

# PATRICK S. SCHNABLE

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Iowa Corn Endowed Chair in Genetics  
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## EDUCATION

Cornell University, B.S., Agronomy, 1981  
Iowa State University, Ph.D., Plant Breeding and Cytogenetics, 1986

## PROFESSIONAL EXPERIENCE

1981-1986 Graduate Research Assistant, Laboratory of Peter Peterson, Iowa State University  
1986-1988 NIH Postdoctoral Fellow, Laboratory of Heinz Saedler, Max-Planck-Institut für Züchtungsforschung, Köln, Germany  
1988-1994 Assistant Professor, Iowa State University  
1994-1998 Associate Professor, Iowa State University  
1998-present Professor, Iowa State University  
1999-present Founding Member, Center for Bioinformatics and Biological Statistics  
1999-2003 Founding Director, Center for Plant Transformation & Gene Expression  
1999-present Founding Director, Center for Plant Genomics  
2002-2006 Associate Chair and Chair, Interdepartmental Genetics Graduate Program  
2005-2010 Associate Director, Plant Sciences Institute  
2007-2013 Director, Center for Carbon Capturing Crops  
2007-2013 Baker Professor of Agronomy  
2013-present Iowa Corn Promotion Board Endowed Chair in Genetics  
2013-present C.F. Curtiss Distinguished Professor  
2014-present Baker Scholar of Agricultural Entrepreneurship  
2014-present Director, Plant Sciences Institute  
2009-present ChangJiang Scholar, China Agriculture University  
2010-present Co-Founder and Managing Partner, Data2Bio LLC  
2014-present Co-Founder and Co-Managing Partner, Dryland Genetics LLC  
2017-present Co-Founder and Managing Partner, EnGeniousAg LLC

## HONORS

- ISU Department of Agronomy Plant Breeding Research Award, 1985
- Max-Planck-Institute Postdoctoral Fellowship, 1986
- Iowa State Research Excellence Award, 1986
- Gamma Sigma Delta Honor Society, 1986
- National Institutes of Health Postdoctoral Fellowship, 1987-1988
- Raymond and Mary Baker Agronomic Excellence Award, 2000
- College of Agriculture Research Team Award, 2005
- Best Paper Award, IEEE International Parallel and Distributed Processing Symposium, 2006
- Finalist, Computerworld Honors Program, 2007
- ChangJiang Scholar, China Agriculture University, 2009
- Outstanding Achievement in Research Award, College of Agriculture and Life Sciences, Iowa State University, 2010
- Fellow, American Association for the Advancement of Science (AAAS), 2010
- Honorary Professor, Shandong Agriculture University, 2014

#### REVIEW PANELS, ADVISORY BOARDS and EDITORIAL POSTS

1990	DOE, Energy Biosciences Panel
2001	NSF Technical Review Team of Missouri MaizeDB
2001-2003	Scientific Advisory Board, NSF-funded Potato Genome Project
2003	Committee of Visitors, Training Cluster, NSF-DBI
2003-2004	Grant Review Panel, NSF Small Business Innovation Research, Agricultural Biotechnology
2003-2007	Scientific Advisory Board, NSF-funded Cell Wall Project
2003-2007	Scientific Advisory Board, NSF-funded Wheat SNP Project
2003-2008	Scientific Advisory Board, NSF-funded Maize Genomic Diversity Project
2005-2009	Elected Member-at-Large of the AAAS Section Committee, Agriculture, Food and Renewable Resources Section
2006	Grant Review Panel, NSF SEI-BIO
2006-2011	MaizeGDB Working Group
2007	Invited to testify to National Research Council Committee: “The National Plant Genome Initiative: Achievements and Future Directions”
2007	Invited to testify to National Research Council Committee: “A Study of Technologies to Benefit Farmers in Africa and South Asia”
2008-2011	Associate Editor, The Plant Genome
2008-Present	Editorial Board, PLoS Genetics
	2008-2015, Associate Editor
	2015-Present, Consulting Editor
2009	Grant Review Panel, Agriculture and Agri-Food Canada
2009	Grant Review Panel, NSF Bioinformatics
2009-2010	NextGen Sequencing Working Group, NSF iPlant Consortium
2009-2010	Steering Committee, “Functionality and the Corn Genome” workshop (NCGA)
2009-present	Organizer, Maize Genetics Workshop, Plant and Animal Genome Meeting

