

CURRICULUM VITAE

Lila O. Vodkin, Ph.D.

OFFICE:

Department of Crop Sciences
384 Edwin R. Madigan Laboratory
University of Illinois
Urbana, IL 61801
Telephone: 217-244-6147
Email: l-vodkin@illinois.edu

EDUCATION:

University of South Carolina	B.S. Physics	1972
University of South Carolina	M.S. Biology	1975
North Carolina State University	Ph.D. Genetics	1978

PROFESSIONAL EXPERIENCE:

2014-present Professor Emerita of Crop Molecular Biology, Ewing Chair Emerita

2004-2014 Charles Adlai Ewing Endowed Chair in Soybean Molecular Biology, Department of Crop Sciences, University of Illinois at Urbana-Champaign

2004-2013 Affiliate of the Institute of Genomic Biology, University of Illinois.

2002-2006 Member, Executive Committee, Agricultural Genome Sciences and Public Policy Training Grant Program, UI.

1995-2014 Professor of Crop Molecular Biology and Genetics, Department of Crop Sciences, University of Illinois at Urbana-Champaign

1989-1993 Member (Chair in 1991), Genetics Graduate Program, UI

1987-2014 Member, Physiological and Molecular Plant Biology Graduate Program, UI.

1987-1995 Associate Professor of Crop Molecular Biology and Genetics, Center for Excellence in Crop Molecular Genetics and Genetic Engineering, Department of Agronomy, University of Illinois at Urbana-Champaign

1978-1987 Research Geneticist, GS11-13, Beltsville Agricultural Research Center, Agricultural Research Service, US Dept of Agriculture, Beltsville, MD

1974-1978 Graduate Research Assistant, also Instructor (1977) Dept. of Genetics, North Carolina State University, Raleigh, NC

1973-1975 Graduate Research Assistant, also Teaching Assistant, Dept. of Biology, Univ. of South Carolina, Columbia, S. C.

HONORS, RECOGNITIONS, AND OUTSTANDING ACHIEVEMENTS

Researcher of the Year Award, Illinois Soybean Association, 1993

Team Award for Excellence in Soybean Research (member of the Soybean Regeneration and Transformation Team) Illinois Soybean Association, 1996

“Incomplete List of Teachers Ranked as Excellent by Their Students”, Univ. of Illinois

AGRON 446 (Plant Gene Regulation)	Spring, 1993
AGRON 447 (Gene Expression in Seed Development)	Spring, 1994
CPSC 446 (Plant Gene Regulation)	Spring, 1996
CPSC 493 (Genomic Approaches to Plant Gene Regulation)	Spring, 2004
CPSC 566 (Plant Gene Regulation)	Spring, 2007
CPSC 566 (Plant Gene Regulation)	Spring, 2008
CPSC 566 (Plant Gene Regulation)	Spring, 2009
CPSC 566 (Plant Gene Regulation)	Spring, 2011

Phi Kappa Phi Honorary Society, 1996

Senior Faculty Award for Excellence in Research, College of Agricultural, Consumer and Environmental Sciences, 1999

Paul A. Funk Recognition Award for Contributions to the Betterment of Agriculture, Natural Resources, and Human Systems, College of Agricultural, Consumer and Environmental Sciences, 2003

INVITED LECTURES AND INVITED CONFERENCE PRESENTATIONS

"Structure and expression of soybean lectin genes", Symposium on Chemical Taxonomy, Molecular Biology, and Function of Plant Lectins, Asilomar, CA, 1983.

“An insertion sequence interrupts expression of a soybean lectin gene”, Department of Biology Seminar Series, Yale University, New Haven, CT, 1983.

"Structural features of a soybean transposable element", Plant Genetics Symposium, joint Genetics Societies of America and Canada National Meeting, Vancouver, Canada, 1984.

"Lectin genes and a transposable element in soybean", Symposium on Protein Improvement in Cereals and Oilseeds through Traditional and Modern Genetic Approaches, American Association of Cereal Chemists National Meeting, Minneapolis, MN, 1984.

“Lectin genes and a transposable element in soybean”, Biochemistry Program Seminar Series, Ohio State University, Columbus, OH, 1984.

"Common structural patterns between the soybean lectin insertion and transposable elements in other plant species", Beltsville Symposium X: Biotechnology for Solving Agricultural Problems, Beltsville Agricultural Research Center, US Department of Agriculture, Agricultural Research Service, 1985.

- “Gene expression in soybean seed development”, Department of Biology Seminar Series, University of Pennsylvania, 1985.
- “Gene expression in soybean seed development”, Department of Genetics Seminar Series, Iowa State University, Ames, IA, 1985.
- "Molecular biology of seed proteins and lectins", 9th Annual Symposium in Plant Physiology, University of California, Riverside, CA, 1986.
- “Soybean molecular genetics”, Department of Botany, University of Texas, Austin, TX, 1986.
- "Gene expression in seed development", Symposium on Biochemistry and Molecular Biology of Oilseed Proteins and Carbohydrates, American Oil Chemists Society National Meeting, New Orleans, LA, 1987.
- "Plant transformation", Workshop on Molecular Methods in Crop Research, 79th National meeting, American Society of Agronomy, Atlanta, GA, 1987.
- "Molecular analysis of mutable and regulatory genes in soybean", DuPont Experimental Research Station, Wilmington, DE, 1989.
- "Molecular genetics of soybean seed proteins", Biotechnology Seminar Series, Clemson University, Clemson, SC, 1993.
- "Molecular exploitation of soybean genetic resources", Symposium on Plant Genome Analysis, Fourth Gatlinburg Symposium, Knoxville, TN, 1993.
- "Improvement of seed protein quantity and quality”, USA-Taiwan, Initiative on Biotechnology for Sustainable Agriculture, National Research Council, USA, Taiwan, ROC, Granlibakken, CA, 1993.
- “The paradox of dominant mutations that affect flavonoid synthesis in soybean”, Department of Genetics Seminar Series, North Carolina State University, Raleigh, N.C., 1995.
- “Duplication and deletions affecting seed color in soybean”, Department of Plant Sciences, University of Western Ontario, Ontario, Canada, 1997.
- “Molecular genetics of seed color pigmentation in soybean”, Symposium at the National Maize Genetics Meeting, Lake Geneva, WI, 1998.
- “Soybean molecular genetics”, Biochemistry Seminar Series, University of Missouri-Columbia, 1998.
- “Naturally occurring duplications and deletions involved in tissue specific silencing of a chalcone synthase gene family”, 7th Biennial Meeting on the Cellular and Molecular Biology of Soybean, Knoxville, TN, 1998.
- “Molecular approaches to soybean cyst nematode resistance”, National SCN Conference, American Soybean Association, Orlando, FL, 1999.
- “The NSF functional genomics program for soybean”, Legume Workshop Session of Plant and Animal Genome VII Meeting, San Diego, CA, 1999.

- “Soybean functional genomics”, Soybean Breeder’s National Meeting, St. Louis, MO, 1999.
- “Soybean EST and functional genomics projects”, Biotechnology Session of Global Soy Forum International meeting, Chicago, IL, 1999.
- “Soybean functional genomics”, Legume Workshop Session of Plant and Animal Genome VIII Meeting, San Diego, CA, 2000.
- “Overview of soybean EST and functional genomics projects”, Soybean Breeders and Entomologists National Meeting, St. Louis, MO, 2000.
- “Soybean functional genomics and microarray resources”, Plenary Session, 8th Biennial Conference on Molecular and Cellular Biology of the Soybean, Lexington, KY, 2000.
- “Structural and functional genomics projects in soybean”, Symposium at Midwest Soybean Conference, Indianapolis, IN, 2000.
- “Structural and functional genomics projects in soybean”, Cambridge Healthtech Institute’s Conference on Impact of Molecular Biology on Crop Production and Crop Protection, Minneapolis, MN, 2000.
- “Project management”, PI Awardee meeting of the NSF Plant Genome Program, Washington, D.C., 2000.
- “Genes and genomics”, Institute of Food Technologists National Meeting, Chicago, IL, 2000.
- “Microarray and genomic resource development in soybean”, Illinois State University, Bloomington, IL, 2000.
- “Development of microarray technology and genomics resources for soybean” INRA, Versailles, France, 2000.
- “Functional genomics and microarray expression analysis in soybean”, BASF Corporation, Research Triangle, Raleigh, NC, 2000.
- “Functional genomics resources for soybean”, Legume Workshop Session of Plant, Animal, Microbe Genome IX Meeting, San Diego, CA., 2001.
- "Global expression analysis in soybean" Plant Pathology Seminar Series, Iowa State University, Ames, IA, 2001.
- “Management of center projects”, speaker and panel participant, How to Apply for and Manage NSF Center Grants, EPSCOR Meeting, Lexington, KY, 2001.
- "Basics of DNA, genetics, and genomics”, Illinois Advanced Judicial Academy, Allerton, Illinois, 2001, (attended by approximately 150 judges in Illinois).
- "The global view of gene expression response to environmental challenges using microarray technology developed for soybean", Olga G. Nalbandov Symposium on The Biology of Crop Response and Adaptation to Global Atmospheric Change, University of Illinois, 2001.

- “Gene functional analysis in soybean by microarray”, Legume Workshop Session of Plant, Animal, Microbe Genome X Meeting, San Diego, CA, 2002.
- “Global expression analysis in soybean”, Biological Sciences Department Seminar, Northern Illinois University, Dekalb, IL, 2002.
- “Toward a global view of soybean development using microarrays”, Plenary Session, International Conference on Legume Genetics and Genomics, Minneapolis, MN, 2002.
- “Global expression analyses in soybean using microarrays”, American Phytopathological Society National Meeting, Milwaukee, WI, 2002.
- “Global expression analyses in soybean using microarrays”, Plenary Session of 9th Biennial Conference on Cellular and Molecular Biology of the Soybean, University of Illinois, Urbana, IL, 2002.
- “Global expression profiling in soybean using microarrays”, Donald Danforth Plant Science Center, St. Louis, MO, 2003.
- “Genetic and molecular control of the flavonoid pathway” Phytochemical Society of North America Symposium, Peoria, IL, 2003.
- “Transcript profiling in soybean using microarrays”, Symposium, Crop Science Society of America National Meeting, Denver, CO, 2003.
- “Functional genomics and microarray analysis in soybean for improvement of soybean and other legumes”, NSF-sponsored U.S.-Egypt Workshop on Genetic Engineering and Genomics, Alexandria, Egypt, 2003.
- “How genomics technologies enable us to learn more about genetics, development, and physiology: Examples from soybean”, Indiana University Southeast, New Albany, IN. 2004.
- “Development and use of soybean microarrays in gene discovery”, Symposium, VII World Soybean Research Conference, Foz do Iguassu, Paraná State, Brazil, 2004.
- “Functional Genomics” 10th Biennial Conference of the Cellular and Molecular Biology of Soybean, University of Missouri, Columbia, MO., 2004.
- “Using global expression patterns from microarray data to expand our knowledge of soybean development, physiology, and genetics”, for Plant Breeding and Genetics Graduate Student Symposium, Michigan State, 2004.
- “Biotechnology Research” presented for “Science of Soy” Forum for Illinois Soybean Association, Urbana, 2004.
- “Soybean cDNA and oligo arrays” presented for Assessment and Strategy Workshop for Soybean Genomics, sponsored by United Soybean Board, St. Louis, MO. 2005.
- “Applications of nanotechnology to plant genomics and gene expression” invited talk for Nanotechnology workshop for the American Society of Biological Engineers national meeting in Portland, Oregon, 2006.

- “Gene identification in soybean by microarray analysis using near isogenic lines”, invited talk for Biennial Molecular and Cellular Biology of Soybean meeting, Lincoln, NE, 2006.
- “Tissue specific production of siRNAs mediated by a naturally occurring cluster of chalcone synthase genes in soybean” selected for oral presentation in the session on “Small RNAs” at the International Society of Plant Molecular Biology meeting, Adalaide, Australia, 2006.
- “Applications of Nanotechnology to Plant Genomics and Gene Expression” invited talk for the American Society of Biological Engineers national meeting in Portland, Oregon, 2006.
- “Gene identification in soybean through microarray analysis”, invited talk for Biotechnology Symposium at Crop Science Society of America, Indianapolis, IN, 2006.
- “Genomics of seed and seedling development in soybean”, invited talk for Soybean Genomics Workshop session at Plant and Animal Genome XV Conference, 2007.
- “Toward an understanding of seed and seedling development using functional genomics resources and isogenic lines affecting developmental processes in soybean”, Invited talk for Functional Genomics Workshop session at Plant and Animal Genome XVI Conference, San Diego, CA, 2008.
- “Flux in the coding and small RNA transcriptomes during soybean seed and seedling development”, invited talk for Biennial Molecular and Cellular Biology of Soybean meeting, Indianapolis, IN, 2008.
- “Soybean genomics and biotechnology” invited presentation for DOW AgroSciences, January 26, 2009.
- “The small RNA transcriptome of soybean”, selected for presentation at minisymposium at American Association of Plant Biologist national meeting, Honolulu, Hawaii, July 2009.
- “Endogenous small RNA populations in soybean including tissue-specific siRNAs that down-regulate the chalcone synthase gene family. Invited talk for Functional Genomics Workshop session at Plant and Animal Genome XVIII Conference, San Diego, CA, 2010.
- “Tissue specific inhibition of the flavonoid pathway by endogenous chalcone synthase siRNAs in Glycine max. Invited talk for Small RNA Workshop session at Plant and Animal Genome XVIII Conference, San Diego, CA, 2010.
- “Plant Gene Silencing and Application of RNAi to plant improvement” Invited talk for United Soybean Board Production Committee meeting. Birmingham, AL., February 18, 2010.
- Invited Presentation for Illinois Soybean Association meeting, February, 2010.
- “Discovering the Small RNAome and Transcriptome in Seed Development Using High Throughput Sequencing”, Invited talk for 13th Biennial Meeting of Cellular and Molecular Biology of Soybean, Raleigh, N.C., 2010.
- Presentation for Biotechnology/Nanotechnology panel for the 2011 Illinois Soybean Outreach Summit for ISA, Urbana, February 25, 2011.
- Invited Presentation for visiting United Soybean Board officials, University of Illinois, July 19, 2011.

Invited speaker for the Society for In Vitro Biology meeting symposium on “RNAi in Plant, Insect, and Human Health”, Raleigh, N.C., June 5, 2011.

Invited presentation “Revealing the Blueprint for Soybean Seed Composition Using “Next Generation” Sequencing” for Workshop on Protein and Amino Acid Composition organized by Illinois Soybean Association, St. Louis, MO., February 26, 2012.

Since Emerita status in 2014

Invited presentation “Hi-Seq approaches to unravel Mendelian traits affecting seed color, morphology, and composition”, 15th Biennial Meeting of Cellular and Molecular Biology of Soybean, Minneapolis, MN. August, 2014.

Invited presentation “The intersection of genomics and nanotechnology: examples from soybean seed and seedling development” for Corn Breeder’s School, University of Illinois, March 3, 2015.

Invited presentation “A mutation in an Argonaute protein explains the epistatic interaction of the *K* and *I* loci controlling seed color patterns” for 16th biennial conference on Molecular and Cellular Biology of Soybean, Ohio State University, Columbus, OH, August 10, 2016.

Invited presentation “A mutation in an Argonaute protein explains the epistatic interactions of the *K* and *I* loci which control soybean seed color patterns through levels of chalcone synthase siRNAs” for Small RNA Workshop at the Plant and Animal Genome XXV Conference, San Diego, CA. January 14, 2017.

Invited presentation “A Molecular Catalog of Independent Mutations that Inactivate Argonaute5 with Effects on the Gene Silencing Pathway in Soybean” 17th Biennial Conference on Molecular and Cellular Biology of Soybean, University of Georgia, Athens, GA, August 28, 2018.

MEMBERSHIPS IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

American Society of Plant Physiologists (Biologists), 1979-present.

American Genetics Association, 1994 – present.

American Association for Advancement of Science, 1987-present.

Crop Science Society of America, 1979 - 1985, 1992 – 2014.

Genetics Society of America, 1973 – present.

International Society of Plant Molecular Biology, 1983 – 2006.

CFAR (Council on Food and Agricultural Research in Illinois) 2000-2013.

OFFICES HELD IN AND SERVICE TO PROFESSIONAL AND SCIENTIFIC SOCIETIES

Member, Program Committee for National Meeting, American Society of Plant Physiologists, 1987-88

Elected to Council of American Genetic Association, 1994-1997 (with annual Council meetings)

Elected Secretary of American Genetic Association, 1997-2000 (with annual Council meetings)

Elected as member of the Soybean Genetics Executive Committee, 2009-2012 by the national soybean community of researchers

Appointed as Ex Officio member of Soybean Genetics Executive Committee 2012-2015

EDITORSHIPS OF JOURNALS

Editorial Board, *Plant Physiology*, 1982-1989
Guest Editor, *Development Genetics* Special issue, 1989
Editorial Board, *Development Genetics*, 1984-1992

RESEARCH RESPONSIBILITIES:

Conceive and lead research programs in crop molecular biology, molecular genetics, and genomics, with emphasis on the soybean. Exploit genetic resources available in the soybean to understand how specific traits or phenotypes are controlled by gene action at the molecular level. Major past and present themes in these programs include: (a) Development of a seed specific promoter and production of transgenic soybean plants for improving seed protein quality and quantity, and for metabolic engineering; (b) Elucidate the soybean flavonoid pathway genes and their control by transposable elements and naturally occurring gene silencing mechanisms; (c) Led a multi-university program on soybean functional genomics that included development of EST, cDNA, and oligo microarray resources for soybean; (d) Elucidate the flux of the transcriptome and the small RNA transcriptome using ultra-high throughput sequencing to understand control of networks of gene expression in important traits including seed quality and composition; (e) Contribute to cross-campus programmatic initiatives in functional genomics, bioinformatics, and nanotechnology; and (f) Direct the research of graduate students and post-doctoral scientists, and provide scholarly mentoring for their career development.

