

William Randolph Woodson

Curriculum Vita

General Information

Professional Address	Office of the Dean College of Agriculture 615 W. State Street Purdue University West Lafayette, IN 47907-2053 (765)494-8391 woodson@purdue.edu
Home Address	5062 Shootingstar Lane West Lafayette, IN 47906 (765)463-7234
Date of Birth	April 20, 1957
Place of Birth	Arkadelphia, Arkansas

Education

Cornell University	Ph.D.	1983	Horticulture/Plant Physiology
Cornell University	M.S.	1981	Horticulture
University of Arkansas	B.S.	1979	Horticulture/Chemistry (highest honors)

Professional Experience

2005-present	Glenn W. Sample Dean of Agriculture Purdue University
2004-present	Dean of Agriculture, Purdue University
1998-2004	Associate Dean of Agriculture and Director of the Office of Agricultural Research Programs, Purdue University
1998	Visiting Professor, Ecole Nationale Superieure Agronomique d'Toulouse, Toulouse, France
1996-1998	Head, Department of Horticulture and Landscape Architecture, Purdue University

1995-1997	Director, Plant Biology Program, Purdue University
1993-present	Professor, Department of Horticulture and Landscape Architecture, Purdue University
1989-1993	Associate Professor, Department of Horticulture, Purdue University
1985-1989	Assistant Professor, Department of Horticulture, Purdue University
1983-1985	Assistant Professor, Department of Horticulture, Louisiana State University
1979-1983	Graduate Research and Graduate Teaching Assistant, Department of Horticulture and Plant Physiology Program, Cornell University

Awards and Honors

2007	Honorary American Degree, National FFA
2006	Distinguished Alumnus Award, College of Agriculture and Life Sciences, University of Arkansas
2005	Glenn W. Sample Dean (Endowed Faculty Position)
2005-2008	President-elect, President and Chairman of the Board; American Society for Horticultural Science
2003	Outstanding Service Award, School of Education, Purdue University
2001	Chairman, National Agricultural Biotechnology Council
2000	Outstanding Scientific Publication Award, American Society for Horticultural Science
2000	Alex Laurie Award for Outstanding Scientific Paper in Floricultural Science, Ohio Floriculture Association
1998	Fellow, American Society for Horticultural Science

1997	Vice-President Research Division and Member of the Board, American Society for Horticultural Science
1997	Outstanding Service Award, Indiana Raw Products Association
1997	Golden Apple Award for Service to the Indiana Tree Fruit Industry, Indiana Horticultural Society
1996	Outstanding Career Researcher Award, American Society for Horticultural Science
1996	B.Y. Morrison Memorial Medal, United States Department of Agriculture, Agriculture Research Service
1995	Award of Merit for Research, Gamma Sigma Delta, Purdue University Chapter
1994	Agriculture Research Award, Purdue University, School of Agriculture
1982	Outstanding Teaching Assistant, College of Agriculture and Life Sciences, Cornell University
1978	Outstanding Senior, Department of Horticulture, University of Arkansas

Professional and Honor Societies

American Association for the Advancement of Science (1981-present)
American Society for Horticultural Science (1981-present)
 Chairman of the Board (2007-08)
 President (2006-07)
 President-elect (2005-06)
 Chair, Continuing Education Committee (2000-present)
 Vice President, Research Division (1997-2000)
 Member, Board of Directors (1997-2000; 2005-08)
 William A. Frazier Lecture Program Committee (1997-2000; 2005-08)
 Graduate Educator Award Selection Committee (1991-1994)
 Distinguished Lecture Program Committee (1988-1990)
 Outstanding Publication Selection Committee (1987)
American Society of Plant Biologists (1981-present)
Alpha Gamma Rho, honorary member (2004)
Gamma Sigma Delta (1978-present)
International Society for Horticultural Science
 Commission on Biotechnology (1996-present)

Pi Alpha Xi (1982)
Sigma Xi (1982)

Administrative Experience, Responsibilities and Accomplishments

November 2004-present Glenn W. Sample Dean of Agriculture

The Dean of Agriculture at Purdue University reports to the Provost and is the Chief Executive Officer for the College of Agriculture, the Indiana Agricultural Experiment Station and the Purdue Cooperative Extension Service. In addition, the Dean oversees a number of regulatory services often found in Department's of Agriculture in other States. Regulatory services are assigned to the Dean of Agriculture or his/her designee by the Indiana General Assembly. Currently, these include the State Chemist Office (feed, fertilizer, seed and pesticides), the Animal Disease Diagnostic Laboratory, the Indiana Wine-Grape Council, and various marketing boards. The College of Agriculture includes 11 academic departments and two service departments with 315 faculty, 750 professional staff, 500 clerical and technical staff and 300 county Extension educators. Total enrollment within the College of Agriculture is 2450 undergraduates and 600 graduate students. The total budget for FY07 for the school is \$150M. This includes \$67M in sponsored research. The National Science Foundation currently ranks Purdue Agriculture 3rd in research expenditures in the agricultural sciences, which is the highest ranked field of science at Purdue University. The Dean provides overall leadership for the College and represents its interests to stakeholders inside and outside the university. During Dean Woodson's tenure a number of significant advances have been made in the College. These accomplishments are the result of outstanding work by Associate Deans, Department Heads, Faculty and Staff. A few examples of these are as follows:

- Faculty: Hired over 100 new faculty and expanded the total faculty by 35. Partnered with the College of Science to launch the Climate Change Research Center with new joint appointments between our two colleges. Partnered with the College of Engineering to expand expertise in biological engineering and environmental and ecological engineering. Increased number of women faculty from 27 to 51 and increased the number of ethnic minority faculty by 75%. Increased the number of endowed professorship to a total of 15 in the College.
- Learning: Developed and/or enhanced a number of "student success" programs including leadership development (certificate program), study abroad (Ag leads University in participation with 25% of our students studying abroad before graduation), Dean's Scholars Program, Honors Program, service learning courses, and Washington-based public policy internship program. These and other programs help to insure the success of our students. The College has also implemented articulation agreements with a number of IVY Tech campuses and Vincennes University in an effort to provide students access to a Purdue College of Agriculture education upon transfer. This will become increasingly important as Purdue becomes more selective.
- Discovery: Increased sponsored research from \$41.6M (2003-2004) to \$66.1M (2006-2007). Tripled funding from NSF and doubled funding from NIH. Increased funding for international program efforts with recent large awards from US Agency for International Development (\$4M) and the Bill and Melinda Gates Foundation (\$11.4M). Led the EPA national study on air emissions from confined livestock

operations funded at over \$14M. Recognition of our faculty in many national awards highlighted by the 2007 World Food Prize to Dr. Phil Nelson from the Department of Food Science.

