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Sommario/riassunto	<p>Ethylene is a simple gaseous phytohormone with multiple roles in regulation of metabolism at cellular, molecular, and whole plant level. It influences performance of plants under optimal and stressful environments by interacting with other signaling molecules. Understanding the ethylene biosynthesis and action through the plant's life can contribute to improve the knowledge of plant functionality and use of this plant hormone may drive adaptation and defense of plants from the adverse environmental conditions. The action of ethylene depends on its concentration in cell and the sensitivity of plants to the hormone. In recent years, research on ethylene has been focused, due to its dual action, on the regulation of plant processes at physiological and molecular level. The involvement of ethylene in the regulation of transcription needs to be widely explored involving the interaction with other key molecular regulators. The aim of the current research topic was to explore and update our understanding on its regulatory role in plant developmental mechanisms at cellular or whole plant level under optimal and changing environmental conditions. The present edited volume includes original research papers and review articles describing ethylene's regulatory role in plant development during plant ontogeny and also explains how it interacts with biotic and abiotic stress factors. This comprehensive collection of researches provide evidence that ethylene is essential in different physiological processes and does not always work alone, but in coordinated manner with other plant</p>

hormones. This research topic is also a source of tips for further works that should be addressed for the biology and molecular effects on plants.

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