GRANTS & GIFTS RECEIVED TO SUPPORT PERSONAL RESEARCH

1. Vodkin, L.O. Structural analysis, distribution, and uses of a soybean insertion sequence. USDA Competitive Research Grants Program, Plant Genetic Mechanisms Section, 1983-87, \$80,000.
2. Vodkin, L.O. Function of a developmentally regulated and tissue specific plant promoter. University of Illinois Biomedical Research Support Grant, 1988-89, \$6,500.
3. Vodkin, L.O., and Kriz, A.L. Pulsed field electrophoresis equipment for DNA analysis. University of Illinois Biotechnology Center, \$7,000, 1988. [\$7,000 to LV].
4. Vodkin, L.O. Soybean molecular biology. United Agriseed Inc , (gift) 1988, \$5,000.
5. Hymowitz, T., and Vodkin, L.O. Cytogenetic and molecular approaches to soybean genome mapping. Illinois Soybean Program Operating Board, \$147,000, 1990-93, [\$60,000 to LV].
6. Hymowitz, T., and Vodkin, L.O. Soybean aneuploids and *in situ* hybridization, E.I DuPont Company (gift) 1988-90, \$80,000 [\$40,000 to LV].
7. Vodkin, L.O. Genetic and molecular analysis of a soybean hydroxyproline-rich protein. USDA Competitive Research Grants Office, Plant Growth and Development Section, 1990-94, \$110,000.
8. Vodkin, L.O. Analysis of mutable soybean genes. Pioneer Hi-bred International, Inc. 1990-94, \$97,000.
9. Vodkin, L.O., and Widholm, J.M. Creation of high protein adapted cultivars by genetic engineering. Illinois Soybean Program Operating Board, \$147,876, 1990-95. [\$100,000 to LV]

10. Vodkin, L.O., and Widholm, J.M. Expression of economically important proteins in soybean seed. Biotechnology Research and Development Corporation, 1991-92, \$79,000 [\$79,000 to LV].
11. Vodkin, L.O. Tissue specific promoters for disease resistance strategies. Illinois Soybean Program Operating Board, 1992-95, \$83,885.
12. Vodkin, L.O. Targeting agronomically important genes by RAPD analysis of near isogenic soybean lines. United Soybean Board/American Soybean Association, 1992-94, \$78,646.
13. Vodkin, L.O. Screening Chinese germplasm by RAPD analysis. U.S. Department of Agriculture-ARS, 1992-94, \$25,000.
14. Nickell, C. D., Vodkin, L.O. and Stephens, P.A. Agronomic and molecular analysis of an active transposable element in soybean. Illinois Soybean Program Operating Board, 6/92-6/95, \$156,477 [\$75,000 to LV].
15. Vodkin, L.O. Expression of flavonoid pathway genes in soybean. Illinois Soybean Program Operating Board, 8/94-8/97, \$97,466.
16. Vodkin, L.O. Tissue specific promoters for disease resistance strategies. Illinois Soybean Program Operating Board. 8/21/95 - 8/20/97, \$108,000.
17. Nickell, C.D., and Vodkin, L.O. Agronomic and molecular evaluation of an active transposable element in soybean. Illinois Soybean Program Operating Board, 6/1/95 - 5/31/98, \$233,081 [\$100,000 to LV].
18. Widholm, J.M., Vodkin, L.O., Farrand, S. K. Soybean improvement by genetic transformation 3/1/95 - 2/28/98, \$240,610 [\$80,000 to LV].
19. Polacco, J.C., Vodkin, L.O., and Veum, T. Genetic engineering of low phytic acid soybeans. Illinois-Missouri Biotechnology Alliance, 3/1/96-2/29/99, \$325,265 [\$139,638 to LV].
20. Widholm, J. M., Vodkin, L. O., Bent, A. F., Farrand, S. K., and 4 co-PI's at four other universities, Improvement in transformation and regeneration of soybean. North Central Soybean Research Program, 3/1/96-2/28/99, \$1.8 million [\$270,511 to LV].
21. Vodkin, L.O. Toward isolation of a soybean cyst nematode resistance gene. 1997-2000. \$243,776
22. Shoemaker, R.C., Keim, P., Vodkin, L.O., Retzel, E. F., Waterston, R., and Smoller, D. A public EST project for soybean. North Central Soybean Research Program/United Soybean Board, 3/1/98-2/28/03, \$4.4 million [\$348,451 to LV].
23. Vodkin, L.O., Shoemaker, R.C., Keim, P., Polacco, J., Young, N., and Retzel, E. F. A functional genomics program for soybean, National Science Foundation, Plant Genome Program, 10/1/98-9/30/02, \$4.6 million [\$1.6 million to LV].
24. Widholm, J.M., and Vodkin, L.O. Soybean improvement by genetic transformation. Illinois Soybean Program Operating Board, 3/1/98 to 2/29/01, \$365,594 [\$80,000 to LV].

25. Vodkin, L.O. Molecular characterization and isolation of soybean cyst nematode resistance genes, subcontract on multiuniversity "Application of Biotechnology to Control of Soybean Cyst Nematode" W. Fehr, Iowa State Univ., PI + 14 coPI's, United Soybean Board 10/1/98 to 9/30/02, [\$240,000 to LV].
26. Larson, R.A, Smith, M.A.L. and Vodkin, L.O. Potentially profitable antioxidants from black soybean lines. Illinois-Missouri Biotechnology Alliance, 10/1/00-6/30/03, \$269,195 [\$89,355 to LV].
27. Rocheford, T. R., Vodkin, L.O., and Korban, S. Equipment grant for crop biotechnology enhancement. Illinois-Missouri Biotechnology Alliance, 6/00, \$215,000 [\$50,000 to LV].
28. Widholm, J.M, and Vodkin, L.O. Subcontract on "Soybean tissue culture and genetic engineering center", Glenn Collins, PI, University of Kentucky prime + 5 co-PI's, 1/01 to 12/03, \$274,630 [\$137,315 to LV].
29. Tranel, P. J., and Vodkin, L.O. Secondary effects of glyphosate in soybean. Illinois Soybean Program Operating Board, 1/01/00 to 10/30/03, \$84,700 [\$25,000 to LV].
30. Vodkin, L.O. and Widholm, J.M. Soybean improvement through biotechnology and functional genomics. Illinois Soybean Program Operating Board, 11/01-12/06, \$265,000 [\$132,500 to LV].
31. Vodkin, L.O. Expression profiles of gene family members in plants using quantitative RT-PCR. Research Board, University of Illinois, 8/01-7/02, \$21,000.
32. Vodkin, L.O., Shoemaker, R.C. and Retzel, E. F. Supplemental award to "Soybean functional genomics program", National Science Foundation, 10/1/02-9/30/04, \$514,100 [\$294,940 to LV].
33. Shoemaker, R. C., and Vodkin, L.O. Gene family and promoter identification in soybean. North Central Soybean Research Program, 3/1/02 to 2/29/05, \$426,000, [\$208,695 to LV].
34. Shoemaker, R.C. and Vodkin, L.O. Functional analysis of soybean genes for iron deficiency chlorosis. North Central Soybean Research Program, 3/1/02 to 2/29/04, \$150,000, [\$83,420 to LV].
35. Vodkin, L.O. Adding value to agriculture through genomics. USDA 8/1/02 to 8/1/07, \$700,471.
36. Vodkin, L.O., Clough, S.J., and Widholm J.M. Application of genomic and transformation technologies to control of soybean diseases, subprojects on USDA-CSREES "Soybean Disease Biotechnology Center", Sonka, S., PI, 7/1/02 - 6/30/05, \$497,088 [\$165,636 to LV].
37. Korban, S., Vodkin, L. O., Liu, L., Aldwinckle, H., and Carroll, N. Apple functional genomics. National Science Foundation, 9/1/03-9/30/06, \$1,659,708 [\$310,000 to LV].
38. Vodkin, L.O. Creation of resource for soybean functional genomics using cDNA and synthetic oligo arrays. 3/1/03-2/28/05 United Soybean Board, \$300,000.
39. Vodkin, L.O. and Widholm, J.M. Soybean improvement by insertion of multiple genes. Illinois Soybean Program Operating Board and approved agreement with Chromatin, Inc. 3/1/06-2/29/08 (\$300,000 total [\$150,000 to LV])

40. Vodkin, L.O. and Liu, C. Nanoliter scale extraction and analysis of DNA and RNA from one or a few cells. Seed funding to stimulate cross interactions between Soybean Disease Biotechnology Center and Center for Nanoscale Science and Technology, 7/15/05-7/15/06, \$35,000 [\$12,000 to LV]
41. Paulsen, M., Strano, M, Vodkin, L.O., and Ahmad, I. Grain traceability using nanoimprinting. Seed funding to stimulate cross interactions between Soybean Disease Biotechnology, NSRL, and Center for Nanoscale Science and Technology, 7/15/05-7/15/06, \$35,000 [\$3,700 to LV]
42. Vodkin, L.O., Gustavo Caetano-Anolles, Matthew Hudson, and Steve Moose, The Sentinel Crop Gene Identification Project, awarded, \$270,000 total, 2006-2009. [67,500 to LV].
43. Widholm, J.M. and Vodkin, L.O. Soybean Genetic Engineering Center Grant (multi-university with Parrot, Finer, Collins) United Soybean Board, 1/1/05-12/31/07 \$273,600 total [136,800 to LV]
44. Vodkin, L.O. and Hartman, G. Evaluation of naturally-occurring soybean secondary products for anti-fungal properties. USDA-CSREES Soybean Disease Biotechnology Center Subproject, \$116,000, 7/15/06-7/14/09.
45. Lin, Y., Widholm, J., and Vodkin, L.O. Exploring the mechanism of soybean oil deposition and increasing soybean oil content through genetic engineering. Illinois-Missouri Biotechnology Alliance, \$100,000. 9/1/06-8/31/08. [\$18,000 to LV]
46. Vodkin, L.O., PI, and Widholm, J.M. Genomics and biotechnology approaches to identify gene function in soybean. Illinois Soybean Association, 07/15/06-07/14/09 \$180,000 [90,000 to LV]
47. Vodkin, L.O. Genomic approaches to adding value to agriculture, USDA, 2006-2011 \$646,367.
48. Vodkin, L.O. and Widholm, J.M. Soybean Genetic Engineering Center Grant (multi-university with Parrot, Finer, Collins). "United Soybean Board, 1/1/2008-12/31/2010. \$388,800 [\$194,400]
49. Vodkin, L.O., Hudson, M., Caetano-Anolles, G. and Moose, S. The role of small RNAs in shaping evolution and diversity of crop plants. Seed funding from Critical Research Initiatives Program of the Office of Vice Chancellor for Research, University of Illinois. 2006-2009, \$200,000 [50,000 to LV].
50. Vodkin, L.O. and Clough, S.J. The role of small RNAs in the defense transcriptome. USDA-CREES Soybean Disease Biotechnology Center subproject. 8/01/07-9/30/08 \$113,000 [93,000 to LV]
51. Caetano-Anolles, G. and Vodkin, L.O. Towards a systems biology approach to metabolic networks for metabolic engineering in soybean. CFAR Sentinel 2007-2009 \$140,500 [\$70,250 to LV]
52. Vodkin, L.O. and Widholm, J.M. Functional genomic approaches to manipulate the developmental program setting protein and oil content in soybean. Illinois-Missouri Biotechnology Alliance, 10/1/08-9/30/11, \$163,020 [100,000 to LV]
53. Vodkin, L.O., Hudson, M., Clough, S. and Caetano-Anolles, G. The contribution of small RNAs toward modulating gene networks for protein and oil composition in soybean. 10/1/08-9/30-10. United Soybean Board, \$382,261 [\$185,830 to LV]

54. Vodkin, L.O. Application of a novel genomics approach to monitor protein synthesis during disease response and resistance in soybean. USDA-CSREES Soybean Disease Biotechnology Center Subproject, 7/15/09-7/14/12, \$61,200.
55. Cunningham, B. PI, Vodkin, L.O., and Bollero, G. Photonic crystal surfaces for label-free detection and fluorescence amplification: Application to DNA microarrays. National Institutes of Health. 1/109-12/31/13. \$1,189,676 [\$378,304 to LV]
56. Vodkin, L.O. and Cunningham, B. Applications of photonic crystal arrays to discover and validate genes involved in seed protein composition or disease resistance. Illinois Soybean Association, 1/1/10-12/31/10, \$60,000 [30,000 to LV].
57. Vodkin, L.O. and Widholm, J.M. Supplement to Soybean Genetic Engineering Center Grant (multi-university with Parrot, Finer, Collins). United Soybean Board, 4/1/2009-3/31/2011. \$81,200 [\$40,600 to LV]
58. Vodkin, L.O. and Widholm, J.M. Engineering effective resistance to the soybean cyst nematode (multi-university with Parrot, Finer, Collins). United Soybean Board, 1/1/2011-9/30/13, \$505,086 [\$252,083 to LV]
59. Vodkin, L.O. and Widholm, J.M. Revealing the blueprint for soybean seed composition using “Next Generation” sequencing. Illinois Soybean Association, 8/15/09-8/15/11, \$120,000. [60,000 to LV]
60. Vodkin, L.O., Hudson, M., Clough, S. Small RNAs that target gene networks for protein and oil composition in soybean. United Soybean Board, 10/1/10-9/30-12. \$390,479 [\$226,000 to LV]
61. Vodkin, L.O. and Bailey, R. Label-free and real time quantitation of soybean small RNAs using microring resonators. USDA-CSREES Soybean Disease Biotechnology Center Subproject, 7/15/10-7/14/13, \$70,000 [35,000 to LV].
62. Vodkin, L.O. and Cunningham, B. Applications of photonic crystal arrays to discover and validate genes involved in seed protein composition or disease resistance. Illinois Soybean Association, 1/1/2010-12/31/2011, \$60,000 [30,000 to LV].
63. Vodkin, L. O. Revealing the blueprint for soybean seed composition using Next Generation Sequencing. Illinois Soybean Association, subproject on the Breeding and Biotechnology Managed Research Area [\$60,000 to LV].
64. Vodkin, L.O. Decoding the networks that set protein and amino acid composition. United Soybean Board, \$128,674. 10/1/2012-12/31/13.
65. Vodkin, L.O. and Cunningham, B., Application of photonic crystal arrays to quantify transcription factors and other low abundance proteins in soybean that could enhance seed composition and yield. United Soybean Board, 10/1/12-1/31/14. \$75,000 [37,500 to LV].
66. Vodkin, L. O. and Cunningham, Application of photonic crystal arrays for gene expression and detecting low abundance proteins. NSF CABPN (Center for Agricultural, Biomedical, and Pharmaceutical Nanotechnology) subproject supported by mentor company Illinois Soybean Association. 8/1/2011-7/31/2014. \$50,000.

67. Vodkin, L.O. and Widholm, J.M. Engineered resistance to soybean cyst nematode via induced gene silencing (RNAi). North Central Soybean Research Program subcontract from Kansas State University. 3/1/2011-2/28/14. \$126,000 [\$63,000 to LV].

Active since Emerita status in 2014

68. Vodkin, L.O. "Center for soybean genetic engineering." United Soybean Board subcontract from the University of Georgia. \$367,113. 10/1/2013-9/30/2016.
69. Vodkin, L.O. Engineered resistance to soybean cyst nematode via induced gene silencing. North Central Soybean Research Program subcontract from Kansas State University. \$77,886. 4/1/2014-9/30/2016.
70. Vodkin, L.O. Decoding the networks that set protein and amino acid composition. United Soybean Board. \$367,113. 1/1/14-12/31/16.
71. Vodkin, L.O. New breeding technologies applied to meal. United Soybean Board subcontract from University of Georgia. Year 1 \$95,083 10/1/2016-9/30/2017; Year 2 \$95,605 10/1/2017-9/30/2018. Year 3 \$96,927 10/1/2018-9/30/2019; total \$286,293 10/1/2016-6/30/2019.

Total Grant and Gift Support (career to date)
Total to Research Program of L. O. Vodkin

\$26,473,236
\$11,077,818

***PROGRAM GRANTS TO SUPPORT CAMPUS, COLLEGE, AND DEPARTMENT
INITIATIVES FOR INFRASTRUCTURE OR PERSONNEL, WITH LEADERSHIP
OR CO-LEADERSHIP BY L. O. VODKIN***

- Vodkin, L.O., and Rocheford, T. R. Plant Genomics and Gene Mapping: Identifying genes for seed quality traits in model and crop plants, ACES Office of Research and UI Office of International Affairs as part of a joint program between the Univ. of Illinois and INRA, the French National Agricultural Research Agency, 1998, \$8,000. [\$3000 to LV].
- Lewin, H., Blaschek, H., Korban, S., Rocheford, T. R., Sunden, S. and Vodkin, L.O. Program in agrigenomics, Council on Food and Agricultural Research, 8/97-8/99, \$200,000 for equipment and support to the University of Illinois Biotechnology Center.
- Vodkin, L.O., Rocheford, T.R., Diers, B.W., Moose, S.P., Widholm, J.M. and Dudley, J.W. 2000. Lead author of the program proposal "Genome-based Enhancement of Plant Functional Traits" for the Post-Genomics Institute intra-campus competition. A Dec. 13, 2000 award was made to the Department of Crop Sciences and College of ACES for two faculty positions in bioinformatics and one in functional genomics, with start-up funding and renovation of space in the National Soybean Research Center. \$1,640,000 (2000-2004).
- Schook, L. PI, Lewin, H., and Vodkin, L.O. (co-PIs) + 24 faculty participants, Agricultural Genomics and Public Policy Program, USDA-IFAFS, Multidisciplinary Graduate Education Traineeship program, \$2.2 million, 9/01-9/06 [Supported 32 new students with 2 year stipends].

