

The electronic form of this issue, available as of June 11, 2007, at [www.plantphysiol.org](http://www.plantphysiol.org), is considered the journal of record.

**On the Cover:** The center photo on the cover of this issue shows a variety of dried legume seeds, including pea (*Pisum sativum*), common bean (*Phaseolus vulgaris*), soybean (*Glycine max*), white lupin (*Lupinus albus*), and winged bean (*Psophocarpus tetragonolobus*). Legume seeds provide 33% to 40% of humankind's dietary nitrogen requirements and 35% of the world's processed vegetable oil. Genomic approaches are unlocking the secrets to how regulatory networks are interconnected to program legume seed development (see the *Update* by Le et al. [pp. 562–574] in this issue for details). TILLING, RNAi, positional cloning, and insertional mutagenesis are facilitating rapid progress in characterizing the functional role of legume genes. Surrounding the dried seeds (clockwise from upper left) are photographs of determinate root nodules from bean, flowers of common bean, seed pods, and leaves of barrel medic (*Medicago truncatula*), indeterminate root nodule (*Medicago* spp.), and leaves and flowers of Russell lupin (*Lupinus polyphyllus*). Photographs and cover image design by Bruna Bucciarelli and Carroll Vance.

## ON THE INSIDE

*Peter V. Minorsky*

535

## FOCUS ISSUE ON LEGUME BIOLOGY

### EDITORIAL

Legume Biology: Sequence to Seeds. *Mark R. O'Brian and Carroll P. Vance*

537

### UPDATES

<sup>[W]</sup>Legume Transcription Factors: Global Regulators of Plant Development and Response to the Environment. *Michael K. Udvardi, Klementina Kakar, Maren Wandrey, Ombretta Montanari, Jeremy Murray, Andry Andriankaja, Ji-Yi Zhang, Vagner Benedito, Julie M.I. Hofer, Foo Chueng, and Christopher D. Town*

538

Translocation in Legumes: Assimilates, Nutrients, and Signaling Molecules. *Craig Anthony Atkins and Penelope Mary Collina Smith*

550

Using Genomics to Study Legume Seed Development. *Brandon H. Le, Javier A. Wagmaister, Tomokazu Kawashima, Anhthu Q. Bui, John J. Harada, and Robert B. Goldberg*

562

Legume Evolution: Where Do Nodules and Mycorrhizas Fit In? *Janet I. Sprent and Euan K. James*

575

Recent Advances in Legume-Microbe Interactions: Recognition, Defense Response, and Symbiosis from a Genomic Perspective. *Deborah A. Samac and Michelle A. Graham*

582

Genome Sequencing and Genome Resources in Model Legumes. *Shusei Sato, Yasukazu Nakamura, Erika Asamizu, Sachiko Isobe, and Satoshi Tabata*

588

Genomic and Genetic Control of Phosphate Stress in Legumes. *Mesfin Tesfaye, Junqi Liu, Deborah L. Allan, and Carroll P. Vance*

594

Nutrient Sharing between Symbionts. *James White, Jurgen Prell, Euan K. James, and Philip Poole*

604

Genomes of the Symbiotic Nitrogen-Fixing Bacteria of Legumes. *Allyson M. MacLean, Turlough M. Finan, and Michael J. Sadowsky*

615

*Continued on next page*

## GENOME ANALYSIS

- <sup>[WJ][OA]</sup>Molecular Evolution of Lysin Motif-Type Receptor-Like Kinases in Plants. Xue-Cheng Zhang, Xiaolei Wu, Seth Findley, Jinrong Wan, Marc Libault, Henry T. Nguyen, Steven B. Cannon, and Gary Stacey 623