- **Engagement:** Hired over 100 new county educators following a federal retirement buy-out that resulted in significant losses from the system. Increased focus on economic development through new programs such as the New Ventures Team and the Agricultural Innovation Center. Enhanced distance education infrastructure to each county office and learning centers located throughout the State. Enhanced our hands-on educational facilities through the completion of the \$5.2M Beck Agricultural Center at the Agronomy Center for Research and Education in West Lafayette. Secured USDA funding to develop modules for online courses on topics such as building cultural competencies to assist communities in their effort to embrace the growing diversity among their citizens. Developed analytical tools and educational programs to assist communities in land use decisions.
- **Diversity:** Created the Office of Multicultural Programs and elevated the director position to Assistant Dean (Dr. Pam Morris). Faculty adopted a multicultural awareness requirement for all students in the College of Agriculture. Launched AGR201 as a 3-Credit multicultural awareness course entitled “communicating across cultures” taught by Dr. Pam Morris (current enrollment is 120 students). Increased efforts to recruit and retain minority students in cooperation with the Office of Academic Programs and departments within the College. The College participated in the Tecumseh Project, leading efforts to secure funding to support the recruitment and retention of Native American Students.
- **Development:** The College of Agriculture exceeded its goal for the campaign for Purdue, securing \$150M for faculty, students, programs and facilities. Highlights include endowing 15 new named professorships and chairs, expanding scholarship endowments by \$12M and completing the \$5.2M Beck Agricultural Center.

1998-2004 Associate Dean of Agriculture and Director of Agricultural Research Programs

The Associate Dean and Director of Research reports to the Dean of Agriculture and is responsible for leadership of research programs in agriculture, including fiscal management, and a number of regulatory functions assigned by the Indiana State Legislature. These responsibilities include: program development and overall direction, budget planning, allocation of funds, support of faculty in the aggressive pursuit of extramural funds, accountability to supporting clientele, and general advocacy for agricultural and natural resources research in Indiana. The total budget for ARP was \$72M in FY03. Extramural research funding increased each year under Dr. Woodson’s leadership from \$25M in FY98 to \$40M in FY03. As Director of the Indiana Agricultural Experiment Station, Dr. Woodson coordinated related research in the Schools of Consumer and Family Sciences and Veterinary Medicine, and worked to assure effective linkage with other campus research organizations, including the Vice President for Research and the Cooperative Extension Service. Purdue Agriculture includes 11 academic departments with active research and graduate education programs. He worked closely with faculty, administrators, and various stakeholder groups to identify emerging areas of science in Agriculture, Food and Natural Resources. A few examples of significant accomplishments include:

- **Agricultural Genomics Initiative:** As part of the effort to strengthen signature science areas in the School of Agriculture, Dr. Woodson provided administrative leadership to the “Agricultural Genomics Initiative”. This initiative brought together resources for 15 new faculty hires in 6 academic departments and new core facilities in high throughput DNA sequencing, affymetrix microarray analysis, metabolic profiling, and computational genomics. This was an early effort at Purdue to hire faculty in a cluster across departments and schools. The success of this effort led to a number of other cluster hires in Agriculture in areas such as food and health, cropping systems, and climate change.
- **Interdisciplinary Research:** In an effort to promote and foster interdisciplinary research, Dr. Woodson worked to establish new interdisciplinary programs including the Food Safety Engineering Center, the Center for Enhancing Foods to Protect Health, the Site Specific Management Center, and the Center for Comparative Medicine. Each of these efforts has been funded through Federal cooperative agreements with USDA-ARS, competitive grants from State and Federal agencies, and/or industry.
- **Development:** Provided leadership in securing funding (\$1.5M) for an endowed chair in soybean utilization from the Indiana Soybean Board. Successfully negotiated the gifting of intellectual property valued at \$35M to the College of Agriculture from DuPont and Solae. Secured \$2M from the Lilly Endowment and the Indiana Crop Improvement Association for an Endowed Chair in Plant Translational Genomics within the Agronomy Department.
- **Federal Relations:** Worked with Indiana’s Congressional Delegation to secure \$2.2M in funding for the Hardwood Tree Improvement and Regeneration Center facilities at Purdue University. The HTIRC is a collaborative center between Purdue’s College of Agriculture and the USDA Forest Service. The focus is on the genetics and genomics of hardwood tree species. Provided leadership for other Federal earmarks for the Food Safety Engineering Center (\$2M annually for last 6 years), Midwest Biobased Products Consortium (\$2M from DOE), carbon sequestration research (\$1.5M to Purdue from USDA-CSREES), phytoremediation research (\$500k to Purdue from USDA-NRCS), and value-added genomics of small grants (\$250k annually from USDA-ARS).

1996-1998 Head, Department of Horticulture and Landscape Architecture

As Head of the Department of Horticulture, Dr. Woodson was responsible for leading a dynamic department consisting of 27 faculty, 16 professional staff, 40 graduate students, 18 postdoctoral associates, and 21 clerical and service staff. The undergraduate program at the time was the second largest in the College of Agriculture with over 350 majors in fields of horticulture and landscape architecture. The department budget was in excess of \$5M (1998), including \$2.5M in extramural funding. Accomplishments included:

- **Capital projects:** Led department through planning and implementation of a new \$8M plant growth facility project that included 35,000 square feet of growing area. This included new greenhouses, headhouse with tissue culture and plant transformation labs, and new growth chambers. Secured funding from NSF Major Research Instrumentation program for new plant growth chambers as part of this project.

- Strategic Planning: Led the Department through the development and early implementation of a strategic plan that identified signature areas in sustainable horticultural production, environmental horticulture, plant biotechnology, and environmental stress physiology.
- Curriculum reform: During his tenure as head, the department began the process of reforming the departmental programs of study. This included the reorganization of the landscape architecture curriculum to admit a select group of talented students to the professional program after the first year of study. The Department also developed a new landscape horticulture and design program that has since grown to represent one of the larger programs in the United States.
- Development: Worked with the Indiana Horticulture Society to develop a “voluntary” check-off program to support tree fruit research at Purdue, creating the “return bloom” fund.

Professional Development

Institute for Management and Leadership in Education, Harvard University, Class of 2008

Philanthropic Practices for Faculty, Advanced Resources Workshop, Purdue University, November 2007.

Insight into Philanthropy, Advanced Resources Workshop, Purdue University, April 2007

Gender Forum, March 2005; Purdue University

Workshop on diversity in the workplace, April 2002, Indianapolis, Indiana

State Agriculture Experiment Station New Directors' Workshop, September 22-24, 1998, Kansas City Missouri.

USDA-CSREES Directors/Administrators Workshop Orientation Conference, May 27-29, 1998, Washington, D.C.