2009-2013	External Advisory Board, French wheat chromosome 3B genome sequencing project
2010-2012	International Scientific Advisory Board, 10th International Congress on Plant Molecular Biology 2012, Jeju, Korea
2011	Co-organizer, Banbury Conference (CSHL): “Genotype to Phenotype: Deriving Biological Knowledge from Large Genomic Datasets”, 16-19 October 2011, Cold Spring Harbor, NY
2011	Organizer “Genomics to Agronomics” Session, American Seed Trade Association, Chicago IL 8 December 2011
2011-2012	Organizing Committee, International Conference of Heterosis Utilization in Crops, 21-24 August 2012, Xian, China
2011-2016	Scientific Advisory Board, NSF-funded <i>Amborella</i> Genome Project
2013-2018	International Advisory Board, Centre for Biotechnological and Agricultural Research, Olomouc, Czech Republic
2013-2016	Scientific Advisory Council, GeneSeek
2013-2014	National Plant Science Council
2013-2017	Scientific Advisory Board, NSF-funded <i>Aegilops tauschii</i> Genome Sequencing Project
2013-present	Co-lead, Maize Genomes to Fields Initiative
2014-2014	Member, CAST Board of Representatives (ASPB representative)
2015	Scientific Committee, EUCARPIA Maize and Sorghum conference, "Genomics and Phenomics for Model-Based Maize and Sorghum Breeding"
2017	Organizing Committee, Nebraska EPSCoR “Predictive Crop Design: Genome-to-Phenome”

## PROFESSIONAL AFFILIATIONS

- American Association for the Advancement of Science
  - “Golden Goose Award” Nominating Committee (ASPB Representative)
- American Society of Plant Biologists
  - Executive Committee, 2012-2016
  - Science Policy Committee, 2008-2016
    - Chair, 2012-2016
  - Pioneer Hi-Bred International Graduate Student Prize Committee, 2009-2013
- Genetics Society of America
  - Public Policy Committee, 2013-2016
- Maize Genetics Cooperative
  - Steering Committee, 1993-1996; 2002-2004
  - Maize Genetics Executive Committee
    - Member, 2000-2004, 2006-2012, 2014-2018
    - Chair, 2003-2004, 2007-2009

## PUBLICATIONS (refereed; *invited author*):

Schnable has an h-index of 65 (as calculated by Google Scholar, <http://scholar.google.com/citations?user=UW4mNTW0nOkC&hl=en>, on 4/15/18) with a total of near 17,000 citations. Reflecting his interest in computational approaches to biology he has an Erdős number of 4. [orcid.org/0000-0001-9169-5204](http://orcid.org/0000-0001-9169-5204)

- **Schnable PS**, PA Peterson (1986) Distribution of genetically active *Cy* elements among diverse maize lines. **Maydica (McClintock issue)** 31:59-81.
- **Schnable PS**, PA Peterson (1988) The *Mutator*-related *Cy* transposable element of *Zea mays* L. behaves as a near-Mendelian factor. **Genetics** 120(2):587-596.
- **Schnable PS**, PA Peterson (1989) Genetic evidence of a relationship between two maize transposable element systems: *Cy* and *Mutator*. **Mol Gen Genet** 215(2):317-321.
- **Schnable PS**, PA Peterson, H Saedler (1989) The *bz-rcy* allele of the *Cy* transposable element system of *Zea mays* contains a *Mu*-like element insertion. **Mol Gen Genet** 217:459-463.
- Menssen A, S Höhmann, W Martin, **PS Schnable**, PA Peterson, H Saedler, A Gierl (1990) The *En/Spm* transposable element of *Zea mays* contains splice sites at the termini generating a novel intron from a *dSpm* element in the *A2* gene. **EMBO J** 9(10):3051-3057.
- Stinard PS, DS Robertson, **PS Schnable** (1993) Genetic isolation, cloning, and analysis of a *Mutator*-induced, dominant antimorph of the maize *amylose extender1* locus. **Plant Cell** 5(11):1555-1566.
- **Schnable PS**, RP Wise (1994) Recovery of heritable, transposon-induced, mutant alleles of the *rf2* nuclear restorer of T-cytoplasm maize. **Genetics** 136(3):1171-1185.
- Wen T-J, **PS Schnable** (1994) Analyses of mutants of three genes that influence root hair development in *Zea mays* (*Gramineae*) suggest that root hairs are dispensable. **Am J Bot** 81:833-842.
- Civardi L, Y Xia, KJ Edwards, **PS Schnable**, BJ Nikolau (1994) The relationship between genetic and physical distances of the cloned *a1-sh2* interval of the *Zea mays* L. genome. **Proc Natl Acad Sci** 91(17):8268-8272.
- Wise RP, **PS Schnable** (1994) Mapping complementary genes in maize: Positioning the *rf1* and *rf2* nuclear-fertility restorer loci of Texas (T) cytoplasm relative to RFLP and visible markers. **Theoretical & Applied Genetics**, 88: 785-795.
- **Schnable PS**, PS Stinard, T-J Wen, S Heinen, D Weber, L Zhang, JD Hansen, BJ Nikolau (1994) The genetics of cuticular wax biosynthesis. **Maydica (Robertson issue)**, 39:279-287.
- Bensen RJ, GS Johal, VC Crane, JT Tossberg, **PS Schnable**, RB Meeley, SP Briggs (1995) Cloning and Characterization of the Maize *An1* Gene. **Plant Cell**, 7(1):75-84.
- Han C-D, RJ Derby, **PS Schnable**, RA Martienssen (1995) Characterization of the plastids affected by class II albino mutations of maize at the morphological and transcript levels. **Maydica (Coe issue)** 40:13-22.