Cunningham, B., Ahmad, I., Hergenrother P., Bashir, R. and Vodkin, L. I/UCRC: Center for Agricultural, Biomedical, and Pharmaceutical Nanotechnology, NSF 1/1/11-12/31/15, \$445,000. Supports seed funding for awarded by support from NSF or the membership fees from companies that each contribute \$25,000 to be members of the center each year.

**Total of Program Grants for Infrastructure or Personnel
with Leadership or Co-leadership by L. O. Vodkin** **\$4,493,000**

REVIEW PANEL AND REVIEW TEAM SERVICE

National Science Foundation

- Small Business Innovation Research Program Panel. 1983.
- Developmental Biology Section Review Panel. 1984
- Postdoctoral Fellowship in Plant Biology Panel. 1988
- Plant Science Center Program Review Panel (joint with Dept of Agriculture and Dept. of Energy). 1988.
- Postdoctoral Research Fellowships in Biosciences Related to the Environment Panel. 1996.
- Member, Site Review Team to Review a Multi-University Plant Genome Project Proposal at UC-Berkeley. 1999.
- Member, site Review Team to Review a Multi-University Plant Genome Project Proposal, Arlington, VA. 2001.

U. S. Dept. of Agriculture - National Research Initiative

- Plant Molecular Biology Program Review Panel. 1985.
- Plant Genetic Mechanisms Program Review Panel. 1990.
- Plant Genome Program Review Panel. 1996.
- Plant Genetic Mechanisms Program Review Panel. 2004

U. S. Agency for International Development

- Biotechnology Program Panel. 1983.

Indiana Soybean Council Research Program Panel. 1993 & 1994.

National Research Council, NAS

- External reviewer of report on "The National Plant Genome Initiative: Objectives for 2003-2008. 2002.

Regular *ad hoc* manuscript reviewer for journals including Plant Cell, Plant Physiology, BMC Genomics, BMC Plant Biology and *ad hoc* proposal reviewer for granting agencies including NSF and USDA.

SERVICE TO ORGANIZATIONS, EXTERNAL ADVISORY BOARDS AND COMMITTEES (SEE ALSO REVIEW PANEL AND REVIEW TEAM SERVICE)

Member, Panel on Soybean Research, American Soybean Association, and USDA-ARS National Program Staff, Peoria, IL. 1982.

Member, Workshop on Plant Maturation & Senescence, USDA-ARS National Program Staff, Beltsville, MD. 1983.

Resource Scientist, Bioscience Research Committee, NRC, National Academy of Sciences, Beltsville, MD. 1984.

Member, Panel on Establishment of Fiber Science Program, USDA-ARS National Program Staff, Southern Regional Research Center, New Orleans, LA. 1985

Participant, USDA-ARS Workshop for Visiting Delegation, Chinese Ministry of Agriculture. Urbana, IL. 1985.

Expert Witness on Peer Review Procedures used by USDA-ARS, National Academy of Sciences, NRC, Board on Agriculture. Washington, D. C. 1986.

Member, Workshop on Application of Biotechnology for Control of Soybean Diseases, United Soybean Board, Ames, IA. 1995.

Member, National Planning Workshop on Soybean Transformation and Regeneration, Illinois Soybean Checkoff Board. 1995.

Member, Planning Committee for Soybean Transformation and Regeneration, North Central and United Soybean Boards, Chicago, IL. 1996.

Member, National Planning Session for Public EST Project, United Soybean Board, St. Louis, MO. 1997.

Participant, NSF Plant Genome Awardee National Meetings, Washington, D.C. 1998-2002.

Member, USDA Genomics Planning Meeting, United Soybean Board, Washington, D.C. 1999.

Member, Workshop on Directions for Soybean Genomics, USDA and United Soybean Board, 1999.

Organizer, Advisory Board Meetings, NSF Functional Genomics Program, Urbana, IL. 1999; Flagstaff, AZ. 2000; Minneapolis, MN. 2001.

Member, Research Priorities Workshop, United Soybean Board, St. Louis, MO. 2000.

Organizer, Microarray Workshop, NSF Functional Genomics Program, (25 participants from 15 institutions). Urbana, IL. 2000.

Member, Workshop on Legume Crop Genomics, sponsored by granting agencies of USDA and United Soybean Board, Hunt Valley, MD. 2001

Member, NSF-sponsored Bioinformatics Research Planning Workshop, The Institute for Genomics Research, Gaithersburg, MD. 2001

Member, NSF-sponsored Workshop on Managing Genomic Resources, Pacific Grove, Asilomar, CA. 2002.

Member, Advisory Board, NSF-sponsored Wheat Genomics Project, Univ. of California-Davis, 2000-2002.

Member, Genomics Planning Workshop, USDA and United Soybean Board, St. Louis, MO. 2003.

Member, Legume Information Steering Committee, National Center for Genomic Resources and USDA-Agricultural Research Service, 2002-2005.

Member, Advisory Board, NSF Sponsored Project on “Developing Sound Statistical Procedures for Microarray Data” University of Alabama, Birmingham, David Allison, PI, 2003-2004.

Participant in Soybean Genomics: Assessment and Strategy Workshop, 2005. July 19-20, 2005, St. Louis, MO.

Presented research at “Science of Soy” Forum for Illinois Soybean Association Board meetings, 2006.

Invited participant in a workshop for strategic planning of Soybean Genomics priorities, sponsored by United Soybean Board, May 30-31, 2007. St. Louis, MO.

Member, Advisory Board, NSF Sponsored Project on “Dissecting Soybean Resistance to Phytophthora by QTL Analysis of Host and Pathogen Expression Profiles, Virginia Polytechnic Institute and State University, Blacksburg, VA. 2003-2007

Invited presentations for Illinois Soybean Association Directors, July 2008 and July 2009, March 2010

At request of Soybean Disease Biotechnology Center reviewed 15 proposals/yr 2007-2010

Program review for United Soybean Board Breeding Program on Seed Composition/Breeding, July, 2010

Member, Soybean Genomics Strategic Planning Session, United Soybean Board, St. Louis, July 2010.

Participant, Workshop on Soybean Protein and Amino Acid Composition for Illinois Soybean Association and United Soybean Board, St. Louis, February, 26, 2012.

Invited to serve on Composition Advisory Panel for Illinois Soybean Association, 2013.

PEER REVIEWED PUBLICATIONS AND BOOK CHAPTERS

1. Ott (Vodkin), L.A. and Scandalios, J.G. 1975. Genetically defined peptidases of maize: Biochemical characterization of allelic and non-allelic forms. *Biochem. Genet.* 14: 619-634.
2. Scandalios, J.G., Sorenson, J.C., and Ott (Vodkin), L.A. 1976. Genetic control and intracellular localization of glutamate-oxaloacetate transaminase in maize. *Biochem. Genet.* 13: 759-769.
3. Ott (Vodkin), L.A. and Scandalios, J.G. 1978. Genetic control and linkage relationships among aminopeptidases in maize. *Genetics* 89: 137-146.
4. Vodkin, L.O. and Scandalios, J.G. 1979. Developmental expression of genetically-defined peptidases in maize. *Plant Physiology* 63: 1108-1204.
5. Vodkin, L.O. and Scandalios, J.G. 1980. Comparative properties of genetically-defined peptidases in maize. *Biochemistry* 19: 4660-4667.
6. Vodkin, L.O. and Scandalios, J.G. 1981. Genetic control, developmental expression, and biochemical properties of plant peptidases (arylamidases). *In: Isozymes: Current Topics in*

- Biological and Medical Research, Alan R. Liss, Inc. Vol. 5, 1-25. Vodkin, L.O. 1981 (book chapter)
7. Vodkin, L.O. 1981. Isolation and characterization of messenger RNAs for seed lectin and Kunitz trypsin inhibitor in soybean. *Plant Physiology* 68: 766-771.
 8. Goldberg, R.B., Hoschek, G., and Vodkin, L.O. 1983. An insertion sequence blocks the expression of a soybean lectin gene. *Cell* 33: 465-475.
 9. Vodkin, L.O., Rhodes, P.R., and Goldberg, R.B. 1983. A lectin gene insertion has the structural features of a transposable element. *Cell* 34: 1023-1031.
 10. Vodkin, L.O. 1983. Structure and expression of soybean lectin genes. *In: Chemical taxonomy, molecular biology, and function of plant lectins*, Irwin Goldstein (ed). Alan R. Liss, Inc., New York, pp. 87-98. (book chapter)
 11. Rhodes, P.R., and Vodkin, L.O. 1985. Highly structured sequence homology between an insertion element and the gene in which it resides. *Proc. Natl. Acad. Sci. USA* 82: 493-497.
 12. Vodkin, L.O., and Raikhel, N.V. 1986. Soybean lectin and related proteins in seeds and roots of soybean seedlings. *Plant Physiology* 81: 558-565.
 13. Vodkin, L.O. and Rhodes, P.R. 1986. Common structural patterns between the soybean lectin insertion and transposable elements in other plant species. *In: Molecular Biology of Seed Proteins and Lectins*, L.M. Shannon and M.J. Chrispeels (eds). Amer. Soc. Plant Physiol., Rockville, MD. pp 97-105. (book chapter)
 14. Vodkin, L.O., Rhodes, P.R., Chandlee, J.M., and Harding, R.W. 1986. Lectin genes and a transposable element in soybean. *In: Biotechnology for Solving Agricultural Problems: Beltsville Symposia in Agricultural Research*. Vol. 10, pp 99-113. (book chapter)
 15. Rhodes, P.R., and Vodkin, L.O. 1988. The Tgm family of transposable elements in soybean. *Genetics* 120: 597-604.
 16. Vodkin, M.H., and Vodkin, L.O. 1989. A conserved zinc finger domain in higher plants. *Plant Molecular Biology* 12: 593-594.
 17. Chandlee, J.M., and Vodkin, L.O. 1989. Unstable expression of a soybean gene during seed coat development. *Theoretical and Applied Genetics* 77:587-594.
 18. Chandlee, J.M., and Vodkin, L.O. 1989. Unstable genes affecting chloroplast development in soybean. *Developmental Genetics* 10: 532-541.
 19. Vodkin, L.O. 1989. Transposable element influence on plant gene expression and variation. *In: Molecular Biology*, A. Marcus (ed). *The Biochemistry of Plants*. Academic Press, Vol 15: 83-132. (book chapter)
 20. Lindstrom, J.T., Vodkin, L.O., Harding, R.W., and Goeken, R.M. 1990. Expression of soybean lectin gene deletions in tobacco. *Developmental Genetics* 11: 160-167. (book chapter)

21. Frank, R.L., and Vodkin, L.O. 1991. Sequence and structure of a phenylalanine ammonia-lyase gene of *Glycine max*. *DNA Sequence* 1: 335-346.
22. Griffor, M.C., Vodkin, L.O., Singh, R.J., and Hymowitz, T. 1991. Florescent *in situ* hybridization to soybean metaphase chromosomes. *Plant Molecular Biol.* 17: 101-109.
23. Lindstrom, J.T., and Vodkin, L.O. 1991. A soybean cell wall protein is affected by seed color genotype. *Plant Cell* 3: 561-571.
24. Stephens, P.A., Nickell, C.D., and Vodkin, L.O. 1993. An association of increased protein and seed size with pink flower color in soybean. *Crop Science* 33: 1135-1137.
25. Nicholas, C.D., Lindstrom, J.T., and Vodkin, L.O. 1993. Variation in proline rich cell wall proteins in soybean lines with anthocyanin mutations. *Plant Molecular Biol.* 21: 145-156.
26. Todd, J.J., and Vodkin, L.O. 1993. Pigmented soybean seed coats accumulate proanthocyanidins during development. *Plant Physiol.* 102: 663-670.
27. Wang, C-S., and Vodkin, L.O. 1994. Extraction of RNA from tissues that contain high levels of procyanidins that bind RNA. *Plant Molecular Biology Reporter* 12: 132-145.
28. Wang, C-S., Todd, J.J., and Vodkin, L.O. 1994. Chalcone synthase mRNA and activity are reduced in yellow seed coats with dominant *I* alleles. *Plant Physiol.* 105: 739-748.
29. Schmidt, J.S., Lindstrom, J.T., and Vodkin, L.O. 1994. Genetic length polymorphisms create size variation in proline rich proteins of the cell wall. *Plant Journal* 6: 177-186.
30. Vodkin, L. O. 1994. Molecular exploitation of soybean genetic resources. *In: Plant Genome Analysis. Current Topics in Plant Molecular Biology.* CRC Press, Boca Raton, pp. 83-95. (book chapter)
31. Cho, M-J., Widholm, J.M. and Vodkin, L.O. 1995. Cassettes for seed-specific expression tested in transformed embryogenic cultures of soybean. *Plant Molecular Biology Reporter* 13: 255-269.
32. Fasoula, D.A., Stephens, P.A., Nickell, C.D., and Vodkin, L.O. 1995. Cosegregation of purple-throat flower color with a DNA polymorphism in soybean. *Crop Science* 35: 1028-1031.
33. Todd, J.J., and Vodkin, L.O. 1996. Duplications that suppress and deletions that restore expression from a CHS multigene family. *Plant Cell* 8: 687-699.
34. Vodkin, L.O. 1996. Plant Transposable Elements: Potential Applications for Gene Tagging in Soybean. *In: Molecular Biology and Biotechnology*, Verma, D.P.S. and Shoemaker R.C. (eds). CAB International, England. pp. 69-90. (book chapter)
35. Cho, M-J., Vodkin, L.O., and Widholm, J.M. 1997. Transformation of soybean embryogenic cultures by microprojectile bombardment. *Plant Cell and Molec. Biol. Letts.* 14:11-16.
36. Darnowski, D.W., and Vodkin, L.O. 1998. Construction of a device composed of common plumbing supplies for freezing microscopy samples. *Bio/Techniques* 3: 412-413.

37. Hegstad, J.M., Nickell, C.D., and Vodkin, L.O. 1998. Identifying resistance to *Phytophthora sojae* in selected soybean accessions using RFLP techniques. *Crop Sci.* 38: 50-55.
38. Thompson, J.A., Nelson, R.L., and Vodkin, L.O. 1998. Identification of diverse soybean germplasm using RAPD markers. *Crop Science* 38: 1348-1355.
39. Johnson, E.O., Stephens, P.A., Fasoula, D.A., Nickell, C.D., and Vodkin, L.O. 1998. Instability of a novel multicolored flower trait in inbred and outcrossed soybean lines. *J. Heredity* 89:508-515.
40. Philip, R., Darnowski, D.W., Sundararaman, V., Cho, M-J., and Vodkin, L.O. 1998. Localization of b-glucuronidase in protein bodies of transgenic tobacco seed by fusion to an amino terminal sequence of the soybean lectin gene. *Plant Science* 137: 191-204.
41. Maughan, P.J., Philip, R., Cho, M-J., Widholm, J.M. and Vodkin, L.O. 1999. Biolistic transformation, expression, and inheritance of bovine *b*-casein in soybean (*Glycine max*). *In Vitro Cell and Develop Biol. Plant* 35:344-349.
42. Percy, J. D., Philip R., and Vodkin, L.O. 1999. Defective seed coat mutations that affect the post-transcriptional abundance of soluble proline rich cell wall proteins. *Plant Molecular Biol.* 40: 603-613.
43. Stromvik, M. V., Sundararaman, V. P., and Vodkin, L.O. 1999. A novel promoter from soybean that is active in a complex developmental pattern with and without its proximal 650 base pairs. *Plant Molecular Biol.* 41: 217-231.
44. Hegstad, J. M., Vodkin, L.O. and Nickell, C.D. 2000. Genetic and agronomic evaluation of *wp-m* in soybean. *Crop Science* 40: 346-351.
45. Hegstad, J.M., Tarter, J.A., Vodkin, L.O., and Nickell, C.D. 2000. RFLP and SSR molecular marker linkage map of *wp* in soybean. *Crop Science* 40: 534-537.
46. Sundararaman, V., Stromvik, M. V., and Vodkin, L.O. 2000. A putative defective interfering RNA from bean pod mottle virus. *Plant Disease* 84: 1309-1313.
47. Philip, R., Darnowski, D.W., Maughan, P.J., and Vodkin, L.O. 2001. Processing and localization of bovine β -casein expressed in transgenic soybean seeds under control of a soybean lectin expression cassette. *Plant Science* 161: 323-335.
48. Choffnes, D. , Philip, R., and Vodkin, L.O. 2001. A transgene locus in soybean exhibits a high level of recombination. *In Vitro Cell and Developmental Biol. Plant* 37:756-762.
49. Coello, P., Maughan, J.P., Mendoza, A., Philip, R., Bollinger, D.W., Veum, T.L., Vodkin, L.O., and Polacco, J.C. 2001. Generation of low phytic acid *Arabidopsis* seeds expressing an *E. coli* phytase during embryo development. *Seed Science Res.* 11: 285-291.
50. Darnowski, D.W., and Vodkin, L.O. 2002. A soybean lectin-GFP fusion labels the vacuoles in developing *Arabidopsis thaliana* embryos. *Plant Cell Rep.* 20:1033-1038.
51. Shoemaker, R. C., Keim, P., Vodkin, L. O., Retzel, E. F., Clifton, S.W., Waterston, R., Smoller, D., Coryell, V., Khanna, A., Erpelding, J., Gai, X., Brendel, V., Raph-Schmidt, C., Shoop, E.G., Vielweber, C.J., Schmatz, M., Pape, D., Bowers, Y., Theising, B., Martin, J., Dante, M., Wylie,