## RESEARCH ARTICLES

- <sup>[WJ][OA]</sup>The Liverwort *Marchantia polymorpha* Expresses Orthologs of the Fungal *Agaricus bisporus* Agglutinin Family. Willy J. Peumans, Elke Fouquaert, Alain Jauneau, Pierre Rougé, Nausicaä Lannoo, Hiroki Hamada, Richard Alvarez, Bart Devreese, and Els J.M. Van Damme 637
- <sup>[WJ][OA]</sup>Pea *LATE BLOOMER1* Is a *GIGANTEA* Ortholog with Roles in Photoperiodic Flowering, Deetiolation, and Transcriptional Regulation of Circadian Clock Gene Homologs. Valérie Hecht, Claire L. Knowles, Jacqueline K. Vander Schoor, Lim Chee Liew, Sarah E. Jones, Misty J.M. Lambert, and James L. Weller 648
- <sup>[WJ][OA]</sup>A Novel Family of Lectins Evolutionarily Related to Class V Chitinases: An Example of Neofunctionalization in Legumes. Els J.M. Van Damme, Raphaël Culerrier, Annick Barre, Richard Alvarez, Pierre Rougé, and Willy J. Peumans 662
- <sup>[W]</sup>A Diffusible Signal from Arbuscular Mycorrhizal Fungi Elicits a Transient Cytosolic Calcium Elevation in Host Plant Cells. Lorella Navazio, Roberto Moscattiello, Andrea Genre, Mara Novero, Barbara Baldan, Paola Bonfante, and Paola Mariani 673
- <sup>[OA]</sup>An *IRE*-Like AGC Kinase Gene, *MtIRE*, Has Unique Expression in the Invasion Zone of Developing Root Nodules in *Medicago truncatula*. Catalina I. Pislariu and Rebecca Dickstein 682
- <sup>[WJ][OA]</sup>Mastoparan Activates Calcium Spiking Analogous to Nod Factor-Induced Responses in *Medicago truncatula* Root Hair Cells. Jongho Sun, Hiroki Miwa, J. Allan Downie, and Giles E.D. Oldroyd 695
- <sup>[WJ][OA]</sup>The *MtMMPL1* Early Nodulin Is a Novel Member of the Matrix Metalloendoproteinase Family with a Role in *Medicago truncatula* Infection by *Sinorhizobium meliloti*. Jean-Philippe Combier, Tatiana Vernié, Françoise de Billy, Fikri El Yahyaoui, René Mathis, and Pascal Gamas 703
- <sup>[C][WJ][OA]</sup>A Symbiotic Plant Peroxidase Involved in Bacterial Invasion of the Tropical Legume *Sesbania rostrata*. Jeroen Den Herder, Sam Lievens, Stephane Rombauts, Marcelle Holsters, and Sofie Goormachtig 717
- <sup>[OA]</sup>RNAi Silencing of Genes for Elicitation or Biosynthesis of 5-Deoxyisoflavonoids Suppresses Race-Specific Resistance and Hypersensitive Cell Death in *Phytophthora sojae* Infected Tissues. Terrence L. Graham, Madge Y. Graham, Senthil Subramanian, and Oliver Yu 728
- <sup>[WJ][OA]</sup>Flavone Synthases from *Medicago truncatula* Are Flavanone-2-Hydroxylases and Are Important for Nodulation. Juan Zhang, Senthil Subramanian, Yansheng Zhang, and Oliver Yu 741
- <sup>[WJ][OA]</sup>Phosphorus Stress in Common Bean: Root Transcript and Metabolic Responses. Georgina Hernández, Mario Ramírez, Osvaldo Valdés-López, Mesfin Tesfaye, Michelle A. Graham, Tomasz Czechowski, Armin Schlereth, Maren Wandrey, Alexander Erban, Foo Cheung, Hank C. Wu, Miguel Lara, Christopher D. Town, Joachim Kopka, Michael K. Udvardi, and Carroll P. Vance 752
- <sup>[WJ][OA]</sup>Developmental Genes Have Pleiotropic Effects on Plant Morphology and Source Capacity, Eventually Impacting on Seed Protein Content and Productivity in Pea. Judith Burstin, Pascal Marget, Myriam Huart, Annie Moessner, Brigitte Mangin, Christiane Duchene, Bruno Desprez, Nathalie Munier-Jolain, and Gérard Duc 768
- <sup>[OA]</sup>Enzymatic Evidence for the Key Role of Arginine in Nitrogen Translocation by Arbuscular Mycorrhizal Fungi. Cristina Cruz, Helge Egsgaard, Carmen Trujillo, Per Ambus, Natalia Requena, Maria Amélia Martins-Loução, and Iver Jakobsen 782
- <sup>[WJ][OA]</sup>Cowpea Chloroplastic ATP Synthase Is the Source of Multiple Plant Defense Elicitors during Insect Herbivory. Eric A. Schmelz, Sherry LeClere, Mark J. Carroll, Hans T. Alborn, and Peter E.A. Teal 793
- <sup>[C][W]</sup>TILLING Mutants of *Lotus japonicus* Reveal That Nitrogen Assimilation and Fixation Can Occur in the Absence of Nodule-Enhanced Sucrose Synthase. Irmtraud Horst, Tracey Welham, Simon Kelly, Takakazu Kaneko, Shusei Sato, Satoshi Tabata, Martin Parniske, and Trevor L. Wang 806
- <sup>[WJ][OA]</sup>The Maize *Zmsmu2* Gene Encodes a Putative RNA-Splicing Factor That Affects Protein Synthesis and RNA Processing during Endosperm Development. Taijoon Chung, Cheol Soo Kim, Hong N. Nguyen, Robert B. Meeley, and Brian A. Larkins 821
- <sup>[C][OA]</sup>Temporal and Spatial Expression of the Major Allergens in Developing and Germinating Peanut Seed. Il-Ho Kang, Pratibha Srivastava, Peggy Ozias-Akins, and Maria Gallo 836