- Kasemsuwan T, JL Jane, **PS Schnable**, P Stinard, D Robertson (1995) Characterization of the dominant mutant amylose-extender (*Ae1-5180*) maize starch. **Cereal Chem**, 72:457-464.
- Xu XJ, A-P Hsia, L Zhang, BJ Nikolau, **PS Schnable** (1995) Meiotic recombination break points resolve at high rates at the 5' end of a maize coding sequence. **Plant Cell**, 7(12):2151-2161.
- Hsia A-P, **PS Schnable** (1996) DNA sequence analyses support the role of interrupted gap repair in the origin of internal deletions of the maize transposon, *MuDR*. **Genetics**, 142(2):603-618.
- Cui X, RP Wise, **PS Schnable** (1996) The *rf2* nuclear restorer gene of male-sterile T-cytoplasm maize. **Science**, 272(5266):1334-1336. (*A commentary on this manuscript solicited by journal editors and written by Charles S. Levings III was provided in 272: 1279-1280*)
- Wise RP, CL Dill, **PS Schnable** (1996) *Mutator*-induced mutations of the *rf1* nuclear fertility restorer of T-cytoplasm maize alter the accumulation of T-*urf13* mitochondrial transcripts. **Genetics**, 143(3):1383-1394.
- Xia YJ, BJ Nikolau, **PS Schnable** (1996) Cloning and characterization of *CER2*, an *Arabidopsis* gene that affects cuticular wax accumulation. **Plant Cell**, 8(8): 1291-1304.
- Hansen JD, J Pyee, Y Xia, T-J Wen, DS Robertson, PE Kolattukudy, BJ Nikolau, **PS Schnable** (1997) The *glossy1* locus of maize and an epidermis-specific cDNA from *Kleinia odora* define a class of receptor-like proteins required for the normal accumulation of cuticular waxes. **Plant Physiology**, 113(4):1091-1100.
- Xu X, C Dietrich, M Delledonne, Y Xia, TJ Wen, DS Robertson, BJ Nikolau, **PS Schnable** (1997) Sequence analysis of the cloned *glossy8* gene of maize suggests that it may code for a beta-ketoacyl reductase required for the biosynthesis of cuticular waxes. **Plant Physiology**, 115(2):501-510.
- Dill CL, RP Wise, **PS Schnable** (1997) *Rf8* and *rf\** mediate unique T-*urf13*-transcript accumulation, revealing a conserved motif associated with RNA processing and restoration of pollen fertility in T-cytoplasm maize. **Genetics**, 147(3):1367-1379.
- Xia Y, BJ Nikolau, **PS Schnable** (1997) Developmental and hormonal regulation of the *Arabidopsis CER2* gene which codes for a nuclear-localized protein required for the normal accumulation of cuticular waxes. **Plant Physiology**, 115(3):925-937.
- **Schnable PS**, RP Wise (1998) The molecular basis of cytoplasmic male sterility and fertility restoration. **Trends in Plant Science**, 3(5):175-180.
- **Schnable PS**, A-P Hsia, BJ Nikolau (1998) Genetic recombination in plants. **Current Opinion in Plant Biology**, 1(2):123-129.
- Wise RP, KS Gobelman-Werner, D Pei, CL Dill, **PS Schnable** (1999) Mitochondrial transcript processing and restoration of male fertility in T-cytoplasm maize. **J Hered**, 90(3): 380-385.
- Wise RP, C Bronson, **PS Schnable**, *HT Horner* (1999) The genetics, pathology, and the molecular biology of T-cytoplasm male sterility in maize. **Adv in Agronomy**, 65:79-130.

