

Molecular Mechanisms Regulating Asymmetry in Crop Plants Embryogenesis and Growth

Guest Editors:

Dr. Loredana F. Ciarmiello

Dipartimento di Scienze e
Tecnologie Ambientali,
Biologiche e Farmaceutiche
(DiSTABiF) dell'Università degli
studi della Campania Luigi
Vanvitelli, Italy

Dr. Pasqualina Woodrow

Department of Environmental
Biological and Pharmaceutical
Sciences and Technologies.
University of Campania "Luigi
Vanvitelli", Via Antonio Vivaldi,
43-81100 Caserta, Italy

Deadline for manuscript
submissions:

closed (31 March 2022)

Message from the Guest Editors

Dear Colleagues,

In plants, as sessile organisms, symmetry has an important meaning. Plants exhibit both radial symmetry and bilateral symmetry, often at the same time. In flowers, for example, this is important for pollination strategy. In plants, loss of symmetry can occur at the molecular, subcellular, tissue, organ, and body levels. Axes of asymmetry might be formed during higher plant embryogenesis and can be maintained and elaborated during growth. It is particularly interesting to go deep inside the mechanisms that specify how the different axes are coordinated and interact to ensure a normally functioning plant. Most of the genes known to influence asymmetry in plants appear to act indirectly in the process. The mechanisms guiding plant symmetry remain poorly understood. The identification of upstream regulators of symmetrically and asymmetrically expressed genes may offer some new important advances. Axis specification in animals usually results from chemical gradients, in a concentration-dependent manner. In plants, there are several pieces of evidence suggesting the involvement of auxin in plant asymmetry...





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Sergei D. Odintsov

1. Institució Catalana de Recerca
i Estudis Avançats (ICREA),
Passeig Luis Companys, 23,
08010 Barcelona, Spain
2. Institute of Space Sciences
(ICE-CSIC), C. Can Magrans s/n,
08193 Barcelona, Spain

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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), CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank: JCR - Q2 (*Multidisciplinary Sciences*) / CiteScore - Q1 (*General Mathematics*); Q1 (*Physics and Astronomy*); Q1 (*Computer Science*)

Contact Us

Symmetry Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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

mdpi.com/journal/symmetry
symmetry@mdpi.com
X@Symmetry_MDPI