**REGULAR ISSUE****BREAKTHROUGH TECHNOLOGIES**

- [WJ][OA] Gene Targeting by Homologous Recombination as a Biotechnological Tool for Rice Functional Genomics. *Rie Terada, Yasuyo Johzuka-Hisatomi, Miho Saitoh, Hisayo Asao, and Shigeru Iida* 846

**BIOINFORMATICS**

- [CI][WJ][OA] EGENES: Transcriptome-Based Plant Database of Genes with Metabolic Pathway Information and Expressed Sequence Tag Indices in KEGG. *Ali Masoudi-Nejad, Susumu Goto, Ruy Jauregui, Masumi Ito, Shuichi Kawashima, Yuki Moriya, Takashi R. Endo, and Minoru Kanehisa* 857

**BIOCHEMICAL PROCESSES AND MACROMOLECULAR STRUCTURES**

- [CI][WJ][OA] *tie-dyed1* Functions Non-Cell Autonomously to Control Carbohydrate Accumulation in Maize Leaves. *R. Frank Baker and David M. Braun* 867

- [WJ][OA] The Structure of Two *N*-Methyltransferases from the Caffeine Biosynthetic Pathway. *Andrew A. McCarthy and James G. McCarthy* 879

- [WJ][OA] Genetic Dissection of Histidine Biosynthesis in Arabidopsis. *Rosanna Muralla, Colleen Sweeney, Asya Stepansky, Thomas Leustek, and David Meinke* 890

- [OA] Deficiency in Phosphatidylserine Decarboxylase Activity in the *psd1 psd2 psd3* Triple Mutant of Arabidopsis Affects Phosphatidylethanolamine Accumulation in Mitochondria. *Annika Nerlich, Melanie von Orlow, Denis Rontein, Andrew D. Hanson, and Peter Dörmann* 904

- [WJ][OA] Functional Analysis of PDX2 from Arabidopsis, a Glutaminase Involved in Vitamin B6 Biosynthesis. *Marina Tambasco-Studart, Ivo Tews, Nikolaus Amrhein, and Teresa B. Fitzpatrick* 915

- [OA] Maize Y9 Encodes a Product Essential for 15-cis- $\zeta$ -Carotene Isomerization. *Faqiang Li, Christina Murillo, and Eleanor T. Wurtzel* 1181

- New Insights into the Unique Structure of the F<sub>0</sub>F<sub>1</sub>-ATP Synthase from the Chlamydomonad Algae *Polytomella* sp. and *Chlamydomonas reinhardtii*. *Robert van Lis, Guillermo Mendoza-Hernández, Georg Groth, and Ariane Atteia* 1190