- *Rothschild MF, PS Schnable* (1999) Animal and Plant Genomics: Driving the Golden Spike. **AgBiotech News**, January:1-2.
- Nikolau BJ, DJ Oliver, **PS Schnable**, ES Wurtele (2000) Molecular biology of acetyl-CoA metabolism. **Biochem Soc Trans**, 28: 591-593.
- Frame BR, H Zhang, SM Cocciolone, L Sidorenko, CR Dietrich, SE Pegg, S Zhen, **PS Schnable**, K Wang (2000) Production of transgenic maize from bombarded type II callus: effect of gold particle size and callus morphology on transformation efficiency. **In Vitro and Developmental Biology-Plant**, 36(1):21-29.
- Liu F, X Cui, HT Horner, H Weiner, **PS Schnable** (2001) Mitochondrial aldehyde dehydrogenase activity is required for male fertility in maize. **Plant Cell**, 13(5):1063-1078. (*Cover image*)
- Bennetzen, JL, VL Chandler, **PS Schnable** (2001) National Science Foundation-Sponsored Workshop Report. Maize Genome Sequencing Project. **Plant Physiology**, 127:1572-1578.
- Dietrich C, F Cui, M Packila, J Li, DA Ashlock, BJ Nikolau, **PS Schnable** (2002) Maize *Mu* transposons are targeted to the 5' untranslated region of the *gl8* gene and sequences flanking *Mu* target-site duplications exhibit nonrandom nucleotide composition throughout the genome. **Genetics**, 160(2) 697-716.
- Xu X, Dietrich CR, Lessire R, Nikolau BJ, **PS Schnable** (2002) The endoplasmic reticulum-associated maize GL8 protein is a component of the acyl-Coenzyme A elongase involved in the production of cuticular waxes. **Plant Physiology**, 128(3): 924-934.
- Yao H, Q Zhou, J Li, H Smith, M Yandea, B Nikolau, **PS Schnable** (2002) Molecular characterization of meiotic recombination across the 140-kb multigenic *a1-sh2* interval of maize. **Proc Natl Acad Sci**, 99(9):6157-6162. (*A commentary on this manuscript solicited by journal editors and written by Cliff Weil was provided in 99:5763-5765; selected as a "must read" by the Faculty of 1000 Biology*)
- Skibbe D, F Liu, TJ Wen, MD Yandea-Nelson, X Cui, J Cao, CR Simmons, **PS Schnable** (2002) Characterization of the aldehyde dehydrogenase gene families of *Zea mays* and *Arabidopsis*. **Plant Molecular Biology**, 48(5):751-764.
- Liu F, **PS Schnable** (2002) Functional specialization of maize mitochondrial aldehyde dehydrogenases. **Plant Physiology**, 130(4):1657-1674.
- Cui X, AP Hsia, F Liu, DA Ashlock, RP Wise, **PS Schnable** (2003) Alternative transcription initiation sites and polyadenylation sites are recruited during *Mu* suppression at the *rf2a* locus of maize. **Genetics**, 163(2):685-698.
- Nakazono M, F Qiu, LA Borsuk, **PS Schnable** (2003) Laser-capture microdissection, a tool for the global analysis of gene expression in specific plant cell types: Identification of genes expressed differentially in epidermal cells or vascular tissues of maize. **Plant Cell**, 15(4):583-596. (*Selected as a "must read" by the Faculty of 1000 Biology*)
- Qiu F, L Guo, TJ Wen, DA Ashlock, **PS Schnable** (2003) DNA sequence-based "bar-codes" for tracking the origins of expressed sequence tags from a maize cDNA library constructed using multiple mRNA sources. **Plant Physiology**, 133(2):475-481.

