



## Fruit and Seed Development

Guest Editors:

**Prof. Dr. Petr Smýkal**

Department of Botany, Palacky  
University, 771 47 Olomouc,  
Czech Republic

**Prof. Dr. David Honys**

Institute of Experimental Botany  
of the Academy of Sciences of  
the Czech Republic, Prague,  
Czech Republic

Deadline for manuscript  
submissions:

**closed (31 July 2021)**

### Message from the Guest Editors

Dear Colleagues,

After fertilization, the ovary of the flower usually develops into fruit. The fruit encloses the seeds containing developing embryos. Embryo and seed development is a pivotal process in the lifecycle of an angiosperm. It is initiated by the development of both gametophytes and their interactions, followed by the process of double fertilization when two pollen tube-released sperm cells fuse with female gametes. This leads to the development of the embryo and the endosperm. The endosperm exerts a profound influence on embryonic growth. Embryo and seed development is a complex process involving the coordinated growth of maternal and zygotic tissues regulated by the integrated action of transcriptional, epigenetic, hormonal, and metabolite signalling regulators.

This Special Issue aims to provide up-to-date information on various aspects of sexual reproduction, including ovule development, pollen tube attraction, double fertilization, embryo, and seed and fruit development, both from theoretical and practical perspectives as well as considering cellular to molecular biology and genetics to agronomical aspects. We welcome original research articles, reviews.





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