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Sommario/riassunto	The primary function of mitochondria is respiration, where the catabolism of substrates is coupled to ATP synthesis via oxidative phosphorylation. In plants, mitochondrial composition is relatively complex and flexible and has specific pathways to support photosynthetic processes in illuminated leaves. Plant mitochondria also play important roles in a variety of cellular processes associated with carbon, nitrogen, phosphorus, and sulfur metabolism. Research on plant mitochondria has rapidly developed in the last few decades with the availability of the genome sequences for a wide range of model and crop plants. Recent prominent themes in plant mitochondrial research include linking mitochondrial composition to environmental stress responses, and how this oxidative stress impacts on the plant mitochondrial function. Similarly, interest in the signaling capacity of mitochondria, the role of reactive oxygen species, and retrograde and anterograde signaling has revealed the transcriptional changes of stress responsive genes as a framework to define specific signals emanating to and from the mitochondrion. There has also been considerable interest in the unique RNA metabolic processes in plant mitochondria, including RNA transcription, RNA editing, the splicing of group I and group II introns, and RNA degradation and translation. Despite their identification more than 100 years ago, plant

mitochondria remain a significant area of research in the plant sciences. This Special Issue, "Plant Mitochondria", will cover a selection of recent research topics and timely review articles in the field of plant mitochondrial research.