

CURRICULUM VITAE  
RONALD ROSS SEDEROFF

17 December 2009

**CURRENT PROFESSIONAL POSITION**

Distinguished University Professor and Edwin F. Conger Professor of Forestry and Environmental Resources  
North Carolina State University, Raleigh, NC

**ASSOCIATE DEPARTMENTAL MEMBERSHIPS**

Department of Genetics  
Department of Molecular and Structural Biochemistry.

**CURRENT ADDRESS**

Department of Forestry and Environmental Resources, Forest Biotechnology Group, 2500 Partners II Building,  
Room 2500, 840 Main Campus Drive, Centennial Campus, North Carolina State University Box 7247, Raleigh, NC  
27695. Telephone: 919-513-0073 direct/ 919-515-7800. Fax: 919-515-7801. Email: [ron\\_sederoff@ncsu.edu](mailto:ron_sederoff@ncsu.edu)

**CURRENT RESEARCH INTERESTS**

Genomics of forest trees  
Molecular genetics of forest trees  
Genetic regulation of lignin biosynthesis  
Molecular mechanisms in the formation of the plant cell wall  
Gene expression in differentiating wood  
Disease resistance in forest trees.

**PREVIOUS PROFESSIONAL POSITIONS**

USDA Forest Service, Berkeley, CA. 1985-1987. Senior Scientist and Plant Molecular Geneticist.  
North Carolina State University, Raleigh, NC. 1978-1985. Associate Professor, Department of Genetics  
University of Oregon, Eugene, OR. 1975-1978. Associate Professor/Assistant Professor, Department of Biology  
Columbia University, New York, NY. 1969-1975. Assistant Professor, Dept. of Biological Sciences  
University of Geneva, Geneva, Switzerland. 1967-1969. Postdoctoral Fellow, Institute of Molecular Biology  
University of California, Los Angeles, CA. 1967. Acting Assistant Professor, Department of Zoology

**EDUCATIONAL BACKGROUND**

College degrees:

1961 Bachelor of Arts in Zoology, UCLA  
1963 Master of Arts in Zoology, UCLA (Genetics)  
1966 Doctor of Philosophy in Zoology, UCLA (Genetics)

Additional academic study:

1967-1969: Post-doctoral Training Post-doctoral Fellow at the Laboratoire  
de Biophysique, Institute de Biologie Moleculaire, University of Geneva, Switzerland  
1984: Sabbatical: On leave from the Department of Genetics, North Carolina State  
University, to the Forest Genetics group, Pacific Southwest Forest and Range  
Experiment Station, Berkeley, California – USDA – Forest Service (6 months)

**HONORS AND AWARDS**

- 2004 Doctor Honoris Causa, Swedish Agricultural University (Honorary Doctorate)
- 2003 Fellow of the American Association for the Advancement of Science
- 2000 Fellow of the International Academy of Wood Science
- 1998 Honorary Research Professor, Chinese Academy of Forestry
- 1997 Appointed Distinguished University Professor of Forestry, N.C. State University
- 1997 Appointed Adjunct Professor Nanjing Forestry University
- 1995 Appointed the Edwin F. Conger Professor of Forestry
- 1995 Elected to the National Academy of Sciences, USA

- 1986 Appointed Senior Scientist, USDA Forest Service  
1965 A. Mandel Schectman Distinguished Teaching Assistant Award

#### PROFESSIONAL SERVICE

##### NATIONAL AND INTERNATIONAL COMMITTEES:

- 1988 Agricultural Biotechnology Research Advisory Committee (ABRAC) for USDA  
1989 National Research Council Committee on the Future of Forestry Research  
1992 Reappointed to the ABRAC  
1994 Reappointed to the ABRAC  
1995 to 1998 Board on Biology, National Research Council, National Academy of Sciences  
1996 to 2001 Program Board for the joint project on Forest Biotechnology and Chemistry/ Agricultural Biotechnology Swedish Foundation for Strategic Research  
1998 National Research Council on Evaluation of the USDA /NRI Program  
1998-2000 Member of the Commission of Life Sciences for the National Research Council  
1998 National Research Council Committee on Forestry Research  
2003 Member of the Electorate Nominating Committee, AAAS Section on Agriculture, Food, and Renewable Resources

