



Behzad Garmabi

Work permit: Iranian

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CONTACT

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WORK EXPERIENCE

● **Shahroud University Of Medical Science** Shahroud, Iran

Address Floor 2, No 317, medical faculty, Sharoud University of Medical Science, Haft tir Sq, University Blv, 3613676541, Shahroud, Iran

faculty member

1 Nov 2016 – Current

I've been the Director of the Neuroscience Department since 2021 and also served as the University's Vice President for Research and Technology from 2023 to 2024.

RESEARCH STATEMENT SUMMARY

Research Statement Summary

Accomplished Neuroscientist and Research Center Director with nearly a decade of experience in circadian biology. Seeking a Postdoctoral Fellowship (**starting Oct 2026**) to leverage expertise in **SCN electrophysiology, molecular clock gene profiling, and translational chronobiology**. Proven track record in establishing research lines and supervising complex Ph.D. projects, with a primary goal of advancing the understanding of sleep-circadian mechanisms in health and disease.

CURRENT APPOINTMENT & LEADERSHIP

Current Appointment & Leadership

Program Founding & Academic Leadership: Established and launched the university's Ph.D. program in Neuroscience (2020); currently serve as the Program Coordinator, overseeing the admission and curriculum of Ph.D. candidates.

Research Pioneering: Secured official licensure from the Ministry of Health to found the Neuroscience Research Center, distinguished as the first research hub in Iran specifically focused on Chronobiology.

Extensive Mentorship: Serving as the Principal Supervisor for 6 Ph.D. dissertations and 27 Medical Doctorate (MD) theses, all centered on Circadian Rhythms and Chronobiology.

Strategic Administration: Held the position of Deputy of Research for 1.5 years, managing institutional research budgets and strategic planning.

Scientific Innovation: Developed proprietary circadian rhythm assessment hardware and conducted advanced data analytics using ACTOJ software.

Professional Recognition: Founder and invited Chair of the Annual Circadian Rhythm Panel at the International Basic and Clinical Neuroscience Congress, delivering keynote presentations on chronobiological advancements

EDUCATION AND TRAINING

● **21 JAN 2011 – 5 SEP 2016** Tehran, Iran

Neuroscience Tehran University of Medical Science

Website <https://en.tums.ac.ir/en> | **Thesis** Effect of circadian rhythm disruption on morphine preference and clock gene expression in rats

● **23 SEP 2007 – 11 SEP 2010** Tehran, Iran

Medical Physiology Tarbiat Modares University

Website <https://en.modares.ac.ir/> | **Thesis** Thesis: Electrophysiology of hippocampal neurons in seizure model using stereotaxic implantation and field potential recording

● **23 SEP 2003 – 6 SEP 2007** rasht, Iran

Biology University of Guilan

Website <https://guilan.ac.ir/> | **Field of study** Biology , Biological and related sciences not further defined

RESEARCH INTERESTS

Research Interests

Systems Neuroscience: Electrophysiological properties of the Suprachiasmatic Nucleus (SCN), mechanisms of circadian entrainment, and the neurobiology of sleep deprivation.

Molecular & Cellular Chronobiology: Regulation of clock gene expressions, utilizing Real-Time PCR and ELISA-based protein quantification.

Behavioral Phenotyping: Designing and executing animal behavior assays and chronobiological paradigms.

Translational Human Studies: Clinical assessment of chronotypes, validation of the Munich Chronotype Questionnaire (MCTQ), and human circadian rhythm modeling

PUBLICATIONS

● **Effect of circadian rhythm disturbance on morphine preference and addiction in male rats: involvement of period genes and dopamine D1 receptor**

● **Validity of the Persian version of the Munich ChronoType Questionnaire (MCTQIR)**

● **Circadian rhythm influences naloxone induced morphine withdrawal and neuronal activity of lateral paraventricular nucleus**

● **Impact of Circadian Disruption on CART mRNA Expression in Nucleus Accumbens: Insights from Constant Light Exposure and Wheel-Running Activity in Rats**

● **Circadian rhythms and human studies: methodology, challenges, and future directions in research**