- T., and Granger, C. 2002. A compilation of soybean ESTs: generation and analysis. *Genome* 45:329-338.
52. Granger, C., Coryell, V., Khanna, A., Keim, P., Vodkin, L. O., and Shoemaker, R.C. 2002. Identification and differential expression of members of a BURP domain containing protein family in soybean. *Genome* 45: 693-701.
 53. Zabala, G.C. and Vodkin, L.O. 2003. Cloning of the pleiotropic *T* locus in soybean and two recessive alleles that differentially affect structure and expression of the encoded flavonoid 3' hydroxylase. *Genetics* 163: 295-309.
 54. Thibaud-Nissen, F., Shealy, R. T., Khanna, A., and Vodkin, L.O. 2003. Clustering of microarray data reveals transcript patterns associated with somatic embryogenesis in soybean. *Plant Physiol.* 132: 118-136.
 55. Shoemaker, R.C., Schulters, J.A., Cregan, P., Vodkin, L. O. 2003. The status of soybean genomics and its role in the development of soybean biotechnologies. *AgBioForum* 6: 4-7.
 56. Stromvik, M. V., Thibaud-Nissen, F., and Vodkin, L. O. 2004. Mining soybean expressed sequence tag and microarray data. *Recent Advances in Phytochemistry* 38: 177-195.
 57. Stacey, G., Vodkin, L. O., Parrott, W., and Shoemaker, R.C., 2004 National Science Foundation-sponsored workshop report. Draft plant for soybean Genomics. *Plant Physiol* 135: 59-70. (meeting report)
 58. Tuteja, J., Clough, S. J., Chan, W.-C, and Vodkin, L. O. 2004. Tissue-specific gene silencing mediated by a naturally occurring chalcone synthase gene cluster in *Glycine max*. 2004. *Plant Cell* 16: 819-835.
 59. Vodkin, L. O., Khanna, A., Shealy, R. T., Clough, S. J., Gonzalez, O., Philip, R., Zabala, G. C., Thibaud-Nissen, F., Sidarous, M., Stromvik, M. V., Shoop, E. G., Schmidt, C., Retzel, E. F., Erpelding, J., Shoemaker, R. C., Rodrigueuz-Huete, A., Polacco, J. C., Coryell, V., Keim, P., Gong, G., Liu, L., Pardinas, J. L., Schweitzer, P. 2004. Microarrays for global expression constructed with a low redundancy set of 27,500 sequenced cDNAs representing an array of developmental stages and physiological conditions of the soybean plant. *BMC Genomics* 5: 73.
 60. Clough, S. J., Tuteja, J., Li, M., Marek, L. F., Shoemaker, R. C., and Vodkin, L. O. 2004. Features of 100 kb gene-rich region include an inverted perfect repeat cluster of CHS genes comprising the *I* locus. *Genome* 47:819-831.
 61. Shoemaker, R.C., Cregan, P.B., and Vodkin, L.O. 2004. Soybean Genomics. *In Soybeans: Improvement, Production and Uses*, 3rd edition, ASA monograph No. 16, J. Specht (ed). American Society of Agronomy, Madison, WI, pp. 235-263. (book chapter)
 62. Clough, S. J. and Vodkin, L. O., 2004. Soybean microarrays: a genomics tool for crop improvement. *In Genomics for Legume Crops*, R. Wilson, C. Brummer, T. Stalker (eds). American Oil Chemists Society Press., pp. 267-283.
 63. Zou, J., Rodriguez-Zas, S., Aldea, M., Li, M., Zhu, J., Gonzalez, D.O., Vodkin, L.O., DeLucia, E., and Clough, S., J. 2005. Expression profiling soybean response to *Pseudomonas syringae* reveals

- new defense-related genes and rapid down regulation of photosynthesis, *Mol Plant Microbe Interact.* 18: 1161-1174.
64. Zabala, G. and Vodkin, L.O. 2005. The *wp* mutation of *Glycine max* carries a gene-fragment-rich transposon of the CACTA superfamily. *Plant Cell* 17: 2619-2632.
 65. Strömvik, M.V., Latour, F. and Archambault, A., and Vodkin, L.O. 2006. Extent of *Bean pod mottle virus*, *Soybean mosaic virus* and *Cowpea chlorotic mottle virus* sequences in soybean EST data evidenced by computational analysis. *Canadian J. Plant Pathology* 28: 289-301.
 66. Ainsworth, E.A., Rogers, A., Vodkin, L.O., Walter, A. and Schurr, U. 2006. The effects of elevated CO₂ on soybean gene expression: An analysis of growing and mature leaves. *Plant Physiol.* 142: 135-147.
 67. Zabala, G., Zou, J., Tuteja, J., Gonzalez, D.O., Clough, S. J., and Vodkin, L.O. 2006. Transcriptome changes in the phenylpropanoid pathway of *Glycine max* in response to *Pseudomonas syringae* infection. *BMC Plant Biology* 6: 26.
 68. Vodkin, L. O., Thibaud-Nissen, F., Gonzalez, D. O., Zabala, G., Clough, S. J., and Shealy, R. 2007. An update on soybean functional genomics and microarray resources for gene discovery and crop improvement. *Petria* 17: 43-53. (symposium review)
 69. Zabala, G. and Vodkin, L. O. 2007. Novel exon combinations generated by alternative splicing of gene fragments mobilized by a CACTA transposon in *Glycine max*. *BMC Plant Biol* 7:38.
 70. Zabala, G. and Vodkin, L. O. 2007. A rearrangement resulting in small tandem repeats in the F3'5'H gene of white flower genotypes is associated with the soybean *WI* locus. *Plant Genome* 47: 113-124.
 71. Gonzalez, D. O. and Vodkin, L.O. 2007. Specific elements of the glyoxylate pathway play a significant role in the functional transition of the soybean cotyledon during seedling development. *BMC Genomics* 8: 468.
 72. O'Rourke, J., Graham, M., Vodkin, L.O., Gonzalez, D. O., Cianzio, S. R., and Shoemaker, R. C. 2007. Recovering from iron deficiency chlorosis in near-isogenic soybeans: A microarray study. *Plant Physiol and Biochem* 47: 287-292. (symposium report).
 73. O'Rourke, J., Carlson, D., Gonzalez, D. O, Vodkin, L. O., Graham, M.,, Cianzio, S. R., Grusak, M., and Shoemaker, R. C. 2007. Microarray analysis of iron deficiency chlorosis in near-isogenic soybean lines. *BMC Genomics* 8: 476.
 74. Brechenmacher, L., Kim, M-Y., Benitez, M., Li, M., Joshi, T., Calla, B., Lee, M. P., Libault, M., Vodkin, L. O., Xu, D. X., Lee, S-H., Clough, S., Stacey, G. 2008. Transcription profiling of soybean nodulation by *Bradyrhizobium japonicum*. *Mol. Plant Microbe Interact.* 21: 621-645.
 75. Li, Y., Zou, J., Li, M., Bilgin, D., Vodkin, L.O., Hartman., G. L., and Clough, S. J. 2008. Soybean defenses against to the soybean aphid. *New Phytologist* 179: 185-195.
 76. Tuteja, J. and Vodkin, L.O. 2008. Structural features of the endogenous *CHS* silencing and target loci in the soybean genome. *Plant Genome* 48: 49-69.

77. Zhu, J., Patzoldt, W., Shealy, R., Vodkin, L., Clough, S., Tranel, P. 2008. Transcriptome response to glyphosate in sensitive and resistant soybean. *J. Agri Food Chem.* 56:6355-6363.
78. Saeed, H., Vodkin, L.O., Fauteux, F., and Strömvik, M.V., 2008. Promoters of the soybean seed lectin homologues *Le2* and *Le3* regulate expression in vegetative tissues of Arabidopsis. *Plant Science* 175:868-876.
79. Zabala, G. and Vodkin, L. 2008. A putative autonomous 20.5 kb-CACTA transposon insertion in an *F3'H* allele identifies a new CACTA transposon subfamily in *Glycine max*. *BMC Plant Biology* 8: 124.
80. Vodkin, L. O., Jones, S., Gonzalez, D. O., Thibaud-Nissen, F., Zabala, G. and Tuteja, J. 2008. Genomics of seed development. In *Soybean Genomics*, G. Stacey (ed). Springer, N. Y. pp. 163-184. (book chapter)
81. Gasic, K., Gonzalez, D. O., Thimmapuram, J., et al. Gasic, K.; Gonzalez, D.O., Thimmapuram, J. Malnoy, M., Gong, G., Han, Y., Vodkin, L., Liu, L., Aldwinckle, H., Carroll, N., Orvis, K., Goldsbrough, P., Clifton, S., Pape, D., Fulton, L., Martin, J., Theising, B., Korban, S. 2009. Comparative and functional annotation of a large sequenced tag collection of apple (*Malus x domestica*). 2009. *Plant Genome* 2: 23-38.
82. Block, I.D., Mathias, P.C., Ganesh, N., Jones, S., Dorvel, B.R., Chaudhery, V., Vodkin, L.O., Bashir, R., and Cunningham, B.T. 2009. A detection instrument for enhanced fluorescence and label-free imaging on photonic crystal surfaces. *Optics Express*, 17:13222-13235.
83. Block, I.D, Mathias, P.C., Jones, S.I., Vodkin, L.O. and Cunningham, Brian T. 2009. Optimizing the spatial resolution of photonic crystal label-free imaging. *Applied Optics* 48:6567-6574.
84. Tuteja, J.H., Zabala, G., Varala, K., Hudson, M., and Vodkin, L.O. Endogenous, tissue-specific short interfering RNAs silence the chalcone synthase gene family in *Glycine max* seed coats. 2009. *Plant Cell* 21:3063-3077. [This article was highlighted in an "In This Issue" feature of *The Plant Cell* by Eckardt, N. A. (Senior Features Editor) 2009. Tissue-specific siRNAs that silence CHS genes in soybean. *The Plant Cell*. 21: 2983-2984.]
85. Widholm, J.M., Finer, J.J, Vodkin, L.O., Trick, H.N., LaFayette, P., Li, J. and Parrott, W. 2010. Transgenic Plants in Breeding and Crop Production - Soybean Transformation. In: F. Kempken and C. Jung (eds.) *Genetic Modification of Plants, Biotechnology in Agriculture and Forestry* 64, Springer-Verlag:Berlin Heidelberg pp. 473-498. (book chapter)
86. Mathias, P., Jones, S.I., Wu, H-Y, Yang, F., Ganesh, N., Gonzalez, D.O., Bollero, G., Vodkin, L.O., and Cunningham, B.T. 2010. Improved sensitivity of DNA microarrays using photonic crystal enhanced fluorescence. *Analytical Chem.* 82:6854-6861.
87. George, S., Block, I.D., Jones, S.I., Mathias, P.C., Chaudhery, V., Vuttipittayamongkol, P., Qu, H.-Y., Vodkin, L.O. and Cunningham, B.T. 2010. Label-free prehybridization DNA microarray imaging using photonic crystals for quantitative spot analysis. *Analytical Chem* 82:8551-8557.
88. Jones, S.I., Gonzalez, D.O., and Vodkin, L.O. 2010. Flux of transcript patterns during soybean seed development. *BMC Genomics* 11:136.

89. Hunt, M., Kaur, N., Stromvik, M., and Vodkin, L.O. 2011. Transcript profiling reveals expression differences in wild-type and glabrous soybean lines. *BMC Plant Biology* 11:145.
90. Vodkin, L., Zabala, G., Campos, E., Tuteja, J., and Jones, S. 2012. Tissue-specific regulation of gene expression by siRNAs in soybean. In: *Designing Soybeans for 21st Century Markets*. R. Wilson (ed). AOCS Press, Urbana, IL, pp. 105-122. (book chapter)
91. Hamamouch, N., Li, C., Hewezi, T., Baum, T.J., Mitchum, M., Hussey, R.S. Vodkin, L.O. and Davis, E.L. 2012. The interaction of the novel 30C02 cyst nematode effector protein with a plant beta-1,3 endoglucanase may suppress host defense to promote parasitism. *J. of Experimental Botany* 63:3683-3695.
92. Shamimuzzaman, M. and Vodkin, L.O. 2012. Identification of soybean seed developmental stage-specific and tissue-specific miRNA targets by degradome sequencing. *BMC Genomics* 13: 310.
93. Zabala G., Campos, E., Varala, K., Bloomfield, S., Jones, S.I., Win, H., Tuteja, J.H., Calla, B., Clough, S.J., Hudson, M. and Vodkin, L. 2012. Divergent patterns of endogenous small RNA populations from seed and vegetative tissues of *Glycine max*. *BMC Plant Biology* 12:177.
94. Jones, S.I. and Vodkin, L.O. 2013. Using RNA-Seq to profile soybean seed development from fertilization to maturity. *PLoS ONE* 8(3):e59270.
95. Shamimuzzaman, Md and Vodkin, L.O. 2013. Genome-wide identification of binding sites for NAC and YABBY transcription factors and co-regulated genes during soybean seedling development by ChIP-Seq and RNA-Seq. *BMC Genomics*, 14:477.
96. Cho, Y.B., Jones, S.I., Vodkin, L.O. 2013. The transition from primary siRNAs to amplified secondary siRNAs that regulate chalcone synthase during development of *Glycine max* seed coats. *PLoS ONE* 8 (10):e76954.

Since Emerita status in 2014:

97. Kour, A., Boone, A.M., Vodkin, L.O. 2014. RNA-Seq Profiling of a defective seed coat mutation in *Glycine max* reveals differential expression of proline-rich and other cell wall protein transcripts. *PLoS ONE* 9 (5) e96342.
98. Shamimuzzam, Md and Vodkin, L.O. 2014. Transcription factors and glyoxylate cycle genes prominent in the transition of soybean cotyledons to the first functional leaves of the seedling. *Func Intr Genomics* 14: 683-696.
99. Zabala, G. and Vodkin, L. O. 2014. Methylation affects transposition and splicing of a large CACTA transposon from a MYB transcription factor regulating anthocyanin synthase genes in soybean seed coats. *PLoS ONE* 9:e111959.
100. Jones, S.I., Tan, Y., Shamimuzzaman, Md, George, S., Cunningham, B. and Vodkin, L.O. 2015. Direct detection of transcription factors in cotyledons during seedling development using sensitive silicon-substrate photonic crystal protein arrays. *Plant Physiol* 167: 639-649.
101. Jacobs, T.B., Lawler, N.J., LaFayette, P.R., Vodkin, L.O., and Parrott, W.A. 2015. Simple gene-silencing using the trans-acting siRNA pathway. *Plant Biotechnol. J.* doi: 10.1111 /pbi.12362.

102. Cho, Y.B., Jones, S.I. and Vodkin, L.O. 2017. Mutations in *Argonaute5* Illuminate Epistatic Interactions of the *K1* and *I* Loci Leading to Saddle Seed Color Patterns in *Glycine max*. *Plant Cell* 29: 708-725. [This article was highlighted by an “In Brief” article in *The Plant Cell* by Mach, J. (Science Editor) 2017. “Saddle Up, Soybean Seed Pigments: *Argonaute5* in Spatially Regulated Silencing of *Chalcone Synthase* Genes”. *Plant Cell* 29:604.]
103. Shamimuzzamin, Md. and Vodkin, L.O. 2018. Ribosome profiling reveals changes in translational status of soybean transcripts during immature cotyledon development. *PLoS ONE* 13(3): e0194596.
104. Tian, B., Li, J., Vodkin, L.O., Todd, T.C., Finer, J.J, and Trick, H.N. 2019. Host-derived gene silencing of parasite fitness genes improves resistance to soybean cyst nematodes in stable transgenic soybean. *Theor Appl Genet* (2019) 132: 2651. <https://doi.org/10.1007/s00122-019-03379-0>
105. Cho, Y.B, Jones, S.I., Vodkin, L.O. 2019. Nonallelic homologous recombination events responsible for copy number variation within an RNA silencing locus. *Plant Direct* 3:1–16.
106. Jones, S.I, Hunt, M.R., and Vodkin, L.O. 2019. A transgene locus that disrupts soybean seed development leads to elevated protein/oil ratios in heterozygous plants. Submitted.