##### MEMBER OF PANELS FOR COMPETITIVE GRANTS PROGRAMS:

- 2009 Grant Panel: Foundation for Science and Technology, Lisbon, Portugal  
2008 Consortium for Plant Biotechnology Research  
2007 Consortium for Plant Biotechnology Research  
2006 Consortium for Plant Biotechnology Research  
2005 Consortium for Plant Biotechnology Research  
1999 Consortium for Plant Biotechnology Research  
1997 USDA/NRI, Plant Genome Program  
1992 Department of Energy, Biological Sciences Program  
1991 USDA Competitive Grants, Plant Pathology Program  
1987 USDA Competitive Grants, Forest Biology Program: Genetic Structure and Function  
1987 NIH Postdoctoral Grants Panel (Genetics of Plants and microorganisms)  
1986 USDA Competitive Grants, Genetic and Molecular Mechanisms /Environmental Stress  
1985 USDA Competitive Grants, Forest Biology Program, Genetic Structure and Function  
1985 Environmental Stress Program, USDA Competitive Grants  
1982 Department of Energy, Biological Sciences Panel, Competitive Grants

##### CONSULTING AND ADVISORY SERVICE:

- 2009 Science Fair Judge, A.B. Combs Elementary School, Raleigh NC  
2009 Science Advisory Board, University of Florida Genetics Institute  
2003 Paradigm Genetics, Inc. Science Advisory Board  
2000-2006 Biolex, Science Advisory Board  
2001-2005 Genome Canada –  
2000-2001 National Center for Genomic Research, Science Advisory Board,  
1998-1999 Weyerhaeuser Corporation  
1998 Shell Ltd. Consultant  
1998-1999 Dow-Chemical, Consultant.  
1995 Program review, GEENZ, NZ  
1995 Program review, Forest Research Institute, Rotorua, NZ  
1995 Program review, Department of Plant Sciences, Ohio University  
1995-2000 Strategic Fund for Swedish Research  
1992 NSERC, Site visit to University of British Columbia  
1991-1994 Nordic Fund Project on DNA Transfer  
1991 USDA site visit to Department of Microbiology, Biochemistry and Molecular Biology at the University of Maine

1990            USDA National Research Initiative Workshop: Science Planning Committee on Plant Systems  
1989            Department of Energy, Short Rotation Woody Crops Program

#### EDITORIAL SERVICE AND GRANT REVIEW:

Associate Editor, Tree Genes and Genomes 2006 to present  
Editorial Board, Tree Physiology, 2005-present.  
Editorial Board: Plant, Tissue and Organ Culture, 2000 to Present  
Editorial Board, Current Opinion in Plant Science, 1997 to Present  
Associate Editor for Forest Science, 1992 to 1994  
Associate Editor for the Canadian Journal of Forestry Research, 1989 to 1994  
Reviewer for: Plant Physiology, Plant Molecular Biology, Science, PNAS, Genetics, Planta, Phytochemistry, Nucleic Acids Research, Plant Journal, BBA, Plant Cell, Plant Breeding Reviews, Plant and Cell Physiology, In Vitro, Annals of Botany and Journal of Food and Agricultural Chemistry, Tree Physiology, Tree Genes and Genomes and International Review Board of Annals of Botany.

Reviewer for Competitive Grants for: National Science Foundation, USDA Competitive Grants, Department of Energy, NSERC (National Science and Engineering Research Council of Canada), Finnish National Science Foundation, Ohio University OURC Program, BBSRC/UK, the Consortium for Plant Biotechnology Research, and Genome Canada.

#### INDUSTRIAL ASSOCIATIONS

Co-Organizer of NCSU Forest Biotechnology Industrial Research Consortium (FORBIRC) Phase 3. 2004 to present.

1988-2002: Supporting Companies for Industrial Associates Program in Forest Biotechnology: Weyerhaeuser Corporation, Westvaco Corporation, Procter and Gamble Cellulose, Scott Paper, Mead Corporation, International Paper, Potlatch Corporation, James River Corporation, Tasman Forestry, Carter Holt Harvey, Union Camp, Nippon Paper, Shell Research Ltd., Soporcel, Portugal, ForBio, Pty, Australia, Aracruz, Brazil, and Champion International.