University Administrators Workshop, June 1997, University of Nebraska, Lincoln, Nebraska

ESGOP/ACOP Leadership Development Program, Class 4, 1994-95

Administrative Service

Purdue University (recent examples)

Chair, Vice President for Research Search Committee (2007-08)

Chair, Dean of Veterinary Medicine Search Committee (2006)

Member, Strategic Plan Review Task Force (2006)

Chair, Administrative Review Committee for Rabindra Mukerjea (2006)
 Member, Discovery Park Liaison Committee (2005-present)
 Member, Computer Research Institute Advisory Committee (2005-2006)
 Member, Pew and Searle Scholars selection committee for Purdue's nominees (2004)
 Interim Leadership Team, Purdue University School of Education (2002-2003)
 Member, Director of Office of Technology Commercialization Search Committee (2003)
 Member, Presidential Task Force on Resource Utilization (2002)
 Member, Purdue Homeland Security Institute Steering Committee (2002-present)
 Member, Federal Relations Liaison Committee (2002-present)
 Member, Purdue Life Science Mall Planning Committee (2002-03)
 Member, Dean of School of Education Search Committee (2002)
 Member, School of Education Strategic Planning Committee (2002)
 Member, Purdue Medical Sciences Building Planning Committee (2002)
 Member, Purdue Research Park Gateways Task Force (2001-present)
 Member, Purdue University Patent and Copyright Committee (2000-2002)
 Member, Purdue University Strategic Planning Task Force (2001)
 Chair, Research Animal Facilities Task Force (2001)
 Member, Associate Dean for Academic Programs Search Committee, School of Agriculture (2001)
 Member, Purdue University Cancer Center Liaison Committee (2000-present)
 Chair, School of Agriculture United Way Campaign (2000)
 Member, Agriculture Hall Renovation Planning Committee (2000)
 Member, Hovde Award Selection Committee, School of Agriculture (2000)
 Member, Biochemistry Department Head Search Committee (2000)
 Member, Agronomy Department Head Search Committee (2000)
 Member, Entomology Department Head Search Committee (2000)
 Chair, Graduate Education Excellence 21 Project Committee, School of Agriculture (2000)
 Member, Interdisciplinary Research Programs committee, VP for Research Office (1999)
 Member, Life Sciences Task Force (1998)
 Member, Biotechnology Institute Task Force (1998)
 Chair, Life Sciences and Biotechnology Institute Proposal Committee (1998)

State of Indiana and Agricultural Organizations

Delegate, Asian Agricultural Trade Mission to Taiwan and Vietnam, Lt. Governor of Indiana (May 2006)
 Member, Board of Directors, Center for Food Integrity (2007-present)
 Member, Board of Directors, Grow America Project (2006)
 Member, Indiana State Department of Agriculture Advisory Board (2005-present)
 Member, Board of Directors, Indiana Natural Conservancy (2005-present)
 Member, National FFA Convention Community Advisory Committee (2005-present)
 Member, Indiana Council for Agricultural and Rural Development (2004-present)
 Member, Agriculture and Rural Development Task Force, Indiana Agricultural Leadership Institute (2003-present)
 Member, Governor's Task Force on Counter-Terrorism and Biosecurity, Agrosecurity Subcommittee (2002-present)
 Member, Governor's Task Force on Tobacco Producers and Rural Community Impact Fund (2000-2005)
 Administrator, Indiana Animal Disease and Diagnostic Laboratory (1998-present)
 Administrator, Office of the Indiana State Chemist and Seed Commissioner (1998- present)

Administrator, Indiana Creamery Licensing Division (1998- present)
Administrator, Indiana Egg Board (1998- present)
Administrator, Fresh Fruit and Vegetable Inspection Program (1998- present)
Director, Indiana Wine-Grape Council (1998-2005)
Director, Indiana Turkey Market Development Council (1998-2004)
Director, Indiana Sheep and Wool Market Development Council (1998-2004)
Director, Indiana Mint Market Development Council (1998-2004)
Member, Board of Directors of the Indiana Crop Improvement Association (1999-2006)
Member, Executive Committee, Indiana Crop Improvement Association (1999-2006)
Member, Board of Directors, Ag Alumni Seed Improvement Association (1998-2006)

Professional Service

National Association of State Universities and Land Grant Colleges (NASULGC)

Chair-elect, Board on Agriculture Assembly Budget and Advocacy Committee, 2007-2011
Member, CREATE-21 committee and Farm Bill Task Force 2005-2007
Chair, International Agriculture Coordinating Committee 2005-2007
Chair, Experiment Station Committee on Policy (ESCOP), Science and Technology Committee (2000-2002)
Member, ESCOP Executive Committee (2000-2002)
Chair, Agricultural Genomics Task Force, ESCOP (2000)
Administrative Advisor, NCA-4 Regional Horticulture Department Heads Committee (1999-present)
Administrative Advisor, NC-202 Regional Research Committee on the Management of Weeds (1998-2005)
Administrative Advisor, NCR-202 Regional Committee on the Health and Management of Honey Bees (2000-2005)
Administrative Advisor, NRSP-5 National Program for Controlling Virus Diseases of Temperate Fruit Tree Crops (2002-2005)
Chair, ESCOP Science Roadmap Committee (1999-2000)
Administrative Advisor, NCR-22 Regional Committee on Small Fruits (1997-1999)

Scholarship

Chair, External Assessment Panel for USDA-ARS National Program 301: Plant, Microbial & Insect Genetic Resources, Genomics & Genetic Improvement, USDA Agricultural Research Service (2005)
Chair, External Review Team of Mississippi State University's Life Sciences Program (2005)
Member, United States Wheat & Barley Scab Initiative Steering Committee, USDA-ARS (2004-2007)
Chair, Research Project Review Panel for National Program 301 – Plant, Microbial & Insect Genetic Resources, Genomics & Genetic Improvement, USDA Agricultural Research Service, Office of Scientific Quality Review (2003)
Member, Executive Committee, Public Sector Intellectual property for Research in Agriculture (2004-present)
Chair, Review Team for the Department of Agronomy, Iowa State University (2003)

Member, Ohio Agricultural Research and Development Center external review team to assess economic impacts of this organization on Ohio's economy (March 1-3, 2003)

Member, Steering Committee, Workshop on Criteria for Field Testing of Plants with Engineered Regulatory, Metabolic and Signaling Pathways. Information Systems for Biotechnology, Virginia Tech University (2002)

Member, Executive Committee, University-Industry Consortium (2002-2005)

Member, Board of Directors, National Alliance for Animal Genomics (2001-present)

Chair, Review Team for the Horticultural Sciences Department, University of Florida (2001)

Vice-Chairman, Gordon Conference on Plant Senescence (2000)

Member, Scientific Program Committee, IV International Symposium on *In Vitro* Culture and Horticultural Breeding, Tampere, Finland (2000)

Member, Search Committee for Director of Ornamental Plant Germplasm Center, USDA-ARS and Ohio State University (2000)

Member, Search Committee for Curator, National Ornamental Plant Germplasm Center, USDA-ARS and Ohio State University (2000)

Member, Steering Committee, Danforth Plant Science Center, St. Louis, Missouri (1999-2000)

Member, Scientific Liaison Committee, Danforth Plant Science Center, St. Louis, Missouri (1999-present)

Member, CSREES Comprehensive Review Team, Department of Horticulture, University of Wisconsin (1999)

Member, Scientific Advisory Board, Senesco Technologies, Inc., Princeton, NJ (1999-2001)

Member, Scientific Program Committee, 7th International Symposium on Postharvest Physiology of Ornamental Plants, Miami, Florida (1999)

Member, External Review Team, Department of Environmental Horticulture, University of Florida (1998)