INVENTIONS

1. Vodkin, L.O., Stromvik, M. V., and Sundararaman, V. 2003. Soybean promoter expressed preferentially in pods. U.S. Patent 6,573,428 issued in 2003.
2. Jacobs, T., Parrott, W., and Vodkin, L.O. UGA 1920 PCT Application No. PCT/US2013/044267 Compositions and Methods of Gene Silencing in Plants. University of Georgia Research Foundation, Inc. and The Board of Trustees of The University of Illinois, UGARF Ref.: 1920; University of Illinois Ref.: TF12121-PCT

TECHNICAL REPORTS ON WWW DATABASES OR WEB SITES:

1. Shoemaker, R.C., Keim, P., Vodkin, L. O., Erpelding, J., Coryell, V., Khanna, A., Marra, M., Hillier, L., Kucaba, T., Martin, J., Beck, C., Wylie, T., Underwood, K., Steptoe, M., Theising, B., Allen, M., Bowers, Y., Person, B., Swaller, T., Gibbons, M., Pape, D., Harvey, N., Schurk, R., Ritter, E., Kohn, S., Shin, T., Jackson, Y., Cardenas, M., McCann, R., Waterston, R., and Wilson, R. 1998-2003. A Public EST Project for Soybean. *Over 250,000 separate EST (expressed sequence tag) entries of 5' sequence information entered into the dbEST database of Genbank. One of the largest of the plant 5' EST collections in the public databases at the time.*
2. Vodkin, L. O., Keim, P., Shoemaker, R. C., Retzel, E. F., Khanna, A., Coryell, V., Erpelding, J., Raph, C., Shoop, E., Pardinias, J., Liu, L., and Lewin, H. 2000-2005. A Functional Genomics Program for Soybean. *Over 22,000 separate EST (expressed sequence tag) entries of 3' sequence reads of unique soybean genes entered into the dbEST database of Genbank. One of the largest plant 3' EST collections in the public databases at the time.*

3. Vodkin, L. O., Clough, S. J., Philip, R. and Shealy, R. T. 2000. Protocols used in Soybean Microarray. Workshop Booklet, University of Illinois, May 2000. At Web site <http://soybeangenomics.cropsci.uiuc.edu>
4. Vodkin, L. O., Gonzalez, D. O., Zabala, G., and Jones, S. 2006. An update on generation and use of microarray resources for soybean. Soybean Genetics Newsletter Vol 33 <http://soybeangenetics.org>
5. Gasic, K., Gonzalez, D. O., Thimmapuram, J., et al. Gasic, K.; Gonzalez, D.O., Thimmapuram, J. Malnoy, M., Gong, G., Han, Y., Vodkin, L., Liu, L., Aldwinckle, H., Carroll, N., Orvis, K., Goldsbrough, P., Clifton, S., Pape, D., Fulton, L., Martin, J., Theising, B., Korban, S. Comparative and functional annotation of a large sequenced tag collection of apple (*Malus x domestica*). 2003-2007. *Output from an NSF project to generate a large EST database for apple. Over 200,000 5' and 3' EST entries.*
6. Vodkin, L.O. et al., 2003-2010. Microarray data platforms including GPL229, GPL1012, GPL1013, GPL3015 representing over 38,000 soybean genes and multiple experimental microarray data sets entered into Gene Expression Omnibus of the National Center for Biotechnology Information (<http://www.ncbi.nlm.nih.gov/geo/>).
7. Thibaud-Nissen F, Shealy RT, Khanna A, Vodkin LO. 2003. Clustering of microarray data reveals transcript patterns associated with somatic embryogenesis in soybean. Series GSE136 releasing raw and processed microarray data entered into Gene Expression Omnibus of the National Center for Biotechnology Information (<http://www.ncbi.nlm.nih.gov/geo/>).
8. Gonzalez, D.O. and Vodkin, L.O. 2007. Glyoxylate pathway elements involved in the functional transition of soybean cotyledons during seedling development. Series GSE6534 releasing raw and processed microarray data entered into Gene Expression Omnibus of the National Center for Biotechnology Information (<http://www.ncbi.nlm.nih.gov/geo/>).
9. Jones, S.I, Gonzalez, D.O. and Vodkin, L.O. 2010. Flux of transcript patterns during soybean seed development. GSE18620 releasing raw and processed microarray data into Gene Expression Omnibus database (<http://www.ncbi.nlm.nih.gov/geo/>).
10. Vodkin, L.O. et al., 2010. Accession entries for raw and processed data for over 15 million small RNAs from soybean as accessions GSM543393, GSM543394, GSM543395, and GSM544496 in Gene Expression Omnibus of National Center for Biotechnology Information and Sequence Read Archives SRP002459 (<http://www.ncbi.nlm.nih.gov/geo/>).
11. Vodkin, L.O., Kaur, N. and Hunt, M. 2011. Transcript profiling reveals expression differences in wild-type and glabrous soybean lines. Accession entries [GSM821042](http://www.ncbi.nlm.nih.gov/geo/) and [GSM821043](http://www.ncbi.nlm.nih.gov/geo/) in Gene Expression Omnibus (<http://www.ncbi.nlm.nih.gov/geo/>) for raw and processed data for nearly 80 million RNAseq reads of soybean shoot tips from normal and glabrous soybean lines.
12. Shamimuzzaman and Vodkin, 2012. Identification of soybean seed developmental stage specific and tissue specific miRNA targets by degradome sequencing. Accession entrie series GSE34433 in Gene Expression Omnibus (<http://www.ncbi.nlm.nih.gov/geo/>) for raw and processed data for over 150 million sequences from an “degradome” experiment that determines the target mRNAs for small RNAs in soybean.

13. Vodkin et al., 2012. Divergent patterns of endogenous small RNA populations from seed and vegetative tissues of *Glycine max*. Accession entries GSM899820, GSM899821, GSM899822, GSM899823 in Gene Expression Omnibus (<http://www.ncbi.nlm.nih.gov/geo/>) for raw and processed data for four small RNA samples representing 30 million small RNA reads from very young seed, germinating cotyledon, stem, and leaf samples of soybean.
14. Shamimuzzam, Md and Vodkin, L.O. 2013. Genome-wide identification of binding sites for NAC and YABBY transcription factors and co-regulated genes during soybean seedling development by ChIP-Seq and RNA-Seq. Accession entries GSE42422 in Gene Expression Omnibus (<http://www.ncbi.nlm.nih.gov/geo/>) releasing high throughput Chip-Seq data for two transcription factors.
15. Cho, Y.B. and Vodkin, 2013. Tissue-specific expression of chalcone synthase siRNAs. Series GSE49708 releasing small RNA sequencing data from multiple tissues of soybean.
16. Kour and Vodkin, 2014. RNA-Seq Profiling of a defective seed coat mutation in *Glycine max* reveals differential expression of proline-rich and other cell wall protein transcripts. Series GSE54903 releases over 500 million RNA-Seq reads from developing seed coats of two soybean isolines in Gene Expression Omnibus (<http://www.ncbi.nlm.nih.gov/geo/>).
17. Shamimuzzam, Md and Vodkin, L.O. 2014. Gene Expression Omnibus (GEO) Accession series GSE42550 of raw and processed representing over 800 million reads of mRNAs from 7 stages of cotyledon development during early seedling growth in Gene Expression Omnibus (<http://www.ncbi.nlm.nih.gov/geo/>).
18. Zabala, G. and Vodkin, L. O. 2014. Methylation affects transposition and splicing of a large CACTA transposon from a MYB transcription factor regulating anthocyanin synthase genes in soybean seed coats. Over 500 million RNA-Seq reads (GSE60593) from developing seed coats of two isolines and methylation bisulfite genome resequencing (GSE61116) of two isolines differing at the R locus.

REVIEW ARTICLES FOR LAY AUDIENCES (+ = by invitation)

- +1. Vodkin, L.O. 1986. Jumping genes that control plant traits. *In: Research for Tomorrow, 1986 Yearbook of Agriculture*. J.W. Crowley, (ed). pp. 127-130.
- +2. Vodkin, L.O. 1990. The promise of biotechnology for sustainable agriculture. *In: Illinois Research* 31:35.

SELECTED CONFERENCE PROCEEDINGS AND ABSTRACTS

1. Vodkin, L.O. 1981. Isolation and characterization of messenger RNAs for seed lectin and Kunitz trypsin inhibitor in soybeans. *Genetics* 97: 109.
2. Vodkin, L.O., Rhodes, P.R., Hoschek, G., and Goldberg, R.B. 1982. Sequences of soybean lectin genomic clones. *Plant Physiol. Suppl.* 60: 140.
3. Goldberg, R.B., Jofuku, D., and Vodkin, L.O. 1983. Seed protein gene structure and expression in normal and mutant soybean lines. *J. Cellular Biochemistry. Suppl.* 7B: 256.

4. Vodkin, L.O., and Rhodes, P.R. 1984. Characterization of lectin genes and a transposable element in soybean. American Association of Cereal Chemists, Minneapolis, MN. Vol. 29: 500.
5. Chandlee, J.M., and Vodkin, L.O. 1985. Attempts to identify an association between an insertion element (Tgm1) and several mutable alleles of soybean. 1st International Congress of Plant Molecular Biology, Savannah, GA., p. 144.
6. Rhodes, P.R., and Vodkin, L.O. 1985. Internal organization of elements related to the insertion sequence which interrupts a seed protein gene in soybean. 1st International Congress of Plant Molecular Biology, Savannah, GA., p. 144.
7. Rhodes, P.R., and Vodkin, L.O. 1985. The transposable element which interrupts a seed protein gene in soybean is related to the suppressor-mutator system of maize. 2nd U.S.-Australia Seed Protein Workshop, Honolulu, HA., p.10.
8. Rhodes, P.R. and Vodkin, L.O. 1986. Highly structured borders characterize the Tgm1 element of soybean. Symposium on Eukaryotic Transposable Elements, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY., p. 16.
9. Vodkin, L.O., Lindstrom, J.T., Harding, R.W., and Goeken, R. 1987. Developmental and organ specific control of the soybean seed lectin gene is maintained in transformed tobacco plants. 78th American Oil Chemists' Society Annual Meeting. J. Amer. Oil Chemist's Society 64:676.
10. Lindstrom, J.T., Harding, R.W., and Vodkin, L. O. 1989. Expression of a deletion series of the soybean lectin gene in tobacco. J. Cellular Biochemistry. Suppl. 13D: 305.
11. Griffor, M.C., Vodkin, L.O., Singh, R.J., and Hymowitz, T. 1990. Fluorescent *in situ* hybridization with soybean metaphase chromosomes. Proc. 3rd Biennial Conference on Molecular and Cellular Biology of the Soybean, Ames, IA., p. 32.
12. Lindstrom, J.T., and Vodkin, L.O. 1990. An abundant hydroxyproline-rich protein in soybean seed coats. Plant Physiol. Suppl. 93: 44.
13. Chyan, Y-J., Kriz, A.L., Vodkin, L.O. and Rinne, R.O. 1991. Molecular characterization of maturation gene (Mat) during soybean seed embryogenesis. International Society of Plant Molecular Biol., 3rd International Congress, Tucson, AZ., No. 660.
14. Vodkin, L.O., Lindstrom, J.T., Nicholas, C., and Todd, J.J. 1992. Cell wall proteins in soybean isogenic lines. J. Cellular Biochemistry 16F: 236.
15. Wang, C-S., and Vodkin, L.O. 1992. Cloning of soybean seed coat dihydroflavonol reductase (DFR) gene by polymerase chain reaction. Proc. of 4th Biennial Conference on Molecular and Cellular Biochemistry of Soybean., Ames, IA., p. 20.
16. Todd, J.J., and Vodkin, L.O. 1992. Presence of proanthocyanidin in soybean seed coat. Proc. of 4th Biennial Conference on Molecular and Cellular Biochemistry of Soybean., Ames, IA., p. 27.
17. Nicholas, C.D., Lindstrom, J.T., Schmidt, J.S. and Vodkin, L.O. 1992. Quantitative and qualitative variation of cell wall proteins in soybean lines with anthocyanin mutations. Proc. of 4th Biennial Conference on Molecular and Cellular Biochemistry of Soybean., Ames, IA., p. 28.

18. Schmidt, J.S., Lindstrom, J.T. and Vodkin, L.O. 1993. Linkage of cell wall proteins and the *Im* gene in soybean. Agron. Abst. p. 182.
19. Fasoula, D.A., Stephens, P.A., Nickell, C.D., and Vodkin, L.O. 1994. Co-segregation of the purple-throat flower color with a RFLP representing dihydroflavonol reductase (DFR) in soybean. Proc. of 5th Biennial Conference on Molecular and Cellular Biochemistry of Soybean., Athens, GA, p. 10.
20. Sundararaman, V.P., Cho, M.J., and Vodkin, L.O. 1994. Understanding organ-specific gene expression in soybean. Proc. of 5th Biennial Conference on Molecular and Cellular Biochemistry of Soybean., Athens, GA, p. 19.
21. Todd, J.J., and Vodkin, L.O. 1994. Molecular basis of seed coat pigmentation in *Glycine max*. Plant Physiol. Suppl. 105: 73.
22. Yu, I-C., and Vodkin, L.O. 1994. RAPD and RFLP markers for *Lw1* gene in soybean, Plant Physiol. Suppl. 105: 73.
23. Cho, M.J., Vodkin, L.O., and Widholm, J.M. 1994. Expression of the seed specific lectin promoter in transgenic soybean embryos. Plant Physiol. Suppl. 105: 356.
24. Johnson, E.O., Nickell, C.D., and Vodkin, L.O. 1995. Agronomic evaluation of a pink-flowered type in soybean. Agron. Abst. p. 83.
25. Thompson, J.A., Nelson, R.L., and Vodkin, L.O. 1995. Identification of diverse soybean germplasm using RAPD markers. Agron. Abst. p. 94.
26. Fasoula, D.A., Todd, J. J., Stephens, P.A., Nickell, C. D., and Vodkin, L. O. 1995. Linkage relationships between genes and molecular markers of the soybean anthocyanin pathway. Agron. Abst. p. 170.
27. Todd, J.J., and Vodkin, L.O. 1995. Molecular genetics of the soybean I locus which inhibits pigment synthesis in a spatial manner. J. Cellular Biochemistry 21A, p461.
28. Fasoula, D.A., Todd, J.J., Stephens, P.A., Nickell, C.D, and Vodkin, L.O. 1996. Linkage analysis with genes and molecular markers of the soybean anthocyanin pathway. Plant Genome IV, San Diego, CA. p. 96.
29. Fasoula, D.A., Todd, J.J., Stephens, P.A. Nickell, C.D., and Vodkin, L.O. 1996. Molecular analysis of anthocyanin pathway genes in soybean. Proc. 6th Biennial Conference on Molecular and Cellular Biology of the Soybean, Columbia, MO. p.18.
30. Philip, R., Sundararaman, V., M-J. Cho, and Vodkin, L.O. 1996. Expression and localization of soybean lectin-GUS fusions in transgenic tobacco seeds. Proc. 6th Biennial Conference on Molecular and Cellular Biology of the Soybean, Columbia, MO. p. 39.
31. Hegstad, J.M., Nickell, C.D., and Vodkin, L.O. 1996. Utilizing RFLP's to determine presence of *Rps* alleles in selected Chinese soybean accessions. Agron. Abst. p. 68.

32. Maughan, P.J., Philip, R., Cho, M.-J., Widholm, J.M., and Vodkin, L.O. 1998. Biolistic transformation, expression and inheritance of bovine b-casein in soybean. Congress on In Vitro Biology, p. 54A.
33. Chan, W-C, and Vodkin, L.O 1998. Tissue-specific gene silencing and DNA methylation patterns of a chalcone synthase gene cluster in soybean. Proc. 8th Biennial Conference on Molecular and Cellular Biology of the Soybean, Knoxville, TN. p E-8.
34. Stromvik, M. V., Sundararaman, V. and Vodkin, L.O. 1998. Isolation and Transgenic analysis of a soybean pod-specific promoter. Proc. 8th Biennial Conference on Molecular and Cellular Biology of the Soybean, Knoxville, TN p. E-9.
35. Maughan, P.J. Philip, R., Cho, M.J., Widholm, J.M, and Vodkin, L.O. (1998) Biolistic Transformation, Expression and Inheritance of Bovine b-Casein in Soybean. . 8th Molecular and Cellular Biol of the Soybean, Knoxville, TN p. C-19.
36. Vodkin, L.O., Chan, W-C., Todd, J.J. (1998) Naturally occurring duplications and deletions involved in tissue specific silencing of a chalcone synthase gene family. . 8th Molecular and Cellular Biol of the Soybean, Knoxville, TN. p. E-1.
37. Clough, S. J., Desfeux, C., Maughan, R., Vodkin, L. O., and Bent, A. F. 1998. Toward application of the Agrobacterium-mediated Arabidopsis germ-line transformation method to soybean. Proc. 8th Biennial Conference on Molecular and Cellular Biology of the Soybean, Knoxville, TN. p. C-6.
38. Schupp, J., Vodkin, L. O., and Keim, P. 1998. SAGE analysis of immature cotyledon gene expression. . Proc. 8th Biennial Conference on Molecular and Cellular Biology of the Soybean, Knoxville, TN. p. E-4.
39. Vodkin, L.O., Erpelding, J., Coryell, V., Khanna, A., Polacco, J., Young, N., Retzel, E. F., Keim, P., and Shoemaker, R.C. 1999. Soybean structural and functional genomics projects: An update. Plant and Animal Genome VII, San Diego, CA. p. 56.
40. Erpelding, J., Keim, P. Vodkin, L. O., Waterston, R., Marra, M., Smoller, D., Retzel, E. F., and Shoemaker, R.C. 1999. A public EST project for soybean. Plant and Animal Genome VII, San Diego, CA. p. 208.
41. Dick, A.B., Schupp, J., Vodkin, L. O., Zinnamon, K. and Keim, P. 1999. SAGE analysis of immature cotyledon gene expression. Plant and Animal Genome VII, San Diego, CA. p. 298.
42. Vodkin, L.O., Khanna, A., Clough, S.J., Shealy, R. T., Philip, R., Erpelding, J., Paz, M., Shoemaker, R.C., Coryell, V., Schupp, J., Keim, P., Rodriguez-Huete, A., Zeng, P., Polacco, J., Mudge, J., Denny, R., Young, N., Raph, C., Shoop, L., Retzel, E. F. 2000. Structural and functional genomics projects in soybean. Plant Molecular Biology Reporter Suppl. 18:2, p. S1.
43. Stromvik, M. V., Sundararamin, V.P., and Vodkin, L.O. 2000. A promoter for cell specific gene expression. Plant Molecular Biology Reporter Suppl. 18:2, p. S1
44. Philip, R., Shealy, R.T., Clough, S.J., Khanna, A., Shoop E., Schmidt C.R., Silverstein, K., Retzel, E. F., and Vodkin, L.O. 2001. Developing baseline global expression profiles for specific tissues