Other Industrial Collaborations: Calgene, Davis CA 1985-1986, Pioneer Hi-Bred 1997-1999, RAIZ, Portugal 2003 ArborGen 2004-2006, FOSA Uruguay 2008.

#### TEACHING IN SPECIAL COURSES AND WORKSHOPS

1986        Summer Course in Forest Molecular Biology, Placerville, CA. at the Institute of Forest Genetics. Co-organizers and teachers: A-M. Stomp, M.T. Conkle, and R. Sederoff. Laboratory work in molecular genetics of conifers and conifer tissue culture. Sponsored by the USDA and the USDA Forest Service.  
1989        Forest Biotechnology Workshop, Taipei, Taiwan. American Co-organizers and Instructors: H-M. Chang, R. Kellison, A-M. Stomp, and R. Sederoff.  
1991        International Course in Forest Biotechnology, Caracas, Venezuela, at the Institute for Advanced Studies. Taught section on DNA markers.  
1992/1993/1994/1995/1996: RAPD mapping. A 2- unit course on genomic mapping, taught as part of the summer biotechnology series at NCSU.  
1996        Summer Course in Agricultural Biotechnology, San Sebastian, Spain, Universidad del Pais Vasco.  
1999        Microarray technology: Biotechnology summer course series at NCSU. (One week -40 hours) Co-taught with R. Alscher, Ying-Hsuan Sun and Susan McCord.  
2001        Teaching Genomics: A course designed for high school teachers to incorporate genomics into their biology curriculum. Biotechnology summer course series at NCSU. (One week-40 hours) Co-taught with Claire Kinlaw, Catherine Clark and Ernie Retzel.

#### PUBLICATIONS (not including abstracts):

- 1) Carlson, E.A., Sederoff, R.R. and Cogan, M. 1967. Evidence favoring a frameshift mutation mechanism for ICR-170 induced mutation in *D. melanogaster*. *Genetics* 55:295-313.
- 2) Sederoff, R. R. 1967. A rare pseudoallelic crossover between two phenotypically identical alleles at a restricted sub-locus of dumpy in *D. melanogaster*. *Nature* 216:1348-1349.
- 3) Brody, E.M., Sederoff, R.R., Bolle, A. and Epstein, R.H. 1970. Early Transcription in T4 infected cells. *Cold Spring Harbor Symp. Quant. Biol.* 35:201-211.
- 4) Sederoff, R.R., Bolle, A. and Epstein, R.H. 1971. A method for the detection of specific T4 messenger RNAs by hybridization competition. *Virology* 45:440-445. (This paper was republished in a volume of collected papers titled "mRNA Current Research I" edited by S. Riva and published by MSS Information Corp., New York, 1972.)
- 5) Sederoff, R.R., Bolle, A., Goodman, H. and Epstein, R.H. 1971. Regulation of rII and region D transcription in T4 bacteriophage: a sucrose gradient analysis. *Virology* 46:817-829.
- 6) Sederoff, R.R., Clynes, R., Poncz, M. and Hatchel, S. 1973. RNA synthesis by exogenous RNA polymerase on cytological preparations of chromosomes. *J. Cell. Biol.* 57:538-550.
- 7) Birnboim, H.C. and Sederoff, R.R. 1975. Polypyrimidine segments in *Drosophila melanogaster* DNA: I. Detection of a cryptic satellite containing polypyrimidine/polypurine DNA. *Cell* 5:173-181.
- 8) Birnboim, H.C., Straus, N.A. and Sederoff, R.R. 1975. Characterization of polypyrimidines in *Drosophila* and L-cell DNA. *Biochemistry* 14:1643-1647.
- 9) Sederoff, R.R., Lowenstein L., and Birnboim, H.C. 1975. Polypyrimidine segments in *Drosophila melanogaster* DNA II. Chromosome location and nucleotide sequence. *Cell* 5:182-194.
- 10) Sederoff, R.R., Lowenstein, L., Mayer, A., Stone, J. and Birnboim, H.C. 1975. Acid treatment of *Drosophila* DNA. *J. Histochem. Cytochem.* 23:482-491.
- 11) Birnboim, H.C., Sederoff, R.R. and Paterson, M.C. 1979. Distribution of segments in DNA from diverse organisms. *European J. Biochem.* 98:301-307.
- 12) Cseko, Y.M.T., Stone, J. and Sederoff, R.R. 1979. Nucleic acid hybridization of highly repeated DNA in extracts of single *Drosophila*. *Biochem. Biophys. Acta* 565:253-264.
- 13) Cseko, Y.M.T., Dower, N.A., Minoo, P., Lowenstein, L., Smith, G.R. and Sederoff, R.R. 1979. Evolution of polypyrimidines in *Drosophila*. *Genetics* 92:459-484.
- 14) Feigen, M.I., Johns, MBA, Postlethwait, J.H. and Sederoff, R.R. 1980. Purification and characterization of acid phosphatase-1 from *Drosophila melanogaster*. *J. Biol. Chem.* 255:10338-10343.
- 15) Spruill, W.M., Jr., Levings, C.S. III and Sederoff, R.R. 1980. Recombinant DNA analysis indicates that the multiple chromosomes of maize mitochondria contain different sequences. *Developmental Genet.* 1:363-378.
- 16) Schaffer, H.E. and Sederoff, R.R. 1981. Improved estimation of DNA fragment lengths from agarose gels. *Analytical Biochem.* 115:113-122.
- 17) Sederoff, R.R., Levings, III, C.S., Timothy, D.H. and Hu, W.W. 1981. Evolution of DNA sequence organization in mitochondrial genomes of *Zea*. *Proc. Natl. Acad. Sci. USA* 78:5953-5957.
- 18) Spruill, W.M., Jr., Levings, III, C.S. and Sederoff, R.R. 1981. Organization of mitochondrial DNA in normal

