Plant Physiology®

September 2012 • Vol. 160 • No. 1

The electronic form of this issue, available as of September 11, 2012, at www.plantphysiol.org, is considered the journal of record.

On the Cover: The cover of this Focus Issue devoted to Ubiquitin in Plant Biology depicts the stylized ubiquitin/proteasome system, which attaches multiple ubiquitin residues to a substrate protein and is then degraded by the 26S proteasome. These events are shown against the background of a confocal scanning laser micrograph of a tobacco (*Nicotiana tabacum*) leaf that visualizes chloroplast autofluorescence (purple signal) and the nucleocytoplasmic partition of the transiently expressed cyan fluorescent protein fluorescent marker (blue signal). This issue highlights the roles of ubiquitin and ubiquitin-like modifiers in all different aspects of plant development and morphogenesis, hormonal and environmental responses, chromatin remodeling and histone modifications, and plant-pathogen interactions. Cover design by Stanislav V. Kozlovsky (Moscow State University, Russia) and Vitaly Citovsky (State University of New York, Stony Brook).

FOCUS ISSUE ON UBIQUITIN IN PLANT BIOLOGY

EDITORIALS

UPDATES

RESEARCH ARTICLES

Continued on next page

Continued from preceding page

REGULAR ISSUE

ON THE INSIDE

UPDATES

GENOME ANALYSIS

BREAKTHROUGH TECHNOLOGIES

BIOINFORMATICS

BIOCHEMICAL PROCESSES AND MACROMOLECULAR STRUCTURES

Continued on next page

Continued from preceding page

BIOENERGETICS AND PHOTOSYNTHESIS

CELL BIOLOGY AND SIGNAL TRANSDUCTION

DEVELOPMENT AND HORMONE ACTION

ENVIRONMENTAL STRESS AND ADAPTATION TO STRESS

PLANTS INTERACTING WITH OTHER ORGANISMS

Continued on next page

Continued from preceding page

SYSTEMS BIOLOGY, MOLECULAR BIOLOGY, AND GENE REGULATION

[C] Some figures in this article are displayed in color online but in black and white in the print edition.
[W] Indicates Web-only data.
[OA] Open Access articles can be viewed online without a subscription.