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## PLANT MITOCHONDRIAL RESPIRATORY CHAIN

### Summary

Plant mitochondrial electron transport chain (mtETC), besides large complexes (Complex I-IV), consists of additional elements: internal and external type II NAD(P)H dehydrogenases (NDin/NDex) and an additional terminal oxidase, named alternative oxidase (AOX). The engagement of alternative pathways in respiration must be tightly regulated since their activity is not linked to pumping protons across membrane and, as a consequence, is not associated with ATP synthesis. The activity of plant-specific components in mtETC allows to dissipate the excess of reducing power and may be especially important under stress conditions. In this review the structure, the regulation of activities and the role of NDin/NDex and AOX in metabolism of plant cells is described.