The modification of proteins to render them light sensitive allows biological processes to be manipulated noninvasively and with unprecedented spatiotemporal resolution.

Nanoengineering Ion Channels for Optical Control

Pau Gorostiza and Ehud Y. Isacoff

EMERGING TECHNOLOGY

How to Live Long and Prosper: Autophagy, Mitochondria, and Aging

Wen-Li, Yen and Daniel L. Klionsky

Review of the role of autophagy, with an emphasis on the signaling pathways that are involved in regulation, and the consequences of autophagy induction with regard to aging.

Endogenous Neural Progenitor Cells as Therapeutic Target

Franz-Josef Obermaier, Aileen Schröter, and Michaela Thallmair

The article reviews the current knowledge about progenitor cells in the intact and injured spinal cord and discusses cellular replacement strategies.

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