

Special Issue

Light-Dependent Control of Metabolism in Plants

Message from the Guest Editors

The photoreceptors of plants sense the alterations in the intensity and ratio of UV-B, blue, red and far-red spectral components, and the metabolism is modified through light-responsive signalling pathways. In this signal transduction, reactive oxygen species and antioxidants are especially important because of the redox sensitivity of many transcription factors and enzymes, as well as the need for reductants or oxidants in several reaction steps. The light-dependent control of basic metabolic pathways such as carbon and nitrogen metabolism will also affect the growth and development of plants. A better understanding of this regulation is also important for agriculture, since the determination of the optimal light conditions for indoor farming will result in increased yield. This Special Issue will present and discuss the physiological, biochemical, and molecular biological effects of changes in light intensity and spectrum on the metabolism in plants, showing the regulatory mechanisms and causal relationships between changes in light conditions and various metabolic pathways.

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