- Hochholdinger F, L Guo, **PS Schnable** (2004) Cytoplasmic regulation of the accumulation of nuclear-encoded proteins in the mitochondrial proteome of maize. **Plant Journal**, 37(2):199-208.
- **Schnable, PS**, F Hochholdinger, M Nakazono (2004) Global expression profiling applied to plant development. **Current Opinion in Plant Biology**, 7(1):50-56.
- Emrich SJ, S Aluru, Y Fu, TJ Wen, M Narayanan, L Guo, DA Ashlock, **PS Schnable** (2004) A strategy for assembling the maize (*Zea mays* L.) genome. **Bioinformatics**, 20(2):140-147.
- da Costa é Silva O, R Lorbiecke, P Garg, L Müller, M Waßmann, P Lauert, M Scanlon, AP Hsia, **PS Schnable**, K Krupinska, U Wienand (2004) The *Etched1* gene of *Zea mays* (L.) encodes a zinc ribbon protein that belongs to the transcriptionally active chromosome (TAC) of plastids and is similar to the transcription factor TFIIS. **Plant Journal**, 38(6): 923-939.
- Kirch HH, D Bartels, Y Wei, **PS Schnable**, AJ Wood (2004) The ALDH gene superfamily of *Arabidopsis*. **Trends in Plant Science**, 9(8):371-377.
- Chou HH, AP Hsia, DL Mooney, **PS Schnable** (2004) PICKY: oligo microarray design for large genomes. **Bioinformatics**, 20(17):2893-2902. (Epub 2004 Jun 4)
- Fu Y, AP Hsia, L Guo, **PS Schnable** (2004) Types and frequencies of sequencing errors in methyl-filtered and high C<sub>0</sub>t maize genome survey sequences. **Plant Physiology**, 135(4):2040-2045. (Epub: 2004 Aug 6)
- Hochholdinger F, L Guo, **PS Schnable** (2004) Lateral roots affect the proteome of the primary root of maize (*Zea mays* L.). **Plant Mol Biology**, 56(3):397-412. *Selected as an Editors' Choice by MaizeGDB, 2/05*.
- Yandea-Nelson MD, Q Zhou, H Yao, X Xu, BJ Nikolau, **PS Schnable** (2005) *MuDR* transposase increases the frequency of meiotic crossovers in the vicinity of a *Mu* insertion in the maize *al* gene. **Genetics**, 169(2):917-929. (Epub: 2004 Oct 16)
- Hsia AP, TJ Wen, HD Chen, Z Liu, MD Yandea-Nelson, Y Wei, L Guo, **PS Schnable** (2005) Temperature Gradient Capillary Electrophoresis (TGCE) – A tool for the high throughput discovery and mapping of SNPs and IDPs. **Theoretical Applied Genetics**, 111(2): 218-225. (Epub: 2005 May 24)
- Yao H, L Guo, Y Fu, LA Borsuk, TJ Wen, DS Skibbe, X Cui, BE Scheffler, J Cao, SJ Emrich, DA Ashlock, **PS Schnable** (2005) Evaluation of five *ab initio* gene prediction programs for the discovery of maize genes. **Plant Mol Biology**, 57(3):445-460.
- Ding J, K Viswanathan, D Berleant, L Hughes, ES Wurtele, D Ashlock, JA Dickerson, A Fulmer, **PS Schnable** (2005) Using the biological taxonomy to access biological literature with PathBinderH. **Bioinformatics**, 21(10):2560-2562. (Epub: 2005 Mar 15)
- Dietrich CR, MA Perera, M Yandea-Nelson, RB Meeley, BJ Nikolau, **PS Schnable** (2005) Characterization of two *gl8* paralogs reveals that the 3-ketoacyl reductase component of fatty acid elongase is essential for maize (*Zea mays* L.) development. **Plant Journal**, 42(6):844-861.
- Wen TJ, F Hochholdinger, M Sauer, W Bruce, **PS Schnable** (2005) The *roothairless1* gene of maize encodes a homolog of *sec3*, which is involved in polar exocytosis. **Plant**

