



## Expanding and Reprogramming the Genetic Code

Guest Editor:

**Dr. Kensaku Sakamoto**

Riken, Division of Structural and  
Synthetic Biology, Wako, Japan

Deadline for manuscript  
submissions:

**closed (31 March 2019)**

### Message from the Guest Editor

Dear Colleagues,

The genetic code defines the fundamental rule of translating genetic information into proteins. Due to advanced knowledge and biotechnology, the genetic code has successfully been modified, even in animals. Engineered codes could produce proteins, molecular systems/pathways, and organisms never realized in the history of life, through either artificial design or the autonomous evolution of host cells. Expanded codes have found various applications in basic science and industry, and enabled the exploration of biosystems supported by non-natural proteins. This Special Issue will cover original reports and review articles on method developments, applications, and future perspectives of genetic code expansion, as well as natural variations in translational molecules and machinery, which can inspire new directions of engineering.

Dr. Kensaku Sakamoto

*Guest Editor*





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Maurizio Battino

Department of  
Odontostomatologic and  
Specialized Clinical Sciences,  
Sez-Biochimica, Faculty of  
Medicine, Università Politecnica  
delle Marche, Via Ranieri 65,  
60100 Ancona, Italy

## Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) 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, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *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.

## 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, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q1 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Inorganic Chemistry)

## Contact Us

---

*International Journal of Molecular  
Sciences* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/ijms  
ijms@mdpi.com  
X@IJMS\_MDPI