Member, External Review Team, Department of Horticulture, Colorado State University (1998)

Member, University-Industry Consortium (1998-present)

Member, Scientific Program Committee, International Symposium on Postharvest Biology, Tel Aviv, Israel (1998)

Member, Scientific Program Committee, 25th International Horticultural Congress, Brussels (1998)

Member, External Review Team for the Department of Horticulture, Penn State University (1997)

Associate Editor, Journal of Natural Resources and Life Sciences Education (1994-1997)

Member, National Agricultural Biotechnology Council (1997-present)

Member, USDA-NRI Plant Growth and Development Grant Panel (1995)

Member, Editorial Board, Horticultural Reviews (1994)

Session Chair, Gordon Conference on Postharvest Physiology (1994)

Member, Editorial Board, International Journal of Postharvest Biology and Technology 1993-1999)

Associate Editor, HortScience (1991-1993)

Associate Editor, Journal of the American Society for Horticultural Science (1991-1994)

Consultant, Senesco Technologies, Inc., Princeton, NJ (1999-2002)

Consultant, Proctor and Gamble, Cincinnati, OH (1999)

Consultant, Calgene Pacific, Melbourne, Australia (1988-1990)

Consultant, Perrier, International, Paris, France (1990)

Ad Hoc Grant Reviewer: National Science Foundation, USDA National Research Initiative, Department of Energy, and Binational Agricultural Research and Development Fund, Israel Science Foundation

Ad Hoc Publication Reviewer: Nature Biotechnology, Science, Proceedings of the National Academy of Sciences, Plant Cell, Plant Physiology, Plant Journal, Plant Science, Plant Cell and Environment, Plant Molecular Biology, Molecular Plant Breeding, Crop Science, Journal of Experimental Botany, Journal of the American Society for Horticultural Science, Postharvest Biology and Technology, HortScience, and Planta
Ad Hoc Dissertation Referee: University of Melbourne and Hebrew University of Jerusalem

Teaching and Graduate Advising

Courses taught

- HORT 220 – Tropical Plants (1986, 1987)
This 2 credit course was taught each year with the Landscape Architecture faculty, emphasizing the biology, ecology and systematics of tropical plants.
- HORT 301 – Plant Physiology (1991-1997)
This 4 credit lecture and laboratory course was taught each year with Professor Robert Joly to students in the Colleges of Agriculture and Science.
- HORT 391 – Methods in Horticulture Research (1991)
This 1 credit discussion course was taught to Horticulture Science students, emphasizing current research through literature review and discussion.
- HORT 415 – Flower Crop Production (1994, 1995)
This 1 credit course focused on the environmental physiology of flower crops, leading to an understanding of production and management practices.
- HORT 443 – Greenhouse Management (1987-1992)
This 4 credit course was taught each year to Horticulture Production majors, emphasizing the cultural and environmental management strategies for producing crops in greenhouses.
- HORT 553 – Plant Growth and Development (1992-1997)
This 3 credit graduate course was part of the core curriculum for the interdisciplinary Plant Biology Program. I was responsible for sections on plant hormones, vegetative and reproductive development.

Graduate Students Advised as Major Professor (current position)

Jennifer Boatright – Ph.D. Transcriptional Regulation of ACC Oxidase Genes in *Petunia hybrida*. 2000. (Research Associate, Purdue University)

Kanogwan Kerdnaimongkol – Ph.D. Characterization of Transgenic Tomato Plants Expressing an Antisense Catalase Gene and Cloning of a TOMCAT2 Gene from Tomato. 1999. (Associate Professor of Botany, Chulalongkorn University, Thailand)

Sven Verlindin – Ph.D. Ethylene-Dependent and Ethylene-Independent Gene Expression during Flower Petal Senescence. 1999. (Associate Professor of Plant Science, University of West Virginia)

Amanda S. Brandt – M.S. Purification and characterization of beta-galactosidase from carnation flowers. 1997. (Lab Technician, USDA-ARS, Purdue University)

Michelle L. Jones – Ph.D. Regulation of ethylene biosynthesis and interorgan signaling following pollination in *Dianthus carophyllus* L. cv. White Sim. 1997. (Associate Professor of Horticulture, the Ohio State University)

Kanogwan Kerdnaimongkol – M.S. Oxidative stress and chilling tolerance in tomato seedlings. 1996. (Associate Professor, Chulalongkorn University, Thailand)

Ana Gomes – Ph.D. Inhibition of Ethylene Production in Petunia via Antisense and Sense ACC Oxidase RNA Expression. (Co-advisor with Dr. Jules Janick). 1996.

Xiaoyan Tang – Ph.D. Structure and expression of 1-aminocyclopropane-1-carboxylate oxidase gene family in *Petunia hybrida*. 1995. (Associate Professor of Plant Pathology, Kansas State University)

Julie Maxson – Ph.D. Characterization of the function and ethylene-regulation of a senescence-related GST gene from carnation. 1995. (Senior Research Scientist, Case Western Reserve)

Paul Larsen – Ph.D. A study of senescence and the post-pollination response in flowers of *Dianthus caryophyllus* L. cv. White Sim. 1994. (Associate Professor of Biochemistry, UC Riverside)

Bridget Baker – M.S. (Agriculture – non-thesis) 1993. (unknown)

Hong Wang – Ph.D. Cloning and characterization of flower senescence-related genes from carnation and petunia. 1993. (Senior Research Scientist, DuPont, Delaware)

Kay A. Lawton – Ph.D. Regulation of gene expression during carnation flower senescence. 1990. (Senior Research Scientist, Syngenta, North Carolina)

Hong Wang – M.S. Regulation of ethylene biosynthesis in carnation flowers. 1989. (Senior Research Scientist, DuPont, Delaware)

Susan Hanchey – M.S. Carbohydrate Metabolism Associated with Low Temperature Storage of Caladium Tubers. 1986 (unkown)

Postdoctoral Research Associates Advised (current position)

Dr. Michelle Jones 1997-98 (Associate Professor, Ohio State University)

Dr. Nathan Lange 1996-97 (Research Associate, University of California, Davis)

Dr. Jon Lindstrom 1994-98 (Associate Professor, University of Arkansas)

Dr. Jason Lei 1993-95 (position unknown)

Dr. Anju Bhatia 1992-95 (Promega Biotech)

Dr. Hanan Itzhaki 1991 (Volcani Institute, Israel)

Dr. Amir Drory 1991-93. (Stay-fresh, Inc., Israel)

Dr. Ky Young Park 1990-92 (Professor, South Korea)

Dr. K. G. Rathothama 1987-89 (Professor and University Faculty Scholar, Purdue)

Grants and Contracts

Education

- 2002 USDA-CSREES, “*Educational Programs in Animal Well Being*”, Dr. Ed Pajor, Co-PI, \$100,000
- 2000 National Science Foundation-IGERT Program, “*Innovation Realization Laboratory*”, Drs. Marie Thursby, Louis Sherman, and Warren Stevenson, Co-PIs. \$2,333,428 (5 years)
- 1996 National Science Foundation – Curriculum, Laboratory, and Instructional Development Program. “*Development and Implementation of an Inquiry-Based Approach to Teaching Plant Physiology*” \$150,000 (Dr. Robert Joly, Co-PI)