- and Texas male-sterile cytoplasms of maize. *Developmental Genet.* 2:319-336.
- 19) Levings, III, C.S. and R.R. Sederoff. 1981. Organization of the mitochondrial genome of maize. pp 119-136, in Subtelny, S. and Abbott, U.K. (eds.), *Levels of genetic control in development*. Thirty-ninth Symp. Soc. Developmental Biol. Alan R. Liss, Inc., NY.
- 20) Levings, C.S., III, Sederoff, R.R., Hu, W.W. and Timothy, D.H. 1982. Relationships among plasmid-like DNAs of the maize mitochondria. pp 363-371 in Ciferri, O. and Dure, L. (eds.), *Structure and function of plant genomes*. NATO Advanced Inst. Ser., Vol. 31. Plenum Press, NY.
- 21) Sederoff, R. R. 1982. Recombinant DNA: New Techniques Create a New Frontier in Biological Sciences. *Research Perspectives* 1:5-8.
- 22) Chao, S., Sederoff, R.R. and Levings, III, C.S. 1983. Partial nucleotide sequence of the 18S-5S region of mitochondrial DNA. *Plant Physiol.* 71:190-193.
- 23) Levings, C.S., III and Sederoff, R.R. 1983. Nucleotide sequence of the S-2 mitochondrial DNA from the S cytoplasm of maize. *Proc. Natl. Acad. Sci. USA* 80:4055-4059.
- 24) Stone, J.S., Dower, N.A., Houseman, J., Cseko, Y.M.T. and Sederoff, R.R. 1983. The characterization of a mutant affecting DNA metabolism in the development of *D. melanogaster*. *Can. J. Genet.* 25:129-138.
- 25) Levings, C.S., III, Sederoff, R.R. and Timothy, D.H. 1983. Molecular basis of cytoplasmic inheritance in plants. Pp. 157-189, in M.S. Swaminathan, P.K. Gupta, and U. Sinha (eds.), *Cytogenetics of crop plants*. Macmillan India, Ltd., Delhi.
- 26) Chao, S., Sederoff, R.R. and Levings, III, C.S. 1984. Nucleotide sequence and evolution of the 18S ribosomal RNA gene in maize mitochondria. *Nucleic Acids Res.* 12:6629-6644.
- 27) Sederoff, R.R. 1984. Structural variation in mitochondrial DNA. *Advances in Genet.* 22:1-108.
- 28) Sederoff, R.R. and Ledig, F.T. 1985. Increasing forest productivity and value through biotechnology. 253-267 In Weyerhaeuser Forest Potentials Symp., Tacoma, WA.
- 29) Sederoff, R.R. and Levings, III, C.S. 1985. Supernumerary DNAs in plant mitochondria. 91-109 In "Genetic flux in plants". B. Hohn and E.S. Dennis eds., Springer-Verlag NY.
- 30) Paillard, M., Sederoff, R.R. and Levings, III, C.S. 1985. Nucleotide sequence of the S-1 mitochondrial DNA from the S cytoplasm of maize. *Journal of the European Molecular Biology Organization* 4:1125-1128.
- 31) Ledig, F.T. and Sederoff, R.R. 1985. Genetic Engineering in Forest Trees. Southern Forest Tree Improvement Conference 18:4-13. (This article was reprinted in the Proceedings of the IX World Forestry Congress, Mexico City, 5 July 1985).
- 32) Sederoff, R.R., Ronald, P., Bedinger, P., Rivin, C., Walbot, V., Bland, M., and Levings, III, C.S. 1986. Maize mitochondrial plasmid S-1. Sequences share homology with chloroplast gene psbA. *Genetics* 113:469-482.
- 33) Sederoff, R., Stomp, A-M, Chilton, W.S. and Moore, L. 1986. Gene transfer into loblolly pine by *Agrobacterium tumefaciens*. *Bio/Technology* 4:647-750.
- 34) Braun, C.J., Sisco, P.H., Sederoff, R.R. and Levings, III, C.S. 1986. Characterization of inverted repeats from plasmid-like DNAs and the maize mitochondrial genome. *Current Genetics* 10:625-630.