● **Effect of prolonged exposure to different lighting conditions on MPTP-induced motor dysfunction and cognitive performance in male rats**

● **Basic research on circadian disruption using animal and human organoid models: a review**

● **Impact of Circadian Rhythm Disturbance and Chronotype on Medical Students' Mental State**

● **Reliability and validity of the Persian version of the Children's Chronotype Questionnaire in school and preschool-aged children (CCTQIR)**

● **Impact of circadian misalignment based on mediating role of chronotype on impulsivity, depression, anxiety, stress, addiction potential, and boredom: a randomized clinical ...**

● **The role of sleep problems and social jetlag with addiction potential: a cross-sectional study**

● **Circadian fluctuation in curiosity is a risk factor for morphine preference**

● **A review on the relationship between circadian rhythms and opioid addiction**

● **Paying attention to circadian rhythms in the treatment of COVID-19**

PROJECTS

As Principal Investigator or Lead Supervisor

I. Circadian Biology & Molecular Neuroscience

- **Clock Gene Oscillations:** Investigation of the 24-hour expression patterns of core clock genes (**PER2, BMAL1, REV-ERB α , ARNTL2**) in the rat hippocampus and peripheral lymphocytes.
- **Environment-Induced Disruption:** Analyzing the impact of **constant light exposure** on hippocampal REV-ERB α expression and its subsequent effects on cognitive function.
- **Nitric Oxide Dynamics:** Evaluating the role of **Nitric Oxide** in the Suprachiasmatic Nucleus (SCN) and its time-of-day-dependent effects on spatial memory in the Morris Water Maze.

II. Addiction & Reward Systems

- **Circadian-Addiction Interface:** Studying the influence of the biological clock on **Morphine-seeking behavior** and preference using the Conditioned Place Preference (CPP) paradigm.
- **Impulsivity & Reward:** Assessing the correlation between circadian rhythm disruption, impulsivity, and reward-processing systems through **Human fMRI studies**.

III. Neuropharmacology & Systemic Health

- **Circadian Medicine:** Investigating the consequences of circadian rhythm disturbances on **renal function** in both healthy subjects and models of Acute Kidney Injury (AKI).

IV. Translational & Clinical Neuroscience

- **Cognitive Neuroimaging:** Utilizing **fMRI** to map the effects of sleep and circadian disruption on human cognitive performance and neural connectivity.
- **Psychometric Validation:** Cross-cultural adaptation and validation of the **Munich Chronotype Questionnaire (MCTQ)** for the Iranian population.

TECHNICAL PROFICIENCIES

Technical Proficiencies

Electrophysiology & Surgery: Stereotaxic neurosurgery, In-vivo/In-vitro field potential recording, and Patch-clamp electrophysiology.

Molecular Biology: RNA extraction and Real-Time PCR (qPCR), Protein quantification via ELISA.

Behavioral Neuroscience: Design and execution of a full spectrum of rodent behavioral assays and circadian rhythm-specific phenotyping.

Data Analytics & Engineering: Specialized circadian data analysis using ACTOJ software, behavioral data processing, and development of custom circadian assessment hardware

LANGUAGE SKILLS

MOTHER TONGUE(S): Persian

Other language(s):

English

Listening B1

Spoken production B1

Reading B1

Spoken interaction B1

Writing C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

REFERENCES

References

Mohammad-Reza Zarrindast, Ph.D. *Professor of Neuroscience and Pharmacology* Department of Pharmacology, School of Medicine, Tehran University of Medical Sciences (TUMS). Iranian National Center for Addiction Studies (INCAS). **Email:** zarinmr@ams.ac.ir

Seyed Javad Mirnajafi-Zadeh, Ph.D. *Professor of Physiology and Neuroscience* Department of Physiology, Faculty of Medical Sciences, Tarbiat Modares University (TMU). **Email:** mirnajaf@modares.ac.ir

Mohammad-Taghi Joghataei, Ph.D. *Professor of Neuroscience and Neuroanatomy* Head of the Cellular and Molecular Research Center, Iran University of Medical Sciences (IUMS). President of the Iranian Neuroscience Society (INSS). **Email:** mt.joghataei@yahoo.com