**BIOENERGETICS AND PHOTOSYNTHESIS**

- [WJ][OA] Short- and Long-Term Operation of the Lutein-Epoxyde Cycle in Light-Harvesting Antenna Complexes. *Shizue Matsubara, Tomas Morosinotto, C. Barry Osmond, and Roberto Bassi* 926

- [CI][OA] The Membrane-Associated CpcG2-Phycobilisome in *Synechocystis*: A New Photosystem I Antenna. *Kumiko Kondo, Yuriko Ochiai, Mitsunori Katayama, and Masahiko Ikeuchi* 1200

**CELL BIOLOGY AND SIGNAL TRANSDUCTION**

- [WJ][OA] Arabidopsis Inositol Polyphosphate 6-/3-Kinase (*AtIpk2 $\beta$* ) Is Involved in Axillary Shoot Branching via Auxin Signaling. *Zai-Bao Zhang, Guang Yang, Fernando Arana, Zhen Chen, Yan Li, and Hui-Jun Xia* 942

- [CI][WJ][OA] White Leaf Sectors in *yellow variegated2* Are Formed by Viable Cells with Undifferentiated Plastids. *Yusuke Kato, Eiko Miura, Ryo Matsushima, and Wataru Sakamoto* 952

- [CI][WJ] The Acropetal Wave of Developmental Cell Death of Tobacco Corolla Is Preceded by Activation of Transglutaminase in Different Cell Compartments. *Massimiliano Della Mea, Francesca De Filippis, Valeria Genovesi, Donatella Serafini Fracassini, and Stefano Del Duca* 1211

**DEVELOPMENT AND HORMONE ACTION**

- [WJ][OA] Apyrases (Nucleoside Triphosphate-Diphosphohydrolases) Play a Key Role in Growth Control in Arabidopsis. *Jian Wu, Iris Steinebrunner, Yu Sun, Timothy Butterfield, Jonathan Torres, David Arnold, Antonio Gonzalez, Francis Jacob, Stuart Reichler, and Stanley J. Roux* 961

- [CI][WJ][OA] Mutation of *E1-CONJUGATING ENZYME-RELATED1* Decreases RELATED TO UBIQUITIN Conjugation and Alters Auxin Response and Development. *Andrew W. Woodward, Sarah E. Ratzel, Erin E. Woodward, Yousif Shamoo, and Bonnie Bartel* 976

