# Special Issue

# Molecular Mechanisms Underlying Root Growth Behavior

## Message from the Guest Editors

Root system architecture is a dynamic trait that contributes to plant survival and productivity. Its ability to adapt to varying environmental conditions within the constraints dictated by a plant's genotype allows the efficient capture of soil water and nutrients while also permitting adequate plant anchorage to the soil substrate. Root system architecture is a consequence of multiple and integrated growth behaviors. These include soil penetration, directional growth responses to vectorial signals such as gravity, light, touch, water, salt, oxygen, ions and/or chemical gradients (tropisms), and/or endogenous cues (autotropism; auto-straightening / proprioception), multileveled root branching, responses to symbiotic and/or pathogenic microbes and parasites, and circumnutation processes. This Special Issue of Plants will gather research articles, review papers and short communications that improve our understanding of the molecular, biophysical, cell biological, physiological and/or morphological mechanisms underlying root growth behavior in the broadest sense of the term, and/or their potential applications in agriculture, horticulture, forestry and/or space biology.

## Guest Editors

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## Deadline for manuscript submissions

closed (30 January 2025)

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*Plants* is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

## Editor-in-Chief

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