

The electronic form of this issue, available as of June 12, 2006, at www.plantphysiol.org, is considered the journal of record.

On the Cover: The cover of this Special Issue devoted to reactive oxygen species illustrates the transformation of oxygen to water, through reactive oxygen intermediates. This process begins with the monovalent reduction of oxygen to superoxide, followed by the dismutation of superoxide to form hydrogen peroxide, and the subsequent breakdown of hydrogen peroxide to form a hydroxyl radical and hydroxyl ion (not shown). The center image is a luminescent *Arabidopsis* plant expressing the oxidative stress-reporting construct *ZAT12:LUC*. This plant was treated with the herbicide methyl viologen prior to imaging. The plants surrounding the high-energy focal point symbolize the growing knowledge that reactive oxygen species play an important role in diverse processes in plants, ranging from response to biotic and abiotic stress to control of development. The cover was rendered by Ms. Jocelyn Brimo of the Center for Plant Cell Biology at the University of California, Riverside.

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^[C] Some figures in this article are displayed in color online but in black and white in the print edition.

^[W] Indicates Web-only data.

^[OA] Open Access articles can be viewed online without a subscription.