



## Mahsa Babaei

Visiting Instructor/Lecturer, Anesthesiology, Perioperative and Pain Medicine

 Curriculum Vitae available Online

### CONTACT INFORMATION

- **Institutional Email Address**

Mahsa Babaei

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### Bio

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#### BIO

Mahsa Babaei, MD is a Postdoctoral Research Fellow at Stanford University working at the intersection of brain imaging, clinical neurology, and artificial intelligence. Her research focuses on developing and applying large language models and advanced AI frameworks to integrate multimodal clinical data, including brain MRI, laboratory results, and phenotypic information into scalable, clinically useful knowledge for neurological and pain disorders.

Dr. Babaei has an extensive publication record in high-impact, peer-reviewed journals, including The Lancet, The Lancet Neurology, Allergy, PLoS One, Cephalalgia, Neurology, and the Journal of Headache and Pain, reflecting her contributions to large-scale international efforts through over 50 publications and several presentations at professional conferences worldwide.

Beyond her research, Dr. Babaei plays an active role in the scientific community as a peer reviewer for leading journals, including the American Journal of Neuroradiology, Psychology, Health & Medicine, International Journal of Behavioral Medicine, and Journal of Pharmacy Practice the evaluation and advancement of high-quality research. She has also served as a Guest Editor, contributing to the curation and direction of emerging scientific topics. Her scholarly output has garnered a growing body of citations, reflecting the interdisciplinary reach, methodological innovation, and translational relevance of her continued work.

Dr. Babaei maintains a strong commitment to clinical medicine and is deeply invested in bridging basic, translational, and computational research with real-world patient care. She is particularly interested in integrating imaging, clinical phenotyping, and laboratory data to advance precision diagnostics and individualized medical diagnostic and therapeutic strategies. Ultimately, she aims to translate these advances into routine clinical practice, improving patient outcomes through data-driven, precision medicine approaches in neurological disorders.

She is also deeply committed to patient-centered care and finds profound motivation in direct clinical practice, engaging with patients, guiding their care, and witnessing their improvements in health and quality of life. This close connection to patients continually informs and grounds her research. She is particularly driven to explore complex and underrecognized areas of medicine, with the goal of addressing unmet clinical needs and delivering more precise, individualized care that meaningfully improves patient outcomes.

## ACADEMIC APPOINTMENTS

- Visiting Instructor/Lecturer, Anesthesiology, Perioperative and Pain Medicine

## HONORS AND AWARDS

- Gifted and Talented Student, Ministry of Health, Tehran, Iran (2013 - present)
- Top 0.01 % rank in Iran National Universities Entrance Exam, Ministry of Education, Tehran, Iran (2013)
- Gifted Member, National Organization for Development of Exceptional Talents (2006 - 2013)
- Guest Editor, Skin Pathophysiology and Management, Journal of Personalized Medicine (IF: 3.4) (2023)
- Reviewer, American Journal of Neuroradiology (2025 - present)
- Reviewer, Journal of Psychology, Health & Medicine (2022 - present)
- Reviewer, International Journal of Behavioral Medicine (2022 - present)

## BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member in Training, American Society of Neuroradiology (ASNR) (2026 - present)
- Member in Training, Radiological Society of North America (RSNA) (2026 - present)
- Member in Training, American Headache Society (AHS) (2024 - present)
- Member in Training, American Neurological Association (ANA) (2022 - present)

## PROFESSIONAL EDUCATION

- Postdoctoral Research Fellow, Stanford University of Medical Sciences, Department of Neurology, CA, USA , Neuroradiology, AI (2022)
- Postdoctoral Research Fellow, Tehran University of Medical Sciences, Tehran, Iran , Neuroradiology (2021)
- Doctor of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran , Medicine (2021)

## COMMUNITY AND INTERNATIONAL WORK

- ERGs and Allies, Stanford Medicine

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

By integrating Imaging, clinical phenotyping, and small molecule lab data using AI and advanced statistics, our team is investigating clinical biomarkers for headache and facial pain disorders to improve individualized medicine for diagnostic and therapeutic purposes. Our main focus is to investigate brain imaging (both functional and structural MRI) and lab results in accordance with clinical findings to improve diagnosis and management of headache disorders.