- 35) Sederoff, R., Stomp, A-M, Gwynn, G., Ford, E., Loopstra, C., Hodgskiss, P. and Chilton, W.S.. 1987. Application of recombinant DNA techniques to pines: A molecular approach to genetic engineering in forestry. In "Cell and Tissue Culture in Forestry" edited by J.M. Bonga and D.J. Durzan. p. 314-329.
- 36) Sederoff, R.R. 1987. Molecular mechanisms of mitochondrial genome evolution in higher plants. Amer. Naturalist 130:s30-s45.
- 37) Gwynn, B.F., Dewey, R.E., Sederoff, R.R., Timothy, D.H. and Levings, III, C.S. 1987. Sequence of the 18S-5S ribosomal gene region and the cytochrome oxidase II gene from mtDNA of Zea diploperennis. Theor. and Applied Genet. 74:781-788.
- 38) Neale, D.B. and Sederoff, R.R. 1988. Inheritance and evolution of conifer organelle genomes. In "Genetic manipulation of woody plants." eds. J. Hanover and D. Keathley. Plenum Press N.Y. pp 251-164.
- 39) Harry, D.E., Kinlaw, C.S. and Sederoff, R.R. 1988. The anaerobic stress response and its use for studying gene expression in conifers. In "Genetic manipulation of woody plants." eds. J. Hanover and D. Keathley, Plenum Press N.Y. pp 275-290.
- 40) Stomp, A.-M., Loopstra, C., Sederoff, R.R., Chilton, S., Fillatti, J., Dupper, G., Tadeschi, P. and Kinlaw, C. 1988. Development of a DNA transfer system for pines. In "Genetic manipulation of woody plants." eds. J. Hanover and D. Keathley, Plenum Press, N.Y. pp 231-241.
- 41) Kinlaw, C.S. Harry, D.E., Sleeter, D.D. and Sederoff, R.R. 1988. Using heterologous probes to isolate and characterize conifer genes. In "Molecular genetics of forest trees," eds. W.M. Cheliak and A.C. Yapa. Published by the Petawawa National Forest Institute, Chalk River, Ont., Canada. pp 9-18.
- 42) Neale D.B., Marshall, K.A., and Sederoff, R.R. 1988 Inheritance of chloroplast and mitochondrial DNA in conifers. In "Proceedings of the Frans Kempe Symposium, Molecular Genetics of Forest Trees." Studia Forestalia Suecica: pp 89-100
- 43) Neale D.B. and Sederoff, R.R. 1989 Paternal inheritance of chloroplast DNA and maternal inheritance of mitochondrial DNA loblolly pine. Theor. and Applied Genetics 77:212-216.
- 44) Harry D. E., Mordecai, K.S., Kinlaw, C.S., Loopstra, C.A. and Sederoff, R.R. 1989. DNA Sequence diversity in alcohol dehydrogenase genes from pines. Proceedings of the Southern Forest Tree Improvement Conference 20:373:380.
- 45) Neale, D. B., Marshall, R.A. and Sederoff, R.R. 1989. Chloroplast and mitochondrial DNA are paternally inherited in *Sequoia sempervirens* Proc. Natl. Acad. Sci. 86:9347-9349.
- 46) Harry, D. E., and Sederoff, R. R. 1989. Biotechnology in Biomass Crop Production: The Relationship of Biomass Production and Genetic Engineering. Oak Ridge National Laboratory, Environment Sciences Division. Publications No. 3411. 47 pages.
- 47) Loopstra, C. A., Stomp. A. M., and Sederoff, R.R. 1990. Agrobacterium mediated DNA transfer in sugar pine. Plant Molecular Biology 15:1-9.
- 48) Stomp, A.M., Loopstra, C. A., Chilton, W. S., Sederoff, R. R. and Moore, L.W. 1990. Extended host range of Agrobacterium tumefaciens in the Genus *Pinus*. Plant Physiology 92:1226-1232.
- 49) Kinlaw, C.S., Harry, D.E. and Sederoff, R.R. 1990 Isolation and characterization of alcohol dehydrogenase cDNA clones from *Pinus radiata*. Can. J. For. Res. 20:1343-1350.

