diet improves spermatogenesis in mice with busulfan-induced azoospermia. **Soltani R**, Abdollahifar MA. The 8th International Congress on BioMedicine. **Poster Presentation.**

BOOKS

1. Application of Learning Technologies in Anatomical Sciences Education, Ebnesina Publications, 2024.
2. Neurosciences, Mashhad medad meshki Publications, 2021.

WORKSHOPS

1. A workshop on “*The application of medical imaging methods in anatomical education*”. Iran University of Medical Sciences, Tehran, Iran.
2. A workshop on “*Laser application in medical sciences*”. Laser application in medical sciences research center, Shahid Beheshti University of Medical Sciences, Tehran, Iran.
3. A workshop on “*Concept map drawing in articles*”. Mashhad University of Medical Sciences, Mashhad, Iran.
4. A workshop on “*Article writing*” . Elsevier.
5. A workshop on “*Graphical abstract design with the Photoshop and Illustrator software*”. Nano Technology Education Foundation, Tehran, Iran

ACADEMIC TEACHING EXPERIENCE

○ Gross Anatomy

1. Musculoskeletal system
2. Head and Neck
3. Respiratory system
4. Gastrointestinal system
5. Urinary system
6. Cardiovascular system

SOFTWARE SKILLS

- Office
- END NOTE
- SPSS
- Graph-pad Prism
- 3d-Slicer
- ITK-Snap
- Weasis
- Photoshop
- Illustrator

PROFESSIONAL AFFILIATIONS AND MEMBERSHIPS

- Member of the "Iranian Anatomical Sciences Association"
- Member of the "The second Anatomical Science Education Festival"
- Reviewer of the "World Journal of Stem Cells"
- Academic advisor of the "Sana Institute" 2021-2024.

ENGLISH PROFICIENCY

- MSRT

| Listening | Structure and Written | Reading | Total Score |
|------------------|------------------------------|----------------|--------------------|
| 23/30 | 23/30 | 18/40 | 64/100 |