Research

- 2004 DOE, “*Development of Sustainable Biobased Products and Bioenergy*”, Dr. Michael Ladisch, Co-PI. \$1,964,000. (2 years)
- 2002 USDA-CSREES, “*National Network of Plant Diagnostic Centers*” \$250,000 (2 years)
- 2002 USDA-ARS Cooperative Agreement, “*Functional Genomics of Small Grains for Value-added Traits*”, Dr. Herb Ohm, Co-PI. \$380,000. (3 years)
- 2002 Indiana 21st Century Growth and Development Fund, “*Development of a Rodent Resource and Research Center and Program of Comparative Medicine*” \$800,000 to Purdue; \$2M total (Dr. Merv Yoder, IU School of Medicine, Co-PI)
- 2001 Department of Energy, “*Capability Study of Midwest Consortium for Biobased Products*”, \$50,000
- 1999 USDA-ARS Cooperative Agreement, “*New Technology and Systems to Detect and Prevent Chemical and Microbial Food Contaminants*”, Dr. Richard Linton, Co-PI, \$6,500,000 (5 years)
- 1997 National Science Foundation-Major Instrumentation Program “*Acquisition of Controlled Environment Plant Growth Chambers for Plant Biology Research at Purdue University*” (Dr. Cary Mitchell, Co-PI) \$450,000
- 1997 American Floral Endowment, “*Floral-Specific Gene Expression*” \$150,000 (3 years)
- 1997 The Fred C. Gloeckner Foundation, “*Effect of Ethanol on Postharvest Keeping Quality*” \$6,500
- 1996 Yoder Brothers, Inc. “*Value-Added Biotechnology*” \$60,000 (2 years)

- 1996 Indiana Commissioner of Agriculture, “*Development of Improved Floral Longevity through Genetic Engineering*” \$20,000
- 1995 The Fred C. Gloeckner Foundation, “*Role of Ethylene in Reproductive Development of Floriculture Crops*” \$18,000
- 1995 Purdue Research Foundation International Travel Grant, “*Sixth Interational Symposium on Postharvest Physiology of Ornamental Plants*”, Oslo, Norway. \$1,000
- 1995 Purdue Research Foundation Research Grant, “*Role of Ethylene in Reproductive Development*” \$21,000
- 1995 Office of Agricultural Research Programs, “*Agricultural Research Award*” \$5,000
- 1994 USDA National Research Initiative, Plant Growth and Development Program, “*Ethylene Biosynthesis and Interorgan Communication during Pollination-Induced Flower Senescence*” \$90,000 (2 years)
- 1994 American Floral Endowment, “*Regulation of Ethylene Production during Postproduction Handling of Flower Crops*” \$35,000
- 1993 Purdue Research Foundation, “*Ethylene Biosynthesis and Interorgan Communication during Flower Senescence*” \$19,800
- 1992 National Science Foundation-Developmental Biology Program, “*Developmental and Hormonal Regulation of Gene Expression during Flower Senescence*” \$315,000 (3 years)
- 1992 USDA-National Research Initiative, Plant Growth and Development Program, “*Ethylene Biosynthesis and Interorgan Communication during Flower Senescence*” \$105,000 (2 years)
- 1992 Purdue Research Foundation International Travel Grant. \$1,045
- 1991 Binational American-Israel Agricultural Research and Development Found (BARD), “*Molecular and Physiological Characterization of the Response to Ethylene during Senescence of Carnation Genotypic Variants*” \$240,000 (3 years)
- 1990 Purdue Agriculture Experiment Station, “*Interaction of developmentally regulated DNA-binding factors with a flower senescence-related gene*” \$17,000
- 1990 Purdue Research Foundation Research Grant, “*Regulation and function of a senescence-related glutathione s-transferase from carnation*” \$18,000
- 1990 The Fred C. Gloeckner Foundation, “*Manipulation of flower senescence by genetic engineering*” \$16,000

- 1989 Purdue Research Foundation Research Grant, “*Identification of genetic elements and cellular factors regulating expression of flower senescence genes*” \$16,000
- 1989 National Science Foundation – Developmental Biology Program. “*Developmental and Hormonal Regulation of Gene Expression during Flower Senescence*” \$240,000 (Dr. Peter Goldsbrough, Co-PI; 3 years)
- 1988 Purdue Agriculture Experiment Station, “*Phytohormone regulation of gene expression during flower petal senescence*” \$17,000
- 1988 The Binational American-Israel Agriculture Research and Development Fund (BARD), “*Mechanisms of chilling injury and resistance in ornamental plants*” \$200,000 (3 years)
- 1988 Indiana Cooperation for Science and Technology – Center for Plant Biotechnology, “*Developmental and hormonal regulation of gene expression during flower senescence*” \$103,106 (Dr. Peter Goldsbrough, Co-PI; 2 years)
- 1988 The Fred C. Gloeckner Foundation, “*Developmet of efficient techniques for the transfer of genes to floriculture crops*” \$16,000
- 1987 Purdue Agriculture Experiment Station – Research Incentive Program, “*Manipulation of flower senescence by genetic engineering*” \$8,000
- 1987 Purdue Research Foundation, “*Molecular cloning and characterization of expression of senescence-specific genes*” \$15,000
- 1986 Purdue Agriculture Exeriment Station, “*Gene expression during the senescence of carnation flowers and its regulation by ethylene*” \$15,000
- 1986 The Fred C. Gloeckner Foundation, “*Effect of low temperature storage on tuber growth and physiology*” \$14,000

Publications

Journal Articles

Lu, Z., Feng, X., Song, L., Han, Y., Kim, A., Herzberg, O., **Woodson, W.R.**, Martin, B.M., Mariano, P.S. and Dunaway-Mariano, D. 2006. Diversity of function in the isocitrate lyase enzyme superfamily: The *Dianthus caryophyllus* petal death protein cleaves α -keto and α -hydroxycarboxylic acids. *Biochemistry* 44:16365-16376.

Woodson, W.R. and M.L. Jones. 2003. In search of eternal youth: The delay of postharvest senescence in flowers. *Acta Horticulturae* 624: 305-314.

Verlinden, S., Boatright, J. and **W.R. Woodson**. 2002. Changes in ethylene responsiveness of senescence-related gene mRNA accumulation during carnation petal development. *Physiologia Plantarum* 116:503-511.

Joly, R.J., M.L. Jones, S. Verlinden, D. Rhodes and **W.R. Woodson**. 2000. Learning in an inquiry-driven plant physiology laboratory. *Journal of Natural Resources and Life Sciences Education*. 29:31-35.

Joly, R.J. and **W.R. Woodson**. 2000. It's all about learning: An inquiry-based approach to teaching plant physiology. *HortTechnology* 10:277-279.

Jones, M. L. and **W. R. Woodson**. 1999. Differential expression of three members of the ACC synthase gene family in carnation. *Plant Physiology* 119: 755-764.