Continued on next page

[W] Analysis of Leaf Development in <i>fugu</i> Mutants of <i>Arabidopsis</i> Reveals Three Compensation Modes That Modulate Cell Expansion in Determinate Organs. <i>Ali Ferjani, Gorou Horiguchi, Satoshi Yano, and Hirokazu Tsukaya</i>	988
[C][W][OA] <i>barren inflorescence2</i> Encodes a Co-Ortholog of the PINOID Serine/Threonine Kinase and Is Required for Organogenesis during Inflorescence and Vegetative Development in Maize. <i>Paula McSteen, Simon Malcomber, Andrea Skirpan, China Lunde, Xianting Wu, Elizabeth Kellogg, and Sarah Hake</i>	1000
[W][OA] A Reevaluation of the Key Factors That Influence Tomato Fruit Softening and Integrity. <i>Montserrat Saladié, Antonio J. Matas, Tal Isaacson, Matthew A. Jenks, S. Mark Goodwin, Karl J. Niklas, Ren Xiaolin, John M. Labavitch, Kenneth A. Shackel, Alisdair R. Fernie, Anna Lytovchenko, Malcolm A. O'Neill, Chris B. Watkins, and Jocelyn K.C. Rose</i>	1012
<b>ENVIRONMENTAL STRESS AND ADAPTATION TO STRESS</b>	
[OA] Differential Regulation of Sorbitol and Sucrose Loading into the Phloem of <i>Plantago major</i> in Response to Salt Stress. <i>Benjamin Pommerrenig, Flavia Stal Papini-Terzi, and Norbert Sauer</i>	1029
[W][OA] Induction of Isoforms of Tetrapyrrole Biosynthetic Enzymes, AtHEMA2 and AtFC1, under Stress Conditions and Their Physiological Functions in <i>Arabidopsis</i> . <i>Satoshi Nagai, Masumi Koide, Shigekazu Takahashi, Akihiro Kikuta, Mitsuko Aono, Yuko Sasaki-Sekimoto, Hiroyuki Ohta, Ken-ichiro Takamiya, and Tatsuru Masuda</i>	1039
[OA] A Major Quantitative Trait Locus for Cadmium Tolerance in <i>Arabidopsis halleri</i> Colocalizes with <i>HMA4</i> , a Gene Encoding a Heavy Metal ATPase. <i>Mikael Courbot, Glenda Willems, Patrick Motte, Samuel Arvidsson, Nancy Roosens, Pierre Saumitou-Laprade, and Nathalie Verbruggen</i>	1052
[OA] <i>Arabidopsis</i> , a Model to Study Biological Functions of Isoprene Emission? <i>Maaria Loivamäki, Frank Gilmer, Robert J. Fischbach, Christoph Sörgel, Anette Bachl, Achim Walter, and Jörg-Peter Schnitzler</i>	1066
<b>PLANTS INTERACTING WITH OTHER ORGANISMS</b>	
[W][OA] Comprehensive Transcriptome Profiling in Tomato Reveals a Role for Glycosyltransferase in <i>Mi</i> -Mediated Nematode Resistance. <i>Jennifer E. Schaff, Dahlia M. Nielsen, Chris P. Smith, Elizabeth H. Scholl, and David McK. Bird</i>	1079
[OA] Mutations in <i>LACS2</i> , a Long-Chain Acyl-Coenzyme A Synthetase, Enhance Susceptibility to Avirulent <i>Pseudomonas syringae</i> But Confer Resistance to <i>Botrytis cinerea</i> in <i>Arabidopsis</i> . <i>Dingzhong Tang, Michael T. Simonich, and Roger W. Innes</i>	1093
[W][OA] The Response of Carbon Metabolism and Antioxidant Defenses of Alfalfa Nodules to Drought Stress and to the Subsequent Recovery of Plants. <i>Loreto Naya, Ruben Ladrera, Javier Ramos, Esther M. González, Cesar Arrese-Igor, Frank R. Minchin, and Manuel Becana</i>	1104
[W][OA] Overlap of Proteome Changes in <i>Medicago truncatula</i> in Response to Auxin and <i>Sinorhizobium meliloti</i> . <i>Giel E. van Noorden, Tursun Kerim, Nicolas Goffard, Robert Wiblin, Flavia I. Pellerone, Barry G. Rolfe, and Ulrike Mathesius</i>	1115
[W][OA] Barley MLO Modulates Actin-Dependent and Actin-Independent Antifungal Defense Pathways at the Cell Periphery. <i>Marco Miklis, Chiara Consonni, Riyaz A. Bhat, Volker Lipka, Paul Schulze-Lefert, and Ralph Panstruga</i>	1132
[W][OA] The GH3 Acyl Adenylase Family Member PBS3 Regulates Salicylic Acid-Dependent Defense Responses in <i>Arabidopsis</i> . <i>K. Nobuta, R.A. Okrent, M. Stoutemyer, N. Rodibaugh, L. Kempema, M.C. Wildermuth, and R.W. Innes</i>	1144
[W] <i>Sebacina vermifera</i> Promotes the Growth and Fitness of <i>Nicotiana attenuata</i> by Inhibiting Ethylene Signaling. <i>Oz Barazani, Caroline C. von Dahl, and Ian T. Baldwin</i>	1223
<b>WHOLE PLANT AND ECOPHYSIOLOGY</b>	
Intact Plant Magnetic Resonance Imaging to Study Dynamics in Long-Distance Sap Flow and Flow-Conducting Surface Area. <i>T.W.J. Scheenen, F.J. Vergeldt, A.M. Heemskerk, and H. Van As</i>	1157
[C][OA] The Gravitropic Response of Poplar Trunks: Key Roles of Prestressed Wood Regulation and the Relative Kinetics of Cambial Growth versus Wood Maturation. <i>Catherine Coutand, Meriem Fournier, and Bruno Moulia</i>	1166
<b>CORRECTIONS</b>	1233

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