- and developmental stages in soybean using cDNA microarrays. Plant and Animal Genome IX, San Diego, CA. p.105.
45. Clough, S.J., Phillip, R., Shealy, R. T., Khanna, A., and Vodkin, L.O. 2000. Development and use of soybean microarrays for analysis of global gene expression. Construction of cDNA microarrays to study gene expression in soybean. Proc. 8th Biennial Conference on Molecular and Cellular Biology of the Soybean. Lexington, KY. p. PIII03.
 46. Shealy, R.T., Clough S.J., Philip R., and Vodkin, L.O. 2000 Statistical analysis of tissue-specific expression data using soybean microarrays. 8th Biennial Conference on Molecular and Cellular Biology of the Soybean. Lexington, KY. p. PIII 13.
 47. Vodkin, L.O., Shoemaker, R.C., Keim, P., Polacco, J. C., Young, N., and Retzel, E. F. 2001. Soybean Functional Genomics. Plant, Animal, and Microbe Genome IX. San Diego, CA. p.105.
 48. Shoemaker, R.C., Keim, P., Vodkin, L.O., Retzel, E. F., Clifton, S., Coryell, V., Khanna, A., Erpelding, J., Grant, D., and Granger, C. 2001. Update on the public soybean EST project., Plant, Animal, and Microbe Genome IX. San Diego, CA. p. 40.
 49. Philip, R., Shealy, R.T., Clough, S.J., Khanna, A., Shoop, E., Schmidt, C.R., Silverstein, K., Retzel, E. F., and Vodkin, L.O. 2001. Developing baseline global expression profiles for specific tissues and developmental stages in soybean using cDNA microarrays. Plant, Animal, and Microbe Genome IX. San Diego, CA. p.105.
 50. Clough, S.J., Philip, R., Shealy, R. T., Khanna, A., and Vodkin, L.O. 2001. Construction of cDNA microarrays to study gene expression in soybean. Plant, Animal, and Microbe Genome IX. San Diego, CA. p.105.
 51. Shealy, R.T., Clough S.J., Philip R., and Vodkin, L.O. 2001. Normalization of microarray data using an analysis of variance approach. Plant, Animal, and Microbe Genome IX. San Diego, CA. p. 113.
 52. Stromvik, M. V., Shoop, E., Silverstein, K., Johnson, J., Kilian, A., Freeman, J., Awad, I., Grindle, S., Staggs, R., Schmid, C., Paule, C., Dwan, C., Shoemaker, R. C., Grant, D., Vodkin, L. O., Keim, P., Young, N., Polacco, J., Sederoff, R., Whetten, R., Kinlaw, C., Neale, D., Marshall, K., Cartinhour, S., Ellis, L., Schneider, D., and Retzel, E. F. 2001. Integrated data visualization and exploration of genomic data. Plant, Animal, and Microbe Genome IX. San Diego, CA. p. 233.
 53. Vodkin, L. O., Shealy, R. T., Khanna, A., Thibaud-Nissen, F., Clough, S. J., Philip, R., Shoop, E., Schmidt, C. and Retzel, E. F. 2002. Gene functional analysis in soybean by microarray. Plant, Animal, and Microbe Genome X. San Diego, CA. p. 54.
 54. Schupp, J.M., Zinnamon, D., Schmidt, C., Retzel, E. F., Shoemaker, R. C., Vodkin, L. O., Stacey, G., and Keim, P. 2002. Analysis of tissue global gene expression diversity of soybean using SAGE. Plant, Animal, and Microbe Genome X. San Diego, CA. p. 54.
 55. Thibaud-Nissen, F., Shealy, R.T., Khanna, A., and Vodkin, L.O. 2002. Global gene expression during the development of somatic embryos from soybean (*Glycine max*) immature cotyledons. Plant, Animal, and Microbe Genome X. San Diego, CA. p. 260.

56. Vodkin, L.O., Shealy, R. T., Khanna A., Thibaud-Nissen, F., Clough, S. J., Philip, R., Shoop, E., Schmidh, C. and Retzel, E.F. 2002. Toward a global view of soybean gene expression during development. International Conference on Legume Genomics. Minneapolis, MN. p. 25.
57. Thibaud-Nissen, F., Shealy, R. T., Khanna, A., and Vodkin, L.O. 2002. Microarray analysis of gene expression during the induction of soybean (*Glycine max*) somatic embryos. International Conference on Legume Genomics. Minneapolis, MN. p. 28.
58. Vodkin, L.O., Shealy, R. T., Khanna, A., Thibaud-Nissen, F., Clough S. J., Philip, R., Shoop, E., Schmidt, C., Stromvik, M. V., and Retzel, E. F. 2002. Global gene expression in soybean using microarrays. Proc. 9th Biennial Conference on Molecular and Cellular Biology of the Soybean. Urbana, IL. No. 707.
59. Zabala, G., and Vodkin, L.O. 2002. The pleiotropic tawny pubescence locus (*T*) encodes a flavonoid 3' hydroxylase. Molecular characterization of gray pubescence mutations (*t*). Proc. 9th Biennial Conference on Molecular and Cellular Biology of the Soybean. Urbana, IL. No. 506.
60. Thibaud-Nissen, F. and Vodkin, L.O. 2002. Global expression in developing seeds of soybean (*Glycine max*) transformed with a lectin-CHS6 construct. Proc. 9th Biennial Conference on Molecular and Cellular Biology of the Soybean. Urbana, IL. No. 304.
61. Thibaud-Nissen, F., Shealy, R.T., Khanna, A., and Vodkin, L.O. 2002. Microarray analysis of gene expression during the induction of soybean somatic embryos. Proc. 9th Biennial Conference on Molecular and Cellular Biology of the Soybean. Urbana, IL. No. 305.
62. Clough, S.J., Gregoire, R., Chan, W.C., Marek, L.F., Shoemaker, R.C. and Vodkin, L.O. 2002. Sequence analysis of the I locus in Williams 82. Proc. 9th Biennial Conference on Molecular and Cellular Biology of the Soybean. Urbana, IL. No. 603.
63. Tuteja, J., and Vodkin, L.O. 2002. Real time expression analysis of the soybean chalcone synthase gene family members. Proc. 9th Biennial Conference on Molecular and Cellular Biology of the Soybean. Urbana, IL. No. 503.
64. Clough, S. J., Bickley, C. B., Shealy, R. T., Philip, R., Vodkin, L. O., and Stacey, G. 2003. Gene expression profiling of soybean in response to nodulation. Plant, Animal, and Microbe Genome XI. San Diego, CA., p. 52.
65. Clough, S. J., Gregoire, R., Chan, W.-C., Chan, Marek, L., Shoemaker, R. C., and Vodkin, L. O. 2003. Sequence analysis of BAC 104J7 and the locus in Williams 82. Plant, Animal, and Microbe Genome XI. San Diego, CA., P. 266.
66. Khanna, A., Shealy, R. T., Wang, D., and Vodkin, L. O. 2003. Microarray analysis of lines varying in soybean seed protein content. Plant, Animal, and Microbe Genome XI. San Diego, CA., p. 80.
67. Thibaud-Nissen, F., Shealy, T. T., Khanna, A., and Vodkin, L. O. 2003 Clustering of genes identified by microarray analysis and associated with somatic embryogenesis in soybean. Plant, Animal, and Microbe Genome XI. San Diego, CA., p. 266.

68. Tuteja, J. and Vodkin, L. O. 2003. The soybean chalcone synthase gene family exhibits diverse expression patterns in the pigmented and non-pigmented isolines of the I locus. *Plant, Animal, and Microbe Genome XI*. San Diego, CA., p. 273.
69. Zabala, G. C. and Vodkin, L. O. 2003. Characterization of mutations that inactivate the pleiotropic soybean tawny pubescence locus. *Plant, Animal, and Microbe Genome XI*. San Diego, CA., p. 273.
70. Stromvik, M. V., Johnson, J., Schupp, J., Schmidt, C., Crow, J., Shoop, E. G., Keim, P., Shoemaker, R. C., Vodkin, L. O. and Retzel, E. F. 2003. Soybean SAGE tag data mining using the table view software. *Plant, Animal, and Microbe Genome XI*. San Diego, CA., P. 299.
71. Clough, S. J., Gregoire, R., Li, M., Marek, L. F., Shoemaker, R. C., and Vodkin, L. O. 2004. Sequence annotation of BAC104J7 containing the 10.91-kb exact invert repeat CHS cluster of the I locus in soybean. *Plant, Animal, and Microbe Genome XII*. San Diego, CA., p. 35.
72. Korban, S. S., Vodkin, L. O., Liu, L., Aldwinckle, H. S., Carroll, N., Goldsbrough, P., Kathryn Orvis, K., and Clifton, S. 2004. Towards apple functional genomics: the est project. *Plant, Animal, and Microbe Genome XII*. San Diego, CA., p. 39.
73. Gonzalez, D. O., Zabala, G., Jones, S. I., Boone, A. M., Sidarous, M., Khanna, A., Thibaud-Nissen, F., Clough, S. J., Shealy, R., Stromvik, M., Retzel, E., Shoemaker, R. C., Polacco, P., Vodkin, L.O. 2004. Global expression analyses using microarrays of a soybean cDNA unigene set. *Plant, Animal, and Microbe Genome XII*. San Diego, CA., p. 806.
74. Zou, J., Rodriguez-Zas, S., Tuteja, J., Gonzales, D. O., Vodkin, L. O., Clough, S. J. 2004. Gene expression profiling of soybean response during compatible and incompatible interactions with the bacterial pathogen *Pseudomonas syringae*. *Plant, Animal, and Microbe Genome XII*. San Diego, CA., p. 808.
75. Li, M., Zou, J., Li, S., Vodkin, L. O., Clough, S. J. 2004. Microarray analysis of sudden death syndrome in soybeans. *Plant, Animal, and Microbe Genome XII*. San Diego, CA., p. 809.
76. Jones, S. I., Gonzalez, D. O., Kim, C.-H., Vodkin, L. O. 2004. Global gene expression profiles of soybean seed development using microarrays. *Plant, Animal, and Microbe Genome XII*. San Diego, CA., p. 909.
77. Stromvik, M. V., Khanna, A., Shoemaker, R., Retzel, E., Vodkin, L. O. 2004. Soybean bioinformatics: in silico discoveries in expression data. *Plant, Animal, and Microbe Genome XII*. San Diego, CA., p. W153.
78. Gonzalez, D.O., Thibaud-Nissen, F., Clough, S., Stromvik, M., Retzel, E., Vodkin, L. O. 2004. Global expression analyses using microarrays of a soybean cDNA unigene set. 2004. 10th Biennial Conference of the Cellular and Molecular Biology of the Soybean, Columbia, MO.
79. Zou, J., Rodriguez-Zas, S., Gonzalez, D.O., Vodkin, L. O., Clough, S.J., Expression profiling of soybean responses to bacterial pathogen *Pseudomonas syringae*. 2004. 10th Biennial Conference of the Cellular and Molecular Biology of the Soybean, Columbia, MO.

80. Jones, S.I., Gonzalez, D.O., Kim, C-H., Vodkin, L.O. 2004. Global gene expression profiles of soybean seed development using microarrays. 10th Biennial Conference of the Cellular and Molecular Biology of the Soybean, Columbia, MO.
81. Tuteja, J. and Vodkin, L.O. 2004. Seed Coat Pigmentation in Soybean: A function of homology dependent gene silencing mediated by the I locus. 10th Biennial Conference of the Cellular and Molecular Biology of the Soybean, Columbia, MO.
82. Zabala, G. and Vodkin, L.O. 2004. Novel identification using microarrays of the *Wp* flower color locus as flavonoid 3 hydroxylase, an enzyme that appears to play a key role in modulating the flavonoid pathway during pathogen challenge. 10th Biennial Conference of the Cellular and Molecular Biology of the Soybean, Columbia, MO.
83. P.J. Tranel, W.L. Patzold, A. Khanna, D.O. Gonzalez and L.O. Vodkin. 2004. Exploring glyphosate action: an example of utilizing gene-expression profiling in weed science research. 2004. 4th International Weed Science Congress. Spokane, WA.
84. Gonzalez, D.O., Zabala, G., Jones, S.I. and Vodkin, L.O. 2005. Soybean Microarrays: Powerful tools for gene discovery and to determine global transcript abundance during seed development. Plant and Animal Genome XIII, San Diego, P678.
85. Jones, S.I., Gonzalez, D.O., Kim, C. H., Vodkin, L.O. 2005. A global view of gene expression during soybean seed development using microarrays. Plant and Animal Genome XIII, San Diego, P679.
86. Gasic, K., Gonzalez, D.O., Malnoy, M., Thimmapuram, J., Vodkin, L.O., Liu, L., Aldwinckle, H.S., Carroll, N., Orvis, K., Goldsbrough, P., Clifton, S., Pape, D., Dante, M., Meyer, R., Korban, S.S. 2005. The apple genome project. Plant and Animal Genome XIII, San Diego, P498.
87. Schuyler S. Korban, Lila O. Vodkin, Lei Liu, Herb S. Aldwinckle, Ksenija Gasic, Delkin Orlando Gonzalez, Mickael Malnoy, Jyothi Thimmapuram, Natalie Carroll, Kathryn Orvis, Peter Goldsbrough, Sandy Clifton, Deana Pape, Mike Dante, Richard Meyer. 2005. Large-Scale Analysis of EST sequences in the Apple genome. Plant and Animal Genome XIII, San Diego, W130.
88. Boone, A. M., and Vodkin, L.O. 2005. Microarray analysis of mutations in the cell walls of soybean seed coats. Plant and Animal Genome XIII, San Diego, P677.
89. Valliyodan, B., Pathan, M., Thelen, J., Mooney, B., Vodkin, L., Nguyen, H. 2005. Transcriptome And Proteome Comparison Of Soybean Under Drought Stress And Recovery, Plant and Animal Genome XIII, San Diego, Jan, 2005, P771.
90. Zabala, G. and Vodkin, L.O. 2005. A Novel Gene-Fragment-Rich Transposon of the CACTA Superfamily Revealed by Microarray Analysis of Glycine max Isogenic Lines, Plant Genetics 2005: Mechanisms of Genetic Variation Meeting in Snowbird, Utah, October 12-16, 2005.
91. Jones, S., Gonzalez, D.O. and Vodkin, L.O. 2006, Global gene expression profiles of early soybean seed development using microarrays. Am Society Plant Physiology, Boston. MA.

92. Ainsworth, E.A., Rogers, A., Walter, A., Schurr, U., and Vodkin, L.O. 2006, The effects of elevated CO₂ on soybean gene expression: An analysis of growing and mature leaves. Am. Soc. Plant Physiol, Boston, MA.
93. Tuteja, J. and Vodkin, L.O. 2006. Tissue specific production of short interfering RNAs mediated by a naturally occurring cluster of chalcone synthase genes in soybean. 8th Internacional Congreso of Plant Molecular Biology, p. 69.
94. Zabala, G. and Vodkin, L.O. 2006. The *wp* mutation of *Glycine max* carries a gene-fragment-rich transposon of the CACTA superfamily. 11th Biennial Cellular and Molecular Biology of Soybean Conference, Lincoln, NE.
95. Gonzalez, D.O. and Vodkin, L.O. 2006. Functional transition of the cotyledon from storage to photosynthetic activity during soybean germination assessed by transcript profiling with an oligo array. 11th Biennial Cellular and Molecular Biology of Soybean Conference, Lincoln, NE.
96. Gonzalez, D.O. and Vodkin, L.O. 2006. Clustering analysis of transcript abundance in soybean cotyledons during germination and emergence. Plant and Animal Genome XIV, p782.
97. Hunt, M. and Vodkin, L.O. 2006. Identifying Possible Mutant Genes In Glabrous Soybeans By Transcript Analysis, Plant and Animal Genome XIV, p778 and 11th Biennial Cellular and Molecular Biology of Soybean Conference, Lincoln, NE.
98. Vodkin, L., Jones, S., Gonzalez, D.O., Zabala, G., Hunt, M., and Freeberg, L., 2007. Plant and Animal Genome XV, San Diego, CA, W404.
99. Hunt, M. R. and Vodkin, L.O., 2007. Identifying possible mutant genes in glabrous soybean by microarray analysis. Plant and Animal Genome XV, San Diego, CA. P726.
100. Freeberg, L.J. and Vodkin, L.O. 2007. Using microarrays to analyse seed coat and leaf pigmentation mutants in soybean. Plant and Animal Genome XV, San Diego, CA. P728.
101. Jones, S.I., Gonzalez, D.O., and Vodkin, L.O. 2007. Global gene expression profiles of early soybean seed development using microarrays. Plant and Animal Genome XV, San Diego, CA. P731.
102. Gasic, K., Gonzalez, D.O., Thimmapuram, J., Malmoy, M., Vodkin, L.O., Liu, L., Aldwinkle, H., Carroll, N., Orvis, K., Goldsborough, P., Clifton, S., Fulton, L., Hou, S., and Korban, S. 2007 Comparative genomic analysis of a large apple EST collection. Plant and Animal Genome XV, San Diego, CA, P226.
103. Zabala, G. and Vodkin, L. 2008. Novel exon combinations generated by alternative splicing of gene fragments mobilized by a CACTA transposon in *Glycine max*. Plant and Animal Genome XVI, San Diego, CA, P392.
104. Hunt, M. and Vodkin, L. 2008. Identifying candidate mutant genes in glabrous soybean by microarray analysis. Plant and Animal Genome XVI, San Diego, CA, P720.
105. Jones, S.I., Gonzalez, D.O. and Vodkin, L.O. 2008. Global gene expression profiles of early soybean seed development using microarrays. Plant and Animal Genome XVI, San Diego, CA, P721.

