



## Nitric Oxide Signalling and Metabolism in Plants 2023

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Nitric oxide (NO) is an unstable free-radical gas which consists of one nitrogen and one oxygen atom. An explosion of research in plant NO biology during the last two decades has revealed that it is not just as a free radical released from the toxic byproducts of oxidative metabolism but that it also helps in plant sustenance when exposed to several abiotic stresses from the beneficial role of NO in plants. It also has a role as a signal molecule and transducer that functions in numerous plant growth and development processes, ranging from seed germination to root development to blossom. Some investigations have highlighted the crosstalk of NO with other gas signal molecules as well as plant hormones, such as hydrogen gas, hydrogen sulfide, auxins, gibberellins, abscisic acid, cytokinins, ethylene, salicylic acid and jasmonic acid, under normal conditions or diverse stresses. Research on NO-mediated S-nitrosylation of specific proteins and specific S-nitrosylation sites has also been carried out. This knowledge allows researchers to explain the effect and mechanism of NO in fields such as plant growth and development, abiotic stress, fruit, cut-flower, and several others.





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