- 50) Whetten, R. and Sederoff, R.R. 1991 Genetic Engineering of Wood. *J. Forest Ecology and Management* 43:301-316.
- 51) Sederoff, R. R. and Chang, H-M. 1991 Lignin Biosynthesis. In "Structure and Composition of Wood." eds. M. Lewin and I. Goldstein. M. Dekker, N.Y. pp 263-285.
- 52) Harry, D.E., Strauss, S.H., and Sederoff, R.R. 1991. Molecular Genetics Comes of Age: 4th Meeting, Molecular Genetics Working party, International Union of Forestry Research Organizations. *Plant Molecular Biology Reporter* 9:169-174.
- 53) Stomp, A-M., Weissinger, A.K., and Sederoff, R.R. 1991. Transient expression from microprojectile-mediated DNA transfer in *Pinus taeda*. *Plant Cell Reports* 10:187-190.
- 54) Whetten, R. and Sederoff, R.R. 1991. Phenylalanine ammonia-lyase in loblolly pine: Purification of the enzyme and isolation of a cDNA clone. *Plant Physiology* 98:380-386.
- 55) O'Malley, D.M., Porter, S., and Sederoff, R.R. 1992. Purification and characterization of cinnamyl alcohol dehydrogenase in loblolly pine. *Plant Physiology* 98:1364-1371.
- 56) Loopstra, C.A., Weissinger, A.K., and Sederoff, R.R. 1992. Transient gene expression in differentiating wood in loblolly pine. *Can. J. Forestry Research* 22:993-996.
- 57) Robertson, D. Weissinger, A.K., Glover, S., Ackley, R., and Sederoff, R.R. 1992. Transient and stable transformation following microprojectile bombardment in Norway spruce. *Plant Mol. Bio.* 19:925-935.
- 58) Bao, W., O'Malley, D., and Sederoff, R.R. 1992. Wood contains a cell wall structural protein. *Proc. Natl. Acad. Sci. USA* 89:6604-6608.
- 59) Grattapaglia, D., Chaparro, J.X., Wilcox, P., McCord, S., Werner, D., Amerson, H., McKeand, S., Bridgwater, F., Whetten, R., O'Malley, D., and Sederoff, R. 1992 Mapping in Woody Plants with RAPD Markers: Application to Breeding in Forestry and Horticulture. In "Applications of RAPD Technology to Plant Breeding". Joint Plant Breeding Symposium Series pp 37-40.
- 60) Grattapaglia, D., O'Malley, D.M. and Sederoff, R.R. 1993 Multiple applications of RAPD markers to genetic analysis in *Eucalyptus* sp. Proceedings of IUFRO Group S2.02-08 Breeding Tropical Trees; Conference, Cartagena and Cali, Columbia, SA, October 9-12, pp 436-450.
- 61) Sederoff, R. and Stomp, A-M. 1993. DNA transfer in conifers. In "Clonal Forestry I: Genetics and Biotechnology" ed. Ahuja, M.R. and Libby, W.J. Springer-Verlag Berlin Heidelberg: pp 241-255.
- 62) Bao, W., O'Malley, D.M., Whetten, R., and Sederoff, R.R. 1993. A laccase associated with lignification. *Science* 260:672-674.
- 63) O'Malley, D., Whetten, R., Bao, W., Chen, C-L., and Sederoff, R.R. 1993. The role of laccase in lignification. *The Plant Journal* 4:751-757.
- 64) Wilcox, P.L., Amerson, H.A., O'Malley, D.M., Carson, S., Carson, M.J., Kuhlman, G., and Sederoff, R.R. 1993. Fusiform rust-A model for marker assisted selection in loblolly pine. Proceedings of the Southern Forest Tree Improvement Conference 22:174-182.
- 65) Grattapaglia, D., Chaparro, J.X., Wilcox, P.L. McCord, S., Crane, B., Amerson, H., Werner, D., Liu, B.-H., O'Malley, D., Whetten, R., McKeand, S., Goldfarb, B., Greenwood, M., Kuhlman, G., Bridgwater, F., and Sederoff, R. 1993. Application of genetic markers to tree breeding. Proceedings of the Southern Forest Tree Improvement Conference 22:452-463.

