

## Special Issue

# Pain Chronicity and Relief: From Molecular Basis to Rehabilitation

### Message from the Guest Editor

Many studies on animals and humans have demonstrated that physical exercise, especially aerobic exercise, is effective in relieving chronic pain. The phenomenon underlying exercise-induced pain relief is exercise-induced hypoalgesia (EIH), and its effects are well observed in both humans and animals. Studies with laboratory animals suggest that the EIH effect is produced by moderate-intensity running and voluntary running, and modifications in the dorsal horn of the spinal cord, activations of the descending pain suppression system, and the mesocorticolimbic system in the brain may be primary mechanisms in producing the EIH effect. Recent human studies suggest that central sensitization may play important roles in producing EIH effects. A recent, interesting topic in this field is the attempt to explore mechanisms for producing barrier factors to inhibit the EIH effect. The purpose of this Special Issue is to update on cellular and molecular mechanisms that induce the EIH effects, and its barrier factors underlining exercise therapy for chronic pain.

---

### Guest Editor

Prof. Dr. Katsuya Kami

Department of Rehabilitation, Faculty of Wakayama Health Care Sciences, Takarazuka University of Medical and Health Care, Wakayama 640-8392, Japan

---

### Deadline for manuscript submissions

closed (20 March 2026)



## International Journal of Molecular Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



[mdpi.com/si/221058](https://mdpi.com/si/221058)

*International Journal of  
Molecular Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[ijms@mdpi.com](mailto:ijms@mdpi.com)

[mdpi.com/journal/  
ijms](https://mdpi.com/journal/ijms)





# International Journal of Molecular Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



[mdpi.com/journal/  
ijms](https://mdpi.com/journal/ijms)



## About the Journal

### Message from the Editor-in-Chief

The *International Journal of Molecular Sciences (IJMS)* is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, and molecular biophysics. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

---

### Editor-in-Chief

Prof. Dr. José L. Quiles  
Department of Physiology, Institute of Nutrition and Food Technology  
"Jose Mataix", Biomedical Research Center, University of Granada,  
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

---

### Author Benefits

#### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, MEDLINE, Embase, CAPus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)