¹Jones, M. L. and **W. R. Woodson**. 1999. Interorgan signaling following pollination in carnation flowers. *Journal of the American Society for Horticultural Science* 124:598-604.

²Kerdnaimongkol, K. and **W.R. Woodson**. 1999. Inhibition of catalase by antisense RNA increases susceptibility to oxidative stress and chilling injury in transgenic tomato plants. *Journal of the American Society for Horticultural Science*. 124:330-336.

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Verlinden, S. and **W. R. Woodson**. 1998. The physiological and molecular responses of carnation flowers to high temperature. *Postharvest Biology and Technology* 14: 185-192.

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Woodson, W. R. 1997. Biotechnology and Horticulture. *HortScience* 32:18-21.

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¹ Alex Laurie Award for Outstanding Science Paper, Ohio Floriculture Association.

² Outstanding Publication Award, American Society for Horticultural Science.

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- Jones, M. L., P. B. Larsen, and **W. R. Woodson**. 1995. Ethylene-regulated expression of a carnation cysteine proteinase during flower petal senescence. *Plant Molecular Biology* 28:505-512.
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- Babiker, A. G. T., T. Cai, G. Ejeta, L. G. Butler, and **W. R. Woodson**. 1994. Enhancement of ethylene biosynthesis and germination with thidiazuron and some selected auxins in *Striga asiatica* seeds. *Physiologia Plantarum* 91:529-536.
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- Woodson, W. R.** and A. K. Handa. 1987. Changes in protein patterns and *in vivo* protein synthesis during presenescence and senescence of hibiscus petals. *Journal of Plant Physiology* 128:67-75.
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- Randle, W. M. and **W. R. Woodson**. 1986. The effect of storage and wounding on ethylene production by sweet potato. *HortScience* 21(4):1018-1019.
- Woodson, W. R.** and T. J. Raiford. 1986. Induction of lateral branching in Chinese hibiscus with mefluidide. *HortScience* 21(1):71-73.
- Woodson, W. R.**, S. H. Hanchey, and D. N. Chisholm. 1985. Role of ethylene in the senescence of isolated hibiscus petals. *Plant Physiology* 79:679-683.
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Woodson, W. R. and J. W. Boodley. 1983. Accumulation and partitioning of nitrogen and dry matter during the growth of chrysanthemum. *HortScience* 18(2):196-197

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Woodson, W. R. and J. W. Boodley. 1982. Effects of nitrogen form and potassium concentration on growth, flowering, and nitrogen utilization of greenhouse roses. *Journal of the American Society for Horticultural Science* 107(2):275-278.

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Book Chapters

Woodson, W.R., A. Dandekar, A. Handa, N. Hubbard, A. Mattoo, P. McCourt and C. Soileau. 2003. Report of the Altered Ripening Working Group. *In: Criteria for Field Testing of Plants with Engineered Regulatory, Metabolic and Signaling Pathways*. L.L. Wolfenbarger (ed), Information Systems for Biotechnology, Virginia Tech Press, Blacksburg, VA. pp. 27-29.

Woodson, W.R. 2002. Protection of Intellectual Property in Plant Breeding and Biotechnology: A Land Grant University Perspective. *In: Biotechnology, Gene Flow, and Intellectual Property Rights: An Agricultural Summit*. M.A. Martin (ed.), Purdue Agricultural Experiment Station Bulletin no. RB-995, Purdue University. pp. 39-44.

Woodson, W.R. 2002. Pollination signals and flower senescence. *In: Plant Reproduction*, S.D. O'Neill and J.A. Roberts (eds.), Sheffield Academic Press, Sheffield, England. pp. 279-300.

Jones, M.L., J.T. Lindstrom, and W.R. Woodson. 1999. Regulation and function of pollination-induced ethylene in carnation and petunia flowers. *In: Biology and Biotechnology of the Plant Hormone Ethylene II*. A.K. Kanellis, C. Chang, H. Klee, A.B. Bleeker, J.C. Pech, and D. Grierson (eds.). Kluwer Academic Publishers.

Jones, M.L. and W.R. Woodson. 1998. Pollination-induced ethylene and flower senescence in carnation. *In: Australasian Postharvest Horticulture – Globalisation; the challenge to home and export markets*. University of Western Sydney Hawkesbury Press, NSW, Australia.

Maxson, J. M. and W. R. Woodson. 1997. Transcriptional regulation of senescence-related genes in carnation flowers. *In: Biology and Biotechnology of the Plant Hormone Ethylene*, A. K. Kanellis, C. Chang, H. Kende, and D. Grierson (eds.), Kluwer Academic Publishers, The Netherlands. pp. 155-162.

Woodson, W. R. 1994. Molecular biology of flower senescence in carnation. *In: Molecular and Cellular Aspects of Plant Reproduction*, R. Scott and A. Stead (eds.), Cambridge University Press, Cambridge, pp. 255-267.

Woltering, E. J., A. Ten Have, P. B. Larsen, and W. R. Woodson. 1994. Ethylene biosynthetic genes and interorgan signaling during flower senescence. *Molecular and Cellular Aspects of Plant Reproduction*, R. Scott and A. Stead (eds.) Cambridge University Press, Cambridge, pp. 287-309.

Woodson, W. R., A. Drory, H. Itzhaki, P. Larsen, J. Maxson, K. Y. Park, and H. Wang. 1993. Ethylene-regulation and function of flower senescence-related genes. In: *Cellular and Molecular Aspects of Biosynthesis and Action of the Plant Hormone Ethylene*, J.-C. Pech (ed.), Kluwer pp. 291-297.

Larsen, P. B., E. J. Woltering, and W. R. Woodson. 1993. Ethylene and interorgan signaling in flowers following pollination. In: *Plant Signals in Interactions with Other Organisms*, J. Schultz and I. Raskin (eds.), American Society of Plant Physiologists, Rockville, MD pp. 171-181.

Woodson, W. R. 1991. Gene expression and flower senescence. IN: *Genetics and Breeding of Ornamental Species*, J. N. Mol, J. Harding and F. Sing (eds.), Kluwer Academic Publishers, The Netherlands. pp. 317-331.

Woodson, W. R., K. A. Lawton, R. C. Meyer, Jr., K. G. Raghothama, and P. B. Goldsbrough. 1990. Regulation of gene expression in senescing carnation petals. In: *Biotechnology of Horticultural Crops*, ed. A. B. Bennett and S. D. O'Neill, Alan Liss Inc., New York. pp. 203-212.

Contributed Papers and Abstracts

Dr. Woodson's research group has published over 200 abstracts from contributed papers to the American Society of Plant Biology, American Society for Horticultural Science and other professional meetings.

Invited Presentations

Dr. Woodson makes many presentations throughout the year as Dean of Agriculture. These include presentations to faculty, staff, alumni, civic clubs, County Extension banquets, State Agencies, and national groups. The following is not intended to be an exhaustive list of lectures, but rather reflects the more significant presentations to national and/or international audiences.