- 66) Chaparro, J.X., Werner, D.J., O'Malley, D.O. and Sederoff, R.R. 1994. Targeted mapping and linkage analysis of morphological isozyme, and RAPD markers in peach. *Theoretical and Applied Genetics* 87: 805-815.
- 67) Grattapaglia, D., Sederoff, R. 1994. Genetic linkage maps of *Eucalyptus grandis* and *E. urophylla* using a pseudotestcross mapping strategy and RAPD markers. *Genetics* 137: 1121-1137.
- 68) Bao, W., O'Malley, D.M., Whetten, R., and Sederoff, R.R. 1994. A laccase in xylem cell walls of loblolly pine. *Polyphenols Actualites* 10:22-24.
- 69) Sederoff, R., Campbell, M., O'Malley, D. and Whetten, R. 1994. Genetic regulation of lignin biosynthesis and the potential modification of wood by genetic engineering in loblolly pine. *Recent Advances in Phytochemistry* vol 28:313-355.
- 70) O'Malley, D.O., Crane, B., McKeand, S. E., Liu, B-H., and Sederoff, R.R. (1994) Genomic mapping of quantitative traits in loblolly pine. *TAPPI Biological Sciences Symposium*, pp 173-177
- 71) Campbell, M.M., Whetten, R.W., and Sederoff, R.R. 1994. Cancer genes and wood formation. *TAPPI Biological Sciences Symposium*, pp 147-155.
- 72) Grattapaglia, D., Bertolucci, F.L., Penchel, R., and Sederoff, R. 1994. Molecular genetic mapping of economically important traits in *Eucalyptus grandis*. *TAPPI, Biological Science Symposium*. pp 133-137.
- 73) Loopstra, C.A., and Sederoff, R.R. 1995. Xylem specific gene expression in loblolly pine. *Plant Molecular Biology* 27:277-291.
- 74) Sederoff, R.R. DNA transfer in forest trees. 1995. In "Transformation in plants and soil micro-organisms" eds. Wang, K. Herrera-Estrella, A. and van Montagu, M. pp 150-163.
- 75) Michler, C.H., Becwar, M.R., Cullen, D., Nance, W., Sederoff, R., Slavicek, J.M. eds. 1994. Proceedings of papers presented at the 2d international symposium on applications of biotechnology to tree culture, protection, and utilization. Gen. Tech. Report. NC-175. St. Paul MN. US Department of Agriculture, Forest Service, North Central Forest Experiment Station, p 203.
- 76) Grattapaglia, D., Bertolucci, F.L. and Sederoff, R.R. 1995. Genetic mapping of quantitative trait loci controlling vegetative propagation in *Eucalyptus grandis* and *E. urophylla* using a pseudotestcross mapping strategy and RAPD markers. *Theoretical and Applied Genetics*. 90:933-947
- 77) Voo, K.S., Whetten, R.W., O'Malley, D.M. and Sederoff, R.R. 1995. 4 Coumarate :CoA Ligase from loblolly pine xylem: Characterization and complementary DNA cloning. *