**Physiology**, 138(3):1637-1643. (Epub: 2005 Jun 24; *Selected as an Editors' Choice by MaizeGDB, 4/07*)

- Fu Y\*, SJ Emrich\*, L Guo, T-J Wen, S Aluru, DA Ashlock, **PS Schnable** (2005) Quality assessment of maize assembled genomic islands (MAGIs) and large-scale experimental verification of predicted genes. **Proceedings National Academy Science**, 102(34):12282-12287. (Epub: 2005 Aug 15)
- Woll K, LA Borsuk, H Stransky, D Nettleton, **PS Schnable**, F Hochholdinger (2005) Isolation, characterization, and pericycle-specific transcriptome analyses of the novel maize lateral and seminal root initiation mutant *rum1*. **Plant Physiology**, 139(3):1255-1267. (Epub: 2005 Oct 7)
- Skibbe DS, **PS Schnable** (2005) Male sterility in maize. **Maydica**, 50:367-376.
- Kresovich S and 35 additional authors including **PS Schnable** (2005) Toward sequencing the sorghum genome: a US National Science Foundation-sponsored workshop report. **Plant Physiology**, 138:1898-1902.
- Yao H, **PS Schnable** (2005) *Cis*-effects on meiotic recombination across distinct *a1-sh2* intervals in a common *Zea* genetic background. **Genetics**, 170(4):1929-1944. (Epub: 2005 Jun 3)
- Hochholdinger F, K Woll, L Guo, **PS Schnable** (2005) The accumulation of abundant soluble proteins changes early in the development of the primary roots of maize (*Zea mays* L.). **Proteomics**, 5(18):4885-4893. (*Cover image*)
- Maher PM, H-H Chou, E Hahn, T-J Wen, **PS Schnable** (2006) GRAMA: genetic mapping analysis of temperature gradient capillary electrophoresis data. **Theoretical Applied Genetics**, 113(1):156-162. (Epub: 2006 Apr 20)
- Swanson-Wagner RA\*, Y Jia\*, R DeCook, LA Borsuk, D Nettleton, **PS Schnable** (2006). All possible modes of gene action are observed in a global comparison of gene expression in a maize F<sub>1</sub> hybrid and its inbred parents. **Proceedings National Academy Science**, 103(18): 6805-6810. (Epub: 2006 Apr 25; "*recommended*" by the Faculty of 1000 Biology; identified by Thomson Reuters Scientific's Essential Science Indicators as the most highly cited paper in the research front map "*On Applying Genome-Wide Selection*"; podcast solicited by ScienceWatch.com: <http://www.in-cites.com/media/podcasts/PatSchnable.mp3>)
- Skibbe DS, X Wang, X Zhao, LA Borsuk, D Nettleton, **PS Schnable** (2006) Scanning microarrays at multiple intensities enhances discovery of differentially expressed genes. **Bioinformatics**, 22(15):1863-1870. (Epub: 2006 May 26)
- Yandeu-Nelson MD, Y Xia, J Li, MG Neuffer, **PS Schnable** (2006) Unequal sister chromatid and homolog recombination at a tandem duplication of the *a1* locus in maize. **Genetics**, 173(4):2211-2226. (Epub: 2006 Jun 4)
- Yandeu-Nelson MD, BJ Nikolau, **PS Schnable** (2006) Effects of *trans*-acting genetic modifiers on the rates and distribution of meiotic recombination across the *a1-sh2* interval of maize. **Genetics**, 174:101-112. (Epub: 2006 Jul 2; "*recommended*" by the Faculty of 1000 Biology)
- Fu Y, TJ Wen, YI Ronin, HD Chen, L Guo, DI Mester, Y Yang, M Lee, AB Korol, DA