2008 "The impact of biofuels on land use, environment and production agriculture",
MIT, Cambridge, MA

 "The status of biofuels policy and prospects as part of the nations fuel mix",
American Association for the Advancement of Science, Boston, MA

- 2007 “The United States Department of Agriculture Specialty Crop Initiative: A Public University Perspective”, American Society for Horticultural Sciences Annual Conference, Scottsdale, AZ
- “Presidential Address”, American Society for Horticultural Sciences Annual Conference, Scottsdale, AZ
- “The Future of Horticultural Sciences in Land Grant Universities”, Department of Natural Resources, University of Illinois
- “The Global Horticulture Initiative”, Department of Plant Sciences, University of California, Davis
- 2006 “International Programs in Purdue Agriculture”, BP Executives, London, England”
- “Biotechnology and Agriculture”, National Taiwan University, Taipei, Taiwan
- “Research Partnerships through the US-India Knowledge Initiative”, University of Agricultural Sciences, Bangalore, India
- 2005 “Undergraduate Programs in Agriculture at Purdue University”, Chinese Agricultural University, Beijing, China
- “International Research Partnerships in Agriculture and Biotechnology”, Gyeongsang National University, South Korea
- 2004 “Publicly Funded Agricultural Biotechnology Research and the Challenges of Bringing Products to Market” USDA Advisory Committee on Biotechnology, Washington, D.C.
- “Public Research in Agriculture and Horticulture: Our Roadmap to the Future” Department of Horticulture, Cornell University, Ithaca, NY
- “Balancing the Land Grant Mission with Excellence in Research and State Economic Development”, Keynote address to the Clemson University Fall Academic Convocation, Clemson, S.C.
- “Twenty Years of Progress in Plant Growth Regulator Research” Keynote Lecture, Plant Growth Regulator Society of America Annual Conference, Charleston, SC
- “Encouraging Competitive Grants: A Director’s Perspective”, USDA-CSREES Grant Writing Workshop, Chicago, IL
- “Raging Hormones: The Sex Life of Plants”, Penn High School Convocations, Mishawaka, IN
- 2003 “Science Roadmap for Agriculture”, Indiana Horticulture Congress, Indianapolis IN,

- “Biotechnology and Public Policy”, ESCOP/ACOP Leadership Development Program for Class 12, Washington, D.C.
- “Public-Private Partnerships in Agricultural Research”, Monsanto, St. Louis, MO
- “Crop Production and United States Energy Security”, Indiana Crop Improvement Association Annual Conference, Indianapolis, IN
- “Clearinghouse for Public Sector Agricultural Biotechnology Intellectual Property”, ESCOP Committee on Science and Technology workshop, Washington, D.C.
- “Plant-made Pharmaceuticals”, Ohio Corn Growers Association annual conference, Wilmington, OH
- “Public Agricultural Research in a Private World”, Indiana Crop Improvement Association Annual Meeting, Indianapolis, IN
- “Positioning LSU Agriculture Research and Extension in Horticulture for the Future”, Louisiana State University Agricultural Summit, Alexandria, LA
- 2002 “The Perceptions of the USDA Competitive Grants Programs from a Director’s Perspective”, SAES/ARD Workshop, Baltimore, Maryland
- “Why Corn”, National Corn Growers Association Summit on Pharma Corn, Washington, D.C.
- “Genetically Modified Foods: Past, Present and Future” Keynote lecture, Huntington College Convocation, Huntington, Indiana
- “The Development, Protection and Marketing of Germplasm from a Public University Perspective” The Indiana Agriculture Summit, Indianapolis, IN
- “In Search of Eternal Youth: The Delay in Postharvest Senescence in Flowers”, Keynote Address, International Horticulture Congress, Toronto, Canada.
- “Altered Fruit Ripening: A Case Study in the Engineering of Regulatory Pathways in Plants”, Information Systems for Biotechnology Workshop, Washington, D.C.
- “Applying Agriculture to Medicine” National Agricultural Biotechnology Council, 14th Annual Conference on Foods for Health, Minneapolis, MN
- 2001 “Biotechnology and Intellectual Property; Impacts on Public Research” Indiana Seed Trade Association Convention Keynote Address, Indianapolis, IN
- “Gene Flow in GMO Crops” University-Industry Consortium meeting, St. Louis, MO

- “Genome Technology Will Shape our Future” World Citrus Expo 2001, Ft. Myers, Florida
- “Agricultural Competition in the 21st Century: Where to Next for the Traditional Family Farm?”, National Conference of State Legislatures, Washington, D.C.
- 2000 “The Role of Land Grant Universities in Agricultural Genomics” National Science Foundation Genome Roundtable, Washington, D.C.
- “Are there Genes in my Food?” Purdue University President’s Council Back-to-Class Session
- “Agricultural Biotechnology” High School Science Teachers Symposium, Purdue University
- “Food Biotechnology: What’s all the fuss?” Purdue Club of Dubois County Annual Banquet, Jasper, IN
- “Science, Research and Universities”, High School Science Teachers Symposium, Purdue University
- “The Biobased Economy: Role of the State Agricultural Experiment Stations”, National Biobased Products and Bioenergy Initiative, Iowa State University, Ames, IA
- “Agricultural Biotechnology: Dreams and Reality” National Agribusiness Conference, Illinois Certified Public Accountants Foundation, Bloomington, Illinois
- “Molecular and Biochemical Determinants of Senescence” American Society for Horticultural Science Colloquium on Postharvest Life of Horticultural Crops, Orlando, FL
- “Federal Funding Opportunities for Horticultural Research” American Society for Horticultural Science Research Colloquium, Orlando, FL
- “Biotechnology and Functional Foods” 23rd Annual Food Science Club Symposium, Purdue University
- 1999 "Public-Private Research Partnerships" North Central Weed Science Society meeting, Columbus, OH
- "Developing a Science Roadmap for Agriculture" State Agricultural Experiment Station Directors' Workshop, Memphis, Tennessee
- “Ethylene: It’s a Gas.” American Society of Plant Growth Regulators Meeting, Los Angeles, CA.
- “Facilitating Internal Awareness and Building Collaborations Within a State Agricultural Experiment Station.” 1999 Agriculture Program Conference, Texas A&M University