106. Vodkin, L., Jones, S., Gonzalez, D.O., Zabala, G., Hunt, M., Freeberg, L., and Fisher, B. Toward an understanding of seed and seedling traits using functional genomics resources and isogenic lines affecting developmental processes in soybean. Plant and Animal Genome XVI, San Diego, CA, W209.
107. Gonzalez, D.O., Boone, A.M., Jones, S., and Vodkin, L.O. 2008. Function and expression of a small auxin down regulated gene associated with soybean seed mutations, development, and germination. 2008. Plant and Animal Genome XVI, San Diego, CA, P787.
108. Zabala, G. and Vodkin, L. 2008. Two distinct CACTA transposon subfamilies create phenotypic and genomic diversity in soybean. 12th Biennial Cellular and Molecular Biology of Soybean Conference, Indianapolis, IN
109. Vodkin, L., Jones, S., Gonzalez, D.O., Zabala, G., Hunt, M., Tuteja, J., Radwan, O., Calla, B., Clough, S.J., Varala, K., Hliang Win, H., Hudson, M. 2008. Flux in the coding and small RNA transcriptomes during soybean seed and seedling development. 12th Biennial Cellular and Molecular Biology of Soybean Conference, Indianapolis, IN.
110. Jones, S., Gonzalez, D.O., and Vodkin, L.O. 2009. Transcript profiling of soybean seed development from fertilization to maturity. Plant and Animal Genome XVII, San Diego, CA, P657.
111. Zabala, G. and Vodkin, L.O. 2009. Two distinct CACTA transposon subfamilies create phenotypic and genomic diversity in soybean. Meeting on “Genomic Impact of Eukaryotic Transposable Elements”, Asilomar, CA.
112. Jones, S.I., Gonzalez, D.O., and Vodkin, L.O. 2010. Transcript profiling of soybean seed development from fertilization to maturity. Plant and Animal Genome XVIII, San Diego, CA, p. P725.
113. Compos, E.J., Zabala, G., Jones, S., Tuteja, J., and Vodkin, L.O. 2010. Differential expression of small RNAs in soybean. Plant and Animal Genome XVIII, San Diego, CA, p. P406.
114. Radwan, O., Calla, B., Vodkin, L., Hudson, M., and Clough, S.J. 2010. Preliminary analysis of small RNA data in soybean infected by *Fusarium virguliforme* and *Phakopsora pachyrhizi*. . Plant and Animal Genome XVIII, San Diego, CA, p. P767.
115. Vodkin, L.O., Tuteja, J., Zabala, G., Varala, K., and Hudson, M. 2010. Tissue-specific inhibition of the flavonoid pathway by endogenous chalcone synthase siRNAs in *Glycine max*. Plant and Animal Genome XVIII, San Diego, CA, p. W553.
116. Vodkin, L.O., Zabala, G., Campos, E., Jones, S.I., Tuteja, J., Radwan, O., Calla, B., Clough, S., Win, H., Varala, K., and Hudson, M. 2010. Endogenous small RNA population in soybean including tissue-specific siRNAs that down-regulate the chalcone synthase gene family. Plant and Animal Genome XVIII, San Diego, CA, p. W584.
117. Jones, S.I., Gonzalez, D.O., Vodkin, L.O. 2010. Transcript profiling of soybean seed development from fertilization to maturity. 13th Biennial Cellular and Molecular Biology of Soybean Conference, Durham, NC.

118. Zabala, Z. Tuteja, J., Varala, K., Hudson, M., and Vodkin, L. 2010. Endogenous Chalcone Synthase-siRNAs silence the flavonoid pathway specifically in the seed coat. Keystone Symposia: RNA Silencing Mechanisms in Plants. Sante Fe, NM. And 13th Biennial Cellular and Molecular Biology of Soybean Conference, Durham, NC.
119. Calla, B. Varala, K., Vodkin, L.O., and Hudson, M.E. and Clough, .S.J. 2011. Small RNA transcriptome of soybean stem tissue during infection with *Sclerotinia sclerotiorum*. Plant and Animal Genome XIX, San Diego, CA., p. 868.
120. Kaur, N., Hunt, M., and Vodkin, L. 2011. Digital gene expression (DGE) tag profiling of soybean wild type and glabrous mutant. Plant and Animal Genome XIX, San Diego, CA. p387.
121. Jones S.I., Gonzalez D.O., Vodkin L.O. 2011. Transcript profiling of soybean seed development from fertilization to maturity. Plant and Animal Genome XIX, San Diego, CA. P703.
122. Zabala, G., Kaur, N. and Vodkin, L. O. 2012. Small RNAs Related to Ribosomal RNA Genes found in Seed and Vegetative Tissues of *Glycine max* Complemented Genes with Multiple Annotation, 14th Biennial Soybean and Molecular Biology Conference, Des Moines, IA.
123. Zabala G., Campos, E., Varala, K., Bloomfield, S., Jones, S.I., Win, H., Tuteja, J.H., Calla, B., Clough, S.J., Hudson, M. and **Vodkin, L.** 2012. Divergent patterns of endogenous small RNA populations from seed and vegetative tissues of *Glycine max*. 14th Biennial Soybean and Molecular Biology Conference, Des Moines, IA.
124. Shamimuzzaman, Md and Vodkin, L.O. 2012. Developmental-stage specific and tissue-specific miRNA targets in soybean seeds identified by degradome sequencing. 14th Biennial Soybean and Molecular Biology Conference, Des Moines, IA.
125. Cho, Y.B, and Vodkin, L. 2012. Endogenous siRNAs that silence chalcone synthase result in pigment pattern formation on seed coats in *Glycine max*. Plant and Animal Genome XX P0838, San Diego, CA. and 14th Biennial Soybean and Molecular Biology Conference, Des Moines, IA.
126. Kaur, N. and Vodkin, L. 2012. Transcriptome variation between wild type and a five-foliolate leaf mutant in *Glycine max*. Plant and Animal Genome XX, San Diego, CA.
127. Jones, S.I. and Vodkin, L.O. 2012. Using RNASeq to profile soybean seed development from fertilization to maturity. Plant and Animal Genome XX, San Diego, CA. P0835.
128. Jones, S.I., George, S., Tan, Y., Cunningham, B., Vodkin, L.O. 2013. Photonic crystal arrays for soybean gene expression and protein analysis. Plant and Animal Genome XXI, San Diego, CA. P0904.
129. Kour, A., Boone, A.M. and Vodkin, L.O. 2013. Transcriptome Profiling of a Defective Seed Coat Mutation in Soybean. Plant and Animal Genome XXI, San Diego, CA.P0333.
130. Shamimuzzaman, Md and Vodkin, L.O. 2014. Genome-Wide Identification of Binding Sites for NAC and Yabby Transcription Factors and Co-Regulated Genes by ChIP-Seq and RNA-Seq. Plant and Animal Genome XXII, San Diego, CA. P892.

131. Cho, Y.B., Jones, S.I., and Vodkin, L.O. 2014. The transition from primary siRNAs to amplified secondary siRNAs that regulate chalcone synthase during development of *Glycine max* seed coats. Plant and Animal Genome XXII, San Diego, CA. P888.
132. Jones, S.I., Tan, Y., Shamimuzzan, Md, George, S., Cunningham, B.T., Vodkin, L.O. 2014. Detection of plant transcription factors using sensitive silicon photonic crystal protein arrays. 15th Biennial Cellular and Molecular Biology of Soybean Conference, Minneapolis, MN. P112.
133. Jones, S.I. and Vodkin, L.O. 2014. High-throughput RNA-Seq data for amino acid pathways in developing soybean seeds. 15th Biennial Cellular and Molecular Biology of Soybean Conference, Minneapolis, MN, P113.
134. Shamimuzzan, Md and Vodkin, L.O. 2015. Transcription factors and glyoxylate cycle genes prominent in the transition of soybean cotyledons to the first functional leaves of the seedling. Plant and Animal Genome XXIII, San Diego, CA. P0207.
135. Cho, Y.B. and Vodkin, L.O. 2015. The effect of structural variation at the *I* locus on regulation of chalcone synthase short interfering rnas in soybean. Plant and Animal Genome XXIII, San Diego, CA, P0715.

SUPERVISION AND PLACEMENT OF GRADUATE STUDENTS AND POST-DOCTORAL PERSONNEL

Graduate Students (fellowships and awards noted)

- Griffor, Matthew C., M.S. 1990. Fluorescent *in situ* hybridization of soybean, *Glycine max* metaphase chromosomes. Placement: Abbot Lab, Inc.; Present position: DeKalb/Monsanto Inc. Mystic, Connecticut. (UI Fellowship, College of Agriculture Fellowship)
- Lindstrom, Jon T., Ph.D. 1991. Variation in proline rich proteins and DNA methylation patterns in soybean seed color isolines. Placement: Postdoctoral associate, Rutgers Univ; Present position: Associate Professor, Department of Horticulture, University of Arkansas.
- Todd, Joselyn Joy, M.S. 1992. Biochemical genetic analysis of flavonoid compounds in soybean. Placement: Graduate student, University of Illinois; Present position: Director of Sciences, Cary Academy, Cary, N.C. (UI Fellowship)
- Wang, Chang-Sheng, Ph.D. 1993. Genetics and expression of the anthocyanin biosynthetic pathway genes in soybean. Present position: Senior Geneticist, Taiwan Agricultural Research Center, Taiwan.
- Schmidt, John Scott, M.S. 1993. Genetic analysis and determination of the molecular basis for the size differences in PRP1 and PRP2 in soybean. Placement: Research Technician, University of Illinois.

- Yu, I-Ching, M.S. 1994. DNA markers linked to the wavy leaf gene (*lw1*) in soybean. Placement: Ph.D. candidate, University of Illinois; Present position: Biotechnology Advisor, Taiwan.
- Todd, Joselyn Joy, Ph.D. 8/92-8/95. The molecular basis of seed coat pigmentation in *Glycine max*. Placement: Postdoctoral associate, North Carolina State Univ; Present position, Director of Sciences, Cary Academy, Cary, N.C. (UI Fellowship, Brockson Fellowship, Ingersoll Fellowship).
- Petrik, Deborah Lynn, M.S. 1995. Molecular analysis of transformation of soybean embryogenic cultures and F2 tobacco plants. Placement: Research Scientist with Forest Science Laboratory, Westvaco, Corp., Summerville, S.C. (J. B. Turner Fellowship).
- Sundararaman, Vijaya, Ph.D. 1996. Analysis of organ-specific gene expression in soybean. Placement: Postdoctoral associate, Thomas Jefferson University; Present position: Associate Director, Global Clinical Communications, Wyeth Research, Cambridge, MA.
- Percy, Jonathan D., M.S. 1996. Expression of cell wall proteins in defective soybean seed coats. Placement: Forest Service, U. S. Dept. of Agriculture. (Ingersoll Fellowship)
- Philip, Reena, Ph.D. 1996. Expression and localization of foreign proteins in soybean and tobacco seed tissue. Placement: Staff Scientist, Gene Logic, Inc., Gaithersburg, MD. Present position: Food and Drug Administration.
- Hegstad, Jeffery Marshall, M.S. 1996. Identification of resistance to *Phytophthora sojae* in soybean using RFLP and pod inoculation techniques. Placement: Graduate student, University of Illinois; Present position: Staff Scientist, Pioneer Hi-Bred International, Inc. Johnston, IA. (Pioneer Hi-Bred International Fellowship)
- Chan, Wan-Ching, M.S. 1998. Analysis of chalcone synthase gene methylation and expression and patterns in soybean lines that exhibit gene silencing. Placement: Research Technician, Singapore Genomics Institute, Singapore. Present position: Washington University Genome Center.
- Hegstad, Jeffery Marshall, Ph.D. 1999. Genetic and molecular analysis of the pink flower mutable trait in soybean. (co-advised with Cecil D. Nickell), Placement: Staff Scientist, Pioneer Hi-Bred International, Inc. Johnston, IA. (Pioneer Hi-Bred International Fellowship)
- Stromvik, Martina, Ph.D. 2000. Isolation and characterization of the soybean major latex homologue, *MSG*, and analysis of its pod-specific promoter. (M. B. Russell Award). Placement: Postdoctoral associate, University of Minnesota; Present position: Assistant Professor, McGill University, Montreal, Canada. Promoted the Associate Professor June 2009.
- Thibaud-Nissen, Françoise, Ph.D. 2003. Global expression profiles and targeted pathway modulation during soybean embryo development. (M. B. Russell Award). Placement: Postdoctoral Research Associate, The Institute for Genomic Research, Gaithersburg, MD., Present position: National Center for Biotechnology Information, Washington, D.C.
- Tuteja, Jigyasa, Ph.D. 2004. Naturally occurring mutations of a chalcone synthase gene cluster reveal features similar to homology dependent gene silencing. (Physiological and Molecular Plant Biology Program Fellowship and Charles Adlai Ewing Fellowship). Placement: Postdoctoral position University of Illinois, and Senior Business Development Scientist, ACGT, Inc., Wheeling, IL.; Present position, Genome Center, University of Chicago.

Jones, Sarah, M.S. 2004. Global expression profiles of soybean seed development. (J. B. Turner Fellowship). Placement: Ph.D. Program, University of Illinois.

Boone, Anne Marie, M.S. 2005. Transcript profiling of soybean mutants affecting cell walls. (Pioneer Hi-Bred International Fellowship). Placement M.S. program in Educational Administration. Present position: Program coordinator and recruiter for Department of Agricultural Engineering, University of Illinois.

Lindsay Freeberg, M.S. 2007. Microarray analyses of chlorotic and flavonoid mutants in soybean. Ag Genome and Public Policy Training Fellowship. Placement: Nimblegen, Madison, WI. Present position: Epicenter, Madison, WI.

Sarah Jones, Ph.D. 2009. Transcript profiling of soybean seed development from fertilization to maturity. (J.B. Turner Fellowship). Placement: Postdoctoral Associate, University of Illinois.

Matt Hunt, Ph.D. 2009. Molecular analyses of the soybean glabrous mutation (P1) and of transgenic lines designed to modify seed composition. (Ag Genome and Public Policy Training Fellowship and Charles Adlai Ewing fellowship). Placement: Postdoctoral position, Virginia Polytechnic Institute, Blacksburg, Va.

Edhylvia Campos, M.S. candidate, M.S awarded 5/11. Tissue specific small RNAs in soybean. Placement Energy Biosciences Institute, University of Illinois.

Young B. Cho, M.S. candidate, 8/09-12/11. M.S. awarded December 2011. Endogenous short interfering RNAs that silence chalcone synthase result in pigment pattern formation on soybean seed coats. Recipient of Ewing Fellowship. Placement: continued for Ph.D program.

Md Shamimuzzaman, Ph.D. candidate 2011-2015. Recipient of Adlai Ewing Fellowship, M.B Russell Award Spring 2013. Global transcriptional, post-transcriptional, and translational regulation during soybean seed and seedling development. Placement: Postdoctoral Associate, Danforth Plant Sciences Center, St. Louis, MO.

Young B. Cho, Ph.D. candidate, 2012-2016. Structural variation at soybean loci regulating small RNAs and seed color. Recipient of R.L. Bernard Award, Ewing Fellowship. Placement: Postdoctoral associate with USDA/ARS, Institute of Genomic Biology, University of Illinois.

Service on graduate student committees other than as major professor: Dr. Vodkin has served on numerous M.S. and Ph.D. student committees over the career including 12 since 2014.

Postdoctoral Associates and other Research Scientists

Rhodes, Patsy, Postdoctoral Associate, 9/81 - 8/85. Placement: Research Geneticist, USDA-ARS and U. S. Office of Patents and Trademarks.

Chandlee, Joel Mark, Postdoctoral Associate, 4/84 - 9/87. Placement: Assistant Professor, Department of Plant Sciences, University of Rhode Island.

Frank, Ronald, Postdoctoral Associate, 4/85 - 9/87. Placement: Assistant Professor, Department of Biology, University of Missouri, Rolla, MO.

- Cho, Myeong-Je, Postdoctoral Associate, 3/91-2/94. Placement: Postdoctoral Associate, University of California, Berkeley, CA. Present position: Staff Scientist DuPont-Pioneer, Hayward, CA.
- Stephens, Paul, Postdoctoral Associate, 6/92 - 8/93. Placement: Soybean Geneticist, Pioneer Hi-Bred International, Inc., Princeton, IL.
- Fasoula, Dionysia, Postdoctoral Associate, 11/93 - 8/96. Placement: Postdoctoral Associate Purdue University. Present position, Agricultural Research Institute, Nicosia, Cyprus.
- Maughan, Peter Jeffrey, Postdoctoral Associate, 6/96-2/98. Placement: Staff Scientist, Monsanto Co., Ankeny, IA; Present position: Associate Professor, Brigham Young University, Provo, UT.
- Darnowski, Douglas, Postdoctoral Associate, 10/96-8/99, Placement: Assistant Professor, Washington College, Chestertown, MD. Present position: Professor of Biology, Indiana University Southeast, New Albany, IN
- Clough, S. J., Postdoctoral Associate, 4/99-10/01. Placement: Research Geneticist, USDA-ARS, Urbana, Illinois and Assistant Professor, University of Illinois.
- Shealy, Robin, Postdoctoral Associate and Senior Research Specialist, 4/99-3/03. Present position: Bioinformatics Consultant, Champaign, IL.
- Khanna, Anupama, Postdoctoral Associate, 10/98-8/03. Placement, Staff Scientist, Epicenter Co., Madison, WI.
- Gaitan, Eliana, Postdoctoral Associate, 11/04-11/05. Placement, Postdoctoral Scientist, Danforth Plant Science Center.
- Gonzalez, Orlando, Postdoctoral Associate and Visiting Senior Research Specialist 6/02-8/08. Placement: Research Scientist, Dow Agrosiences, Indianapolis, IN.
- Jinu Jacob, Postdoctoral Associate, 2/09-10/10. Presently: In India on a post-doctoral fellowship from the Indian government.
- Navneet Kaur, Postdoctoral Associate, 6/09-11/12. Placement: Marker Scientist, Sakata Seed America, Morgan Hill, CA.
- Anupreet Kour Postdoctoral Associate, 11/12-present. Placement: Research Associate, University of Virginia. Charlottesville, Va.
- Zabala, Gracia, Senior Research Specialist, 8/99-present.
- Sarah Jones, Senior Research Specialist, 12/13-present.