- Ashlock, **PS Schnable** (2006) Genetic dissection of intermated recombinant inbred lines using a new genetic map of maize. **Genetics**, 174(3): 1671-1683. (Epub 2006 Sep 1)
- Ohtsu K, H Takahashi, **PS Schnable**, M Nakazono (2007) Cell type-specific gene expression profiling in plants by using a combination of laser microdissection and high-throughput technologies. **Plant & Cell Physiology**, 48(1):3-7. (Epub: 2006 Dec 5)
  - Emrich SJ\*, WB Barbazuk\*, L Li, **PS Schnable** (2007) Gene discovery and annotation using LCM-454 transcriptome sequencing. **Genome Research**, 17(1): 69-73. (Epub: 2006 Nov 9)
  - Emrich SJ\*, L Li\*, TJ Wen, MD Yandea-Nelson, Y Fu, L Guo, HH Chou, S Aluru, DA Ashlock, **PS Schnable** (2007) Nearly identical paralogs: implications for maize (*Zea mays* L.) genome evolution. **Genetics**, 175(1):429-439. (Epub: 2006 Nov 16) (*Featured in Science (315:302) as in Editor's Choice: Highlights of the recent literature; selected as an Editors' Choice by MaizeGDB, 12/06*).
  - Travers SE, MD Smith, J Bai, SH Hulbert, JE Leach, **PS Schnable**, AK Knapp, GA Milliken, PA Fay, A Saleh, KA Garrett (2007) Ecological genomics: making the leap from model systems in the lab to native populations in the field. **Front Ecol Environ**, 5(1):19-24.
  - Li J, AP Hsia, **PS Schnable** (2007) Recent advances in plant recombination. **Current Opinion in Plant Science**, 10(2):131-135. (Epub: 8 Feb 2007)
  - Buckner B, J Beck, KF Browning, AE Fritz, LD Grantham, E Hoxha, ZN Kamvar, AN Lough, O Nikolova, **PS Schnable**, MJ Scanlon, and D Janick-Buckner (2007) Involving undergraduates in the annotation and analysis of global gene expression studies: creation of a maize shoot apical meristem expression database. **Genetics**, 176(2):741-747.
  - Kalyanaraman A, SJ Emrich, **PS Schnable**, S. Aluru (2007) Assembling genomes on large-scale parallel computers. **Journal of Parallel and Distributed Computing**, Vol. 67:1240-1255. (*Special issue devoted to IPDPS best papers*)
  - Zhang X, S Madi, LA Borsuk, DS Nettleton, RJ Elshire, B Buckner, D Janick-Buckner, J Beck, M Timmermans, **PS Schnable**, MJ Scanlon (2007) Laser microdissection of narrow sheath mutant maize uncovers novel gene expression in the shoot apical meristem. **PLoS Genetics**, 3(6):1040-1052. (*Selected an Editors' Choice by MaizeGDB, 7/07*).
  - Li J, LC Harper, I Golubovskaya, CR Wang, DF Weber, RB Meeley, J McElver, B Bowen, WZ Cande, **PS Schnable** (2007) Functional analysis of maize RAD51 in meiosis and double-strand break repair. **Genetics**, 176(3): 1469–1482. (*Selected by journal editors as an "Issue Highlight"; selected as an Editors' Choice by MaizeGDB, 8/07*).
  - Barbazuk WB, SJ Emrich, HD Chen, L Li, **PS Schnable** (2007) SNP discovery via 454 transcriptome sequencing. **Plant J**, 51(5): 910-918. (*Cited in Wikipedia: <http://en.wikipedia.org/wiki/RNA-Seq>*)
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*an Editors' Choice by MaizeGDB, 10/07).*

- Dembinsky D, K Woll, M Saleem, Y Liu, Y Fu, LA Borsuk, T Lamkemeyer, C Fladerer Claudia, J Madlung, B Barbazuk, A Nordheim, D Nettleton, **PS Schnable**, F Hochholdinger (2007) Transcriptomic and proteomic analyses of pericycle cells of the maize primary root. **Plant Physiology**, 145(3):575-578. (Epub: 2007 Aug 31)
- Li J, TJ Wen, **PS Schnable** (2008) Role of RAD51 in the repair of *MuDR*-induced double-strand breaks in maize (*Zea mays* L.). **Genetics**, 178(1):57-66. (*Selected as an Editors' Choice by MaizeGDB, 2/08*).
- Hochholdinger F, TJ Wen, R. Zimmermann, P Chimit-Marolle, O da Costa e Silva, W Bruce, KR Lamkey, U Wienand, **PS Schnable** (2008) The maize (*Zea mays* L.) *roothairless3* gene encodes a putative GPI-anchored, monocot-specific, COBRA-like protein that significantly affects grain yield. **Plant Journal**, 54(5):888-898. (*Selected as an Editors' Choice by MaizeGDB, 6/08*).
- Buckner B, KA Swaggart, CC Wong, HA Smith, KM Aurand, MJ Scanlon, **PS Schnable**, D Janick-Buckner (2008) Expression and nucleotide diversity of the maize *RIK* gene. **J Heredity**, 99(4):407-16. Epub 2008 Feb 28.
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## TECHNOLOGY TRANSFER-PATENTS

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- 7,524,678 Materials and methods for the alteration of enzyme and acetyl-CoA levels in plants (issued on April 28, 2009).
- 7,056,672 Method of identifying an open reading frame using a nucleic acid molecule encoding multiple start codons and histidine tags (issued 6 June 2006)
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