## Publications

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### PUBLICATIONS

- **A Novel Approach to Migraine Classification to Improve Clinical Outcome**  
Babaei, M., Sridhar, J., Sanjanwala, B., De Souza, D., Cowan, R.  
SAGE PUBLICATIONS LTD.2025: 165-166
- **Prevalence and Characteristics of Temporomandibular Disorders in Migraine Patients Compared to Headache-Free Controls**  
Togha, M., Babaei, M., Heidari, S., Jafari, E., Dastanpour, S., Osouli, S., Martami, F.  
SAGE PUBLICATIONS LTD.2025: 414
- **Global burden of bacterial antimicrobial resistance 1990-2021: a systematic analysis with forecasts to 2050.** *Lancet (London, England)*

2024

- **Global, regional, and national burden of disorders affecting the nervous system, 1990-2021: a systematic analysis for the Global Burden of Disease Study 2021** *LANCET NEUROLOGY*  
Steinmetz, J. D., Seeher, K., Schiess, N., Nichols, E., Cao, B., Servili, C., Cavallera, V., Cousin, E., Hagins, H., Moberg, M. E., Mehlman, M. L., Abate, Y., Abbas, et al  
2024; 23 (4): 344-381
- **Botulinum toxin applications in the lower face and neck: A comprehensive review.** *Journal of cosmetic dermatology*  
Kassir, M., Babaei, M., Hasanzadeh, S., Rezaei Tavirani, M., Razzaghi, Z., Robati, R. M.  
2024; 23 (4): 1205-1216
- **Potential efficacy of caffeine ingestion on balance and mobility in patients with multiple sclerosis: Preliminary evidence from a single-arm pilot clinical trial.** *PloS one*  
Dadvar, A., Jameie, M., Azizmohammad Looha, M., Parsaei, M., Zeynali Bujani, M., Amanollahi, M., Babaei, M., Khosravi, A., Amirifard, H.  
2024; 19 (2): e0297235
- **Mortality and disability-adjusted life years in North Africa and Middle East attributed to kidney dysfunction: a systematic analysis for the Global Burden of Disease Study 2019.** *Clinical kidney journal*  
Rashidi, M. M., Saeedi Moghaddam, S., Azadnajafabad, S., Mohammadi, E., Khalaji, A., Malekpour, M. R., Keykhaei, M., Rezaei, N., Esfahani, Z., Rezaei, N., Mokdad, A. H., Murray, C. J., Naghavi, et al  
2024; 17 (1): sfad279
- **Good response to rectal diazepam in refractory cases of cyclic vomiting: A case-series and review of the literature.** *Clinical case reports*  
Togha, M., Babaei, M., Jameie, M.  
2023; 11 (11): e8109
- **Global, regional, and national burden of allergic disorders and their risk factors in 204 countries and territories, from 1990 to 2019: A systematic analysis for the Global Burden of Disease Study 2019.** *Allergy*  
Shin, Y. H., Hwang, J., Kwon, R., Lee, S. W., Kim, M. S., Shin, J. I., Yon, D. K.  
2023; 78 (8): 2232-2254
- **Device profile of Nerivio for the acute and preventive treatment of episodic or chronic migraine in patients 12 years and older** *EXPERT REVIEW OF MEDICAL DEVICES*  
Babaei, M., Rapoport, A. M.  
2023; 20 (6): 433-447
- **Reversible cerebral vasoconstriction syndrome (RCVS): an interesting case report** *J Headache Pain*  
Togha, M., Babaei, M., Ganji Ghelichi, P.  
2021
- **Mental Health and Attitude toward Substance use among Medical Students** *J. Psychology and Mental Health Care*  
Mohamadbeigi, A., Babaei, M.  
2021

## PRESENTATIONS

- A novel approach to migraine classification to improve clinical outcome. - 22nd International Headache Congress (6/18/2025)
- Understanding chronic migraine progression: A longitudinal study of clinical and brain network changes - 22nd International Headache Congress (7/18/2025)