# Sajjad Salari, Ph.D.

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## Research Focus

## My research has primarily centered on the physiology of potassium channels, with a particular emphasis on their functions within intracellular organelles such as the endoplasmic reticulum and mitochondria. I have explored their role in the development of metabolic disorders, including diabetes, by linking ion channel physiology to metabolic dysfunction in an effort to uncover potential therapeutic targets.

## During my postdoctoral tenure at Linköping University, I expanded my expertise in cardiac ion channel electrophysiology and its modulation. Collaborating with Professor Fredrik Elinder’s team, I contributed to drug assessment studies and identified novel lipophilic compounds capable of modulating voltage-gated ion channels, employing the HL-1 cell line for experimental investigations.

## Professional Experience

Associate Professor, Department of Physiology
Ilam University of Medical Sciences, Ilam, Iran | 2020–Present
- Lead research on ion channels, pain mechanisms, and neurodegeneration.
- Supervise research projects in neurophysiology and pain.

Head of University Laboratories
Ilam University of Medical Sciences, Ilam, Iran | 2020–Present
- Oversee laboratory operations, equipment optimization, and research facilitation.

Group Director, Physiology Department
Ilam University of Medical Sciences, Ilam, Iran | 2018–2020
- Managed academic programs, teaching schedules, and faculty collaboration.

Assistant Professor, Department of Physiology
Ilam University of Medical Sciences, Ilam, Iran | 2016–2020
- Conducted research on neurophysiology and pain mechanisms.

Postdoctoral Research Fellow, Heart Electrophysiology
Linköping University, Sweden | 2013–2015
- Specialized in cardiac ion channel electrophysiology and modulation.

## Education

Ph.D. in Physiology
Shahid Beheshti University of Medical Sciences, Tehran, Iran | 2005–2011

Thesis: Characterization of the Electro-pharmacological Properties of Single K+ Channels in the Rough Endoplasmic Reticulum of Rat Hepatocytes through Incorporation into a Bilayer Lipid Membrane.

M.Sc. in Physiology
Tehran University of Medical Sciences, Tehran, Iran | 2002–2005
Thesis: Analgesic effects of chromaffin cell extracts (histogranin and norepinephrine) on neuropathic pain in a sciatic chronic constriction injury (CCI) rat model.

## Technical Skills

- Electrophysiology: BLM and Patch-Clamp
-cell culture
- Animal Pain Models & Behavioral Testing
- Immunohistochemistry, Western Blot
- Research Design & Statistical Analysis
- Data Analysis using Python and Prism Software

## Publications

Salari, S., Maleki, M., & Bagheri, M. (2024). Effects of chronic pain following unilateral ureteral obstruction on hippocampal CA1 pyramidal neurons in male Wistar rats. Archives of Neuroscience, 11(3).
Fahanik-Babaei, J., Bagheri, M., & Salari, S. (2024). Characterization of a novel Ca2+-activated potassium channel in rat brain rough endoplasmic reticulum. Archives of Biochemistry and Biophysics, 759, 110105.
Bagheri, M., Ghaneialvar, H., Oshnokhah, M., & Salari, S. (2022). GFAP and neuron-specific enolase (NSE) in the serum of suicide attempters. Medical Journal of the Islamic Republic of Iran, 36.
Oshnokhah, M., Bagheri, M., Ghaneialvar, H., Haghani, K., Khorshidi, A., Shahbazi, A., & Salari, S. (2021). The role of oxidant-antioxidant status in suicide behavior in Kurdish ethnicity. Basic and Clinical Neuroscience, 12(5), 667–674.
Salari, S., Silverå Ejneby, M., Brask, J., & Elinder, F. (2018). Isopimaric acid—a multi-targeting ion channel modulator reducing excitability and arrhythmicity in a spontaneously beating mouse atrial cell line. Acta Physiologica (Oxford), 222(1).
Nasirinezhad, F., Hosseini, M., & Salari, S. (2015). Anti-allodynic efficacy of NMDA antagonist peptide and noradrenaline alone and in combination in rodent neuropathic pain model. The Korean Journal of Pain, 28(2), 96–104.
Ghasemi, M., Khodaei, N., Salari, S., Eliassi, A., & Saghiri, R. (2014). Gating behavior of endoplasmic reticulum potassium channels of rat hepatocytes in diabetes. Iranian Biomedical Journal, 18(3), 165–172.
Fahanik-Babaei, J., Eliassi, A., Jafari, A., Sauve, R., Salari, S., & Saghiri, R. (2011). Electro-pharmacological profile of a mitochondrial inner membrane big-potassium channel from rat brain. Biochimica et Biophysica Acta (BBA), 1808(1), 454–460.
Salari, S., Eliassi, A., & Saghiri, R. (2011). Evidence for a new potassium channel in the rough endoplasmic reticulum in rat hepatocytes. Physiology and Pharmacology, 15(1), 16–26.

## References

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