- 1998 “Farming in “Dolly” World.” 1998 Indiana Farm Bureau Convention, Indianapolis, IN
- “Ethylene Responsive Genes.” Ecole Nationale Supérieure Agronomique, Toulouse, France
- “Pollination-Induced Ethylene: Regulation and Function.” Department of Horticulture and Landscape Architecture Seminar, Purdue University
- “Midwestern Horticulture in the New Millennium.” Indiana Horticulture Congress, Keynote speaker for Raw Products Luncheon, Indianapolis, IN
- 1997 “Regulation and Function of Flower Senescence Genes.” International Symposium on Plant Senescence and Postharvest Biotechnology, Institute of Botany Academia Sinica, Taipei, Taiwan
- “Ethylene and Plant Reproduction.” Plant Biology Seminar Series, University of Nebraska, Lincoln, NE
- “Ethylene and its Role in Plant Reproductive Development” Plant Biology Seminar Series, Cornell University, Ithaca, NY
- “Ethylene and the Regulation of Programmed Cell Death.” DowElanco Seminar Series, Indianapolis, IN
- “Ethylene and the Sex Life of Flowers.” Plant Biological Sciences Colloquium, University of Minnesota, St. Paul, MN
- 1996 “Pollination-Induced Ethylene: Role in Reproductive Biology of Plants.” Horticulture and Crop Science Seminar, Michigan State University, East Lansing, MI
- “Ethylene: It’s Life or Death to Many Flowers.” B.Y. Morrison Memorial Lecture at the Annual Meetings of the American Society for Horticultural Science, Lexington, KY
- “Regulation of Flower Senescence Through Biotechnology.” Keynote Address to the International Conference on Postharvest Science, Taupo, New Zealand
- “Ethylene-Regulated Expression of Flower Senescence-related Genes in Carnation.” Presented at the International meeting on the Biology and Biotechnology of the Plant Hormone Ethylene, Chania, Crete
- 1995 “Phenotypic and Genetic Stability of Petunias Expressing Sense and Antisense RNAs of Endogenous Genes.” Presented at the Workshop on the Variation in Expression and Stability of Transgenes in Horticultural Crops, 92nd Annual Meeting of the American Society for Horticultural Science, Montreal, Canada

- “Genetic Engineering and Crop Improvement.” Presented at the Workshop on Fads and Fashions in Horticultural Science Research: Reality Check, 92 Annual Meeting of the American Society for Horticultural Science, Montreal, Canada
- “Manipulation of Ethylene Biosynthesis and Action in Transgenic Plants.” 22nd Annual Meeting of the Plant Growth Regulator Society of America, Minneapolis, MN
- “Ethylene-Responsive Gene Expression during Flower Senescence.” 15th International Conference on Plant Growth Substances, Minneapolis, MN
- “The Regulation and Function of Flower Senescence-Related Genes.” Sixth International Symposium on Postharvest Physiology of Ornamental Plants, Oslo, Norway
- “Ethylene and the Sex Life of Flowers.” Department of Horticulture Seminar Series, Purdue University
- “Molecular Genetics of Flower Senescence.” Keynote Address at the XV 111th Eucarpia Symposium, Tel Aviv, Israel
- 1994 “Genetic Engineering of Flowers for Improved Postharvest Quality.” USDA National Symposium on Genetic Engineering of Ornamental Plants, Beltsville, MD
- “Ethylene and Flower Senescence.” Purdue University Agriculture Research Award Seminar
- 1993 “Regulation and Function of Flower Senescence-Related Genes.” DowElanco/Purdue Colloquium, Purdue University
- “Role of Ethylene in Post-Pollination Signaling.” Eighth Annual Penn State Symposium in Plant Physiology, Penn State University
- “Role of Ethylene in Pollination-Induced Flower Senescence.” ATO-DLO, Wageningen, The Netherlands
- “A Molecular Genetic Approach to Flower Senescence.” ICI Seed Company, Jealott’s Hill Research Station, Berkshire, England
- “Molecular Aspects of Carnation Flower Senescence.” Society for Experimental Biology, University of Kent, Canterbury, England
- 1992 “Molecular Genetics of Programmed Organ Death in Plants.” Horticultural Sciences Seminar, University of Florida
- “Ethylene-Regulation of Flower Senescence-Related Genes.” International Symposium on Cellular and Molecular Aspects of the Biosynthesis and Action of Ethylene, Agen, France

- “Regulation and Function of Flower Senescence-Related Genes.” Second International Symposium on In Vitro Culture and Horticultural Breeding, Baltimore, MD
- “Genetic Engineering of Postharvest Longevity.” Ball Seed Company, West Chicago, IL
- “Physiology and Biochemistry of Flower and Senescence.” Ohio State University, Department of Horticulture Seminar
- “Developmental and Hormonal Gene Regulation during Floral Senescence.” International Workshop on Molecular Control of Flower Development and Plant Reproduction, One of 10 Invited Keynote Speakers, Amsterdam
- “Molecular Biology of Flower Senescence.” Penn State University, Visiting Scholar Lecture in Horticulture Department
- 1991 “Plant Genetic Engineering.” Ag Forum 1991 - Showcase on Agriculture Conference, Purdue University
- “Ethylene Regulation of Flower Senescence-Related Gene Expression.” Washington State University, College of Agriculture Distinguished Lecture Series
- 1990 “Regulation and Function of Senescence-Related Genes from Carnation.” Montana State University, Department of Plant Science Seminar
- “Regulation and Function of Flower Senescence-Related Genes from Carnation.” Texas A&M University, Department of Horticulture and Plant Physiology Joint Seminar Series
- “Gene Expression and Flower Senescence.” E. I. Du Pont De Nemours and Company, Newark, DE
- “Manipulation of Flower Crops by Genetic Engineering.” Professional Plant Growers Association Conference, Denver, CO
- “Flower Senescence: A Molecular Genetic Approach.” University of Georgia, Center for Molecular and Cellular Biology Seminar Series
- 1989 “Regulation of Gene Expression during Flower Senescence.” Plant Cell and Molecular Biology Seminar Series, Purdue
- “Genetic Engineering of Flowers,” Purdue CARET meeting, West Lafayette, IN
- “Regulation of Gene Expression by Ethylene.” NCR 144/NCR 155 Joint Meeting, Purdue University
- “Improving Flower Keeping Quality through Genetic Engineering.” Science in Agriculture Symposium, Purdue University

- “Gene Expression during Flower Senescence.” Plant Science Seminar, Michigan State University
- “Regulation of Gene Expression during Flower Senescence.” Horticultural Biotechnology Symposium, Davis, CA
- “Biotechnology of Floricultural Crops.” ASHS Colloquium: Biotechnology: Implications for Improved Quality in Horticultural Products, Tulsa, OK
- “Developmental and Molecular Biology of Floral Senescence.” Presentation to DuPont and Great Lakes Chemical Corp. Executives
- “Genetic Engineering of Flower Crops for Improved Postharvest Quality.” AVIV Flower Exhibition and Conference, Tel Aviv, Israel
- 1988 “Developmental and Hormonal Regulation of Gene Expression during Flower Petal Senescence.” Calgene Pacific, Melbourne, Australia
- “Gene Expression during Flower Senescence.” Department of Environmental Horticulture, University of California, Davis
- “Gene Expression and Protein Synthesis in Senescing Flower Petals.” The Fourth Gordon Research Conference on Plant Senescence, Colby-Sawyer, NH
- “Gene Expression during Flower Petal Senescence.” Department of Horticulture Seminar Series, Purdue University
- “Ethylene-Regulated Gene Expression during Carnation Petal Senescence.” Fourth International Symposium on Postharvest Physiology of Ornamentals. Tel Aviv, Israel
- 1985 “Role of Ethylene in Flower Petal Senescence.” Dept. of Horticulture Seminar, Purdue University
- 1985 “Ethylene Biosynthesis and Action during Flower Senescence.” Dept. of Crop Physiology Seminar, Louisiana State University