

The electronic form of this issue, available as of April 11, 2006, at www.plantphysiol.org, is considered the journal of record.

On the Cover: Plant respiratory electron transport chains contain two terminal oxidases: cytochrome C and the cyanide-resistant alternative oxidase (AOX). Transfer of electrons to cytochrome C is linked to the formation of a proton gradient that drives ATP production. In contrast, electron transport to the AOX diverges from the phosphorylating pathway at ubiquinone. The potential for ATP production is reduced and the extra energy is released as heat. It has long been assumed that the AOX is responsible for heat production in thermogenic plants, but demonstrating this has been difficult. In addition, the discovery of plant uncoupling proteins has presented a possible alternative for heat production in plants. In this issue, Watling et al. (pp. 1367–1373) used oxygen isotope discrimination to show that electron fluxes through the AOX increased during thermogenesis in the floral receptacle of the sacred lotus (*Nelumbo nucifera*). The large yellow receptacle, where the bulk of heating occurs, can be seen at the center of the lotus flower on the cover. Cover photograph by David Hollingworth. Cover layout by Ash Csikos.

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^[W] Indicates Web-only data.

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