



Editorial

Editorial for the First Issue of the *Journal of Plant Physiology and Metabolism*

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How To Cite: Hancock, J.T. Editorial for the First Issue of the *Journal of Plant Physiology and Metabolism*. *Journal of Plant Physiology and Metabolism* **2025**, 1(1), 2.

1. Introduction

It is with pleasure that I would like to introduce a new journal which is focused on cutting-edge research on plants. The *Journal of Plant Physiology and Metabolism (JPPM)* is peer-reviewed and also gold open access, making it attractive as we move to a more accessible and transparent scientific community. The growth of plants is instrumental to the world around us, and as such *JPPM* will accept submissions on any plant species, either aquatic or land.

The interest in plants and their metabolism has many aspects. Many of the molecular pathways and the principles of action which underpin them are similar to animals, and it is not uncommon for researchers to compare and contrast mechanisms in plants and animals [1,2], and this of course aids in the understanding of the biology of both. Plants are also valuable human resources, not least as crops. Food security is a growing global issue [3], but further, plants have secondary metabolism and many of the products of this activity have commercial and biomedical uses [4].

Plants generally have a sessile existence (although some aquatic plants may physically move) so they have to survive in an ever-changing environment, including global climate change. To survive, and hopefully thrive, a plant has to endure a range of stresses, which includes, but is certainly not limited to, the lack of water, sub-optimal temperatures, as well as chemical changes such as salinity and heavy metals [5]. Hence, an in-depth understanding of the physiology and metabolic changes which underpin how a plant grows, reproduces, and survives is vital if we are to continue to use and enjoy the presence of plants, whether that is a crop in a field, a flower in a vase, or the grass on a sports pitch.

2. Journal Scope

To bring together the complex elements of how plants grow and survive, *JPPM* has a broad remit and encourages submissions on a wide range of plant-related topics. These include, but are not limited to:

- The discovery of new aspects plant physiology;
- Changes in physiological responses in the presence of stressful growth conditions. This may include changes of water availability (drought or flood), changes in temperature, or in the presence of pathogens or animal attacks;
- Acclimation of plants, especially if pertinent to climate change;
- The discovery of new metabolic processes, including biochemistry associated with secondary metabolite production;
- Novel uses of plant metabolites and enzymes;
- Cell signalling events in, and between, plant cells, especially in response to abiotic or biotic stress. Interplant signalling is also embraced;
- Production, and use, of volatile compounds by plants, including gasotransmitters;
- Biochemical and metabolic processes which are unique to plants;
- Photo-reception and photosynthetic processes;



- Developmental biology of plants, including roots, leaves and seeds;
- Germination/dormancy of seeds and how it can be altered;
- Postharvest physiology and metabolic events, and how they can be manipulated, including fruit ripening and crop storage;
- Genetics and epigenetics in plants.

Interdisciplinary research is particularly welcomed, such as the adoption of new methodologies from other field, or the use of digital technologies.

3. Summary

I am delighted to encourage you to engage with this new journal. I would like to send thanks to all the researchers around the world who have already joined our Editorial Board, details of which can be found here [6], and would encourage you to consider joining us in developing and shaping this new project. If being a board member is too much of a commitment at present, please consider submitting your latest research to *JPPM*, whether this is in the form of a report of primary research, a review of a topic which you feel needs to be given more prominence, or a shorter opinion article as to what you think is important and ways in which your field can be progressed. I wish this journal to not only report excellent data, but also to be used as a voice to challenge current thinking in the world of plant physiology and metabolism.

Conflicts of Interest

The author declares no conflict of interest.

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