

A sleigh ride through the SNO: Role of S-nitrosylation in plant immunity

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Changes in redox status are a conspicuous feature of immune responses in a variety of eukaryotes, but the associated signalling mechanisms are not well understood. In plants, attempted microbial infection triggers the rapid synthesis of nitric oxide (NO) and a parallel accumulation of reactive oxygen intermediates (ROIs). In this context, I will discuss our work on S-nitrosylation, the addition of an NO moiety to a protein cysteine thiol to form an S-nitrosothiol, which is emerging as a key regulator of the plant defence response, controlling ROI synthesis, the accumulation of the immune activator, salicylic acid, hypersensitive cell death and defence at the cell wall.