HOSTING OF VISITING SCIENTISTS ON SABBATICAL LEAVE

- Dr. Asim Esen, Professor, Virginia Polytechnic Institute, Blacksburg, VA, 4/83-7/83
- Dr. Roy Harding, Staff Scientist, Smithsonian Environmental Research Center, Rockville, MD, 9/84-9/84

Dr. Shafquat Farooq, Principal Scientific Officer, National Institute for Biotechnology and Genetic Engineering, Faisalabad, Pakistan, 7/92-9/92

Dr. Jung-Ho Kim, Professor, Dept. of Food and Nutrition, Seowon University, Chungchong Buk-Do, South Korea, 8/02-7/03

RESIDENT INSTRUCTION

Responsibilities include providing leadership to develop and teach courses in crop molecular biology and crop genomics at the University of Illinois. This includes conception and development of the Crop Biotechnology and Molecular Biology undergraduate curriculum option in Crop Sciences in 1995 and serving as the founding core advisor for some of the undergraduate students in this popular option, advising up to 16 of them. After 15 years, this option and the Biological Sciences option serve about 40% of the department's undergraduate student population within the department.

Previously taught CPSC 450 (Recombinant DNA Technology Laboratory, 4 credit hours) and expanded the class to double its size from 12 to 24 students. This class was taught during the summer months directly out of Dr. Vodkin's research laboratory to graduate students as the department did not have any molecular biology teaching space at that time.

Responsible for developing the first undergraduate molecular laboratory class "Genetic Engineering Laboratory" taught in the Department of Crop Sciences, CPSC 205, 3 credit hours (same as CPSC265) started in 1995. Reorganized the space that the department dedicated for its first molecular lab. Designed and taught the laboratory section so that the students work in pairs to perform techniques of molecular genetics including DNA and RNA extractions, gel electrophoresis, polymerase chain reaction, and cloning exercises. Emphasis was also placed the application of technology to agriculture and society. The success of this class led to the department starting a second section of the laboratory. Many non-majors from other departments enrolled in the "Genetic Engineering Laboratory". It remains one of the laboratory classes on campus taught by the professor, as opposed to teaching assistants.

Developed and taught the new graduate courses CPSC 466 Plant Gene Regulation that is one of the main classes for graduate students who focus on molecular plant sciences. The course covers key topics in the understanding of the regulation and expression of plant genes and transposable elements. The content of the class was substantially modified in 2004 (under rubrics CPSC 493 Genomic Applications and CPSC 566 Plant Gene Regulation, 4 hours) to include the advances in genomic sciences and the revolutionary discoveries of gene silencing and small RNA biology in the plant field. Has also taught a graduate class on Gene Expression in Seed Development (CPSC447) after the faculty member left and some of that content is included now in the revised Plant Gene Regulation class (CPSC566). Also organized the departmental seminar for graduate students several times, most recently in Fall 2009. Has been listed eight times on the Incomplete List of Instructors Rated as Excellent by Their Students.

Courses taught, dates, and enrollment

Year	Semester	Course	% Taught	No. enrolled
1989	Spring	Agron 446 Plant Gene Reg	100	16
1989	Fall	Agron 400C Gen Eng Seminar	100	15
1990	Spring	Agron 400C Gen Eng Seminar	100	11

1990	Spring	Agron 446 Plant Gene Regulation	100	11
1991	Spring	Agron 446 Plant Gene Regulation	100	13
1992	Spring	Agron 446 Plant Gene Regulation	100	15
1993	Spring	Agron 446 Plant Gene Regulation	100	8
1993	Spring	Agron 447 Gene Exp in Seed	100	7
1993	Summer	Agron 450 Recomb DNA Lab	100	24
1994	Spring	Agron 446 Plant Gene Regulation	100	13
1994	Spring	Agron 447 Gene Exp in Seed	100	13
1994	Summer	Agron 450 Recomb DNA Lab	100	24
1995	Spring	CPSC 446 Plant Gene Reg	100	11
1995	Spring	CPSC 447 Gene Exp in Seed	100	8
1995	Fall	CPSC 205 Genetic Eng Lab	100	17
1996	Spring	CPSC 446 Plant Gene Regulation	100	8
1996	Spring	CPSC 447 Gene Exp in Seed	100	9
1996	Fall	CPSC 205 Genetic Eng Lab	100	12
1997	Fall	CPSC 205 Genetic Eng Lab	100	22
1998	Spring	CPSC 446 Plant Gene Regulation	100	15
1998	Spring	CPSC 400C Gen Eng Seminar	100	20
1998	Fall	CPSC 205 Genetic Eng Lab	100	21
1999	Fall	CPSC 205 Genetic Eng Lab	100	21
2000	Spring	CPSC 446 Plant Gene Regulation	100	18
2000	Fall	CPSC 205 Genetic Eng Lab	100	22
2001	Fall	CPSC 205 Genetic Eng Lab	100	20
2002	Spring	CPSC 493 Genomic App	100	9
2002	Fall	CPSC 205 Genetic Eng Lab	100	20
2003	Fall	CPSC 205 Genetic Eng Lab	100	21
2004	Spring	CPSC 493 Genomic App	100	14
2004	Fall	CPSC 265 Genetic Eng Lab	100	14
2006	Spring	CPSC 566 Plant Gene Regulation	100	16
2007	Spring	CPSC 566 Plant Gene Regulation	100	12
2008	Spring	CPSC 566 Plant Gene Regulation	100	11
2009	Spring	CPSC 566 Plant Gene Regulation	100	16
2009	Fall	CPSC 598 Genetic Eng. Seminar	100	31
2010	Spring	CPSC 566 Plant Gene Regulation	100	20
2011	Spring	CPSC 566 Plant Gene Regulation	100	18
2012	Spring	CPSC 566 Plant Gene Regulation	100	14
2013	Spring	CPSC 566 Plant Gene Regulation	100	14

Undergraduate students mentored through independent study in the laboratory

Year	Semester	Course	Student
1989	Fall	Agron 300 Ind study	Christopher Nicholas
1990	Summer	Agron 300 Ind study	Christopher Nicholas
1993	Spring	Agron 300 Ind study	Jon Percy
1994	Spring	Agron 300 Ind study	Eric Baima
1994	Summer	Agron 300 Ind study	Sara Lara
1994	Fall	Agron 300 Ind study	Eric Baima
1996	Spring	Agron 300 Ind study	Rachel Mann
1998	Spring	CPSC 300 Ind study	Teri Nibert
1998	Fall	CPSC 300 Ind study	Katie Vahle

1999	Fall	CPSC 251 Ind study	Dan Choffnes
2000	Fall	CPSC 251 Ind study	Barbara Federson
2001	Spring	CPSC 300 Ind study	Bradley Engel
2001	Fall	CPSC 251 Ind study	Sarah Jones
2002	Fall	CPSC 251 Ind study	Anne Marie Boone
2003	Fall	CPSC 251 Ind Study	Tara Knackstedt
2004	Fall	CPSC 251 Ind Study	Lindsay Freeberg
2005	Spring	CPSC 251 Ind Study	Lindsay Freeberg
2006	Fall	CPSC 295 Undergrad Res	Brian Fisher
2007	Spring	CPSC 295 Undergrad Res	Brian Fisher
2007	Fall	CPSC 295 Undergrad Res	Brian Fisher
2009	Spring	MCB 290 Undergrad Res	Pamela Long

In addition, Dr. Vodkin has provided employment and research opportunities in her laboratory to more than 70 additional undergraduate students from various departments and colleges. Recently, a number of them are from the College of Electrical and Computer Engineering or Computer Sciences and they learn the application of computer sciences to bioinformatics and genomics research in our laboratory.

Some of the undergraduate students have published on their undergraduate research experiences in the laboratory or received awards or been accepted for graduate school. For example, Christopher Nicholas was first author on a peer-reviewed paper published in *Plant Molecular Biology* in 1993. He pursued a Ph.D. in psychology from University of Arizona. Rachel Mann received an undergraduate JBT Scholarship from the College of ACES to conduct independent study. Jennifer Tarter was a co-author on a paper published in *Crop Sciences* in 2000. She received an M.S. from North Carolina State University pursued a Ph.D. Dan Choffnes, a Crop Sciences Biotechnology Option major, was first author on a paper published in 2001 in *In Vitro Cell Develop Biology-Plants*. Based on his undergraduate record, he was one of a small number of students nationally to receive a prestigious pre-doctoral fellowship award from the National Science Foundation in 2000. He received a Ph.D. in plant molecular genetics and genomics at the University of California, Berkeley. Another student Brian Fisher received the Best Undergraduate Research Project in the Crop Sciences Department for his project entitled "Identification of possible leaf mutant genes in soybean through microarray analysis" in Spring 2007. Rachel Mann completed an M.S. at the University of Minnesota. Sarah Jones, Anne Marie Boone, and Lindsay Freeberg completed Ph.D or M.S. programs at the University of Illinois. Pamela Long was an undergraduate pre-med major in Molecular and Cellular Biology. She completed an M.S. at Loyola University and is currently working on the Ph.D. in clinical genomics at the Mayo Clinic in Rochester, MI.

SERVICE TO THE UNIVERSITY, AND PUBLIC ENGAGEMENT (SEE ALSO SCIENTIFIC SOCIETY OFFICERSHIPS AND EDITORSHIPS)

University

Member, Campus Genetics Graduate Program Executive Committee, 1989-93, *Chair* 1991.

Member, Biotechnology Center Coordinating Committee, 1991-96.

Member, Graduate College Executive Committee, 1993-95.

Member, Search Committee for Associate Dean of the Graduate College, 1994.

Elected Member, Graduate College Executive Committee, 1995-1997.

Member, Critical Research Initiatives Panel, Office of the Vice Chancellor for Research, 1995-96.

Member, Biosciences Committee, Office of the Vice Chancellor for Research, 1995.

Member, Search Committee for Associate Director of Biotechnology Center, 1996.
Member, Biotechnology Planning Committee to establish the Post Genomic Biotechnology Program at the UI, Office of the Vice Chancellor for Research, 1998-1999.
Member, Advisory Committee, National Center for Supercomputer Applications, 1999-present.
Member, Biotechnology Council and Post Genomics Program Statement Committees, Office of the Vice Chancellor for Research, 1999-2000.
Member, Advisory Committee, Keck Center for Structural and Functional Genomics, 1999-2002.
Member, *ad hoc* Advisory Committee, Office of the Vice Chancellor for Research, 2001-2002.
At request of university/college hosted lab tour to Governmental Affairs representative from the UI President's office, Dec 15, 2005
Invited by OVCR to attend and participate in a workshop on representation of university research programs in Washington, February 15, 2006, Beckman Institute, UI.
Member, Campus Radiation Safety Committee 2009-present

College

Member, College of Agriculture Library Subcommittee, 1988-92.
Faculty Educator, International Soybean Program, UI. Training module for visiting Scholars from Egypt, Uganda, and Pakistan, 1990.
Member, Biotechnology Open House Committee for Dedication of Plant and Animal Biotechnology Laboratory, 1991.
Member, Salary and Budget Subcommittee, 1995-96.
Panelist, "Commodity Issues in ACES", Illinois Commodity Conference, 1997.
Member, Biotechnology Organizing Committee for Global Soy Forum, 1998-99.
Member, Graduate Policy Committee, 1998-2000.
Member, Plant Biotechnology Workshop, Planning Session for UI-INRA Coordination, January 1999.
Research Overview Presentation to Participants in UI Ag Press Day, Illinois State Legislators Campus Visit, and Illinois State Senate High Technology Task Force, 1999.
Research Overview Presentation, visitors from Novartis, and from DuPont, Inc., 2000.
Research Overview Presentation, U. S. Congressional Aides, 2000.
Member, Coordination Group to establish linkages with West Virginia State College for outreach/recruiting, 2001.
Research Overview Presentation, to visiting delegations from French Consulate, and INRA, 2002.
Member, Awards Committees (Paul Funk), 2004.
Steering Committee for the Soybean Disease Biotech Center, 2003-present
Member, College of ACES Promotion & Tenure Committee, 2003-2005
Member, Award Committee for Excellence in Research 2004
Member, Award Committee for Graduate Student Research Award 2005
Member, Award Committee for Team Award for Excellence in Research, 2006
Member College Salary and Budget Committee, 2005-2006
Member ERML Building Advisory Committee, 2004-2005
Member for selection committee for Division of Nutritional Sciences Selection Committee for Kraft Endowed Chair, 2005
Hosted Explore ACES lab tours for visiting members of the public and prospective students, March 2005 and March 2006.
At request of College, gave a presentation and meet with representative from BASF at Research Park, Nov 29, 2005.
At College request, interview with News Gazette reporter about the interdisciplinary research projects between NSRL and College of Engineering and Nanoscale Science and Technology Center, article appeared in News Gazette in Feb 2005.

At request of Council for Food and Agricultural Research, gave a lab tour and explained research for CFAR Board of Directors, March 15, 2006
Meet with visiting United Soybean Board officials, April 18, 2006.
At request of Illinois Soybean Association participated in strategic planning session, UI, June 8, 2006.
At request of Bruce Chassey in College of ACES, provided a lab tour and consulted with visiting officials from Department of Agriculture and Secretary of Agriculture in Ireland on biotechnology and genomics, October 24, 2006.
Member, Selection Committee for Kraft Endowed Professorship in Food Science, 2008
Member, Salary and Budget Subcommittee 2006-2007
Member, Steering Committee for the Soybean Disease Biotech Center, 2003-present
Member, Nanotechnology Community of Scholars representing ACES and College of Engineering 2007-present; participated in meeting at USDA in Washington, D.C. on August 13, 2008.
Member ERML Building Advisory Committee, 2008-2009
Research overview presentations to visiting officials from DOW AgroSciences, April 17, 2009
Meet with visiting United Soybean Board Officials, June 10, 2009

Department

Member, Graduate Student Dissertation Committees, Depts. of Botany and of Horticulture, Univ. of Maryland, 1985-86.
Member, Search Committee for Maize Breeding and Genetics position, 1988.
Member, Search Committee for USDA-ARS Plant Pathologist/Molecular Virologist, Plant Pathology Department, 1988.
Elected Member, Faculty Advisory Committee, 1988-90.
Member, Graduate Committee, 1989-1994.
Member, Graduate Applications Committee, 1990-1993.
Member, Search Committee for Head of Department, 1989.
Department Representative to Chancellor's Allerton Conference on "Cultural Values and Ethics", 1990.
Member, Agronomy Day Committee, 1991-1994.
Member, Greenhouse Committee, 1992-1994.
Member, Task Force on Future Academic Positions, 1992.
Chair, Search Committee for Assistant Professor of Plant Molecular Genetics and Biology, 1993.
Member, Transition Team for Undergraduate Programs (to prepare for department restructuring), 1994-95.
Chair, Subcommittee for Curriculum Option in Plant Molecular Biology and Biotechnology, 1994-95.
Academic advisor for the Biotechnology Option, 1995-present.
Member, Search Committee for Associate Professor of Soybean Breeding and Genetics, 1997.
Elected Member, Promotion and Tenure Committee, 1997-2000.
Member, Teaching Committee, 1995-2002.
Member, Task Force on Future Academic Positions, 1998-present.
Member, Search Committee for Assistant Professor of Maize Functional Genomics, 1999.
Member, Search Committee for Professor of Plant Functional Genomics (Biotechnology Council), 2000-2001.
Member, Search Committee for USDA-ARS scientist position in Plant Genetics, 2001.
Member, Graduate Student Policy and Grievance Committee, 2002-present.
Member, Academic Professional Promotion Committee 2004
Chair, Search Committee for Associate Professor of Bioinformatics, 2002-2003.
Member, Search Committee for Assistant Professor of Plant Functional Genomics, 2003.
Chair, Search Committee for Assistant Professor of Bioinformatics position, 2003-2004.
Member, Promotion and Tenure Committee 2005-2008
Member, Promotion and Tenure Committee 2011-2013

Member, Space and Facilities Committee 2007-2009

Member, Academic Professional Awards for Excellence Committee 2007

Chair, Search Committee for Assistant/Associate/Full Professor of Genomics of Perennial Plant Feedstocks for Energy Biosciences Institute Spring, 2008.

Member, Faculty Grievance Committee, 2009-present

Member, Search Committee for Business Office Associate Head, August 2012

Member, Search Committee for Nematologist faculty position, 2011-2012

Member, or chair of mentor committees for nine Assistant or Associate Professors

In summary, Dr. Vodkin has served the department in important functions including chairing 4 successful search committees for faculty member positions. She also served the department by hosting or making presentations to visiting clientele groups, speaking to the public during annual Field Days and open houses, speaking to the annual meeting of the department's External Advisory Committee, counseling undergraduates who are interested in careers in plant biotechnology, and chairing or serving on numerous mentor committees for assistant and associate professors to aid in preparation and presentation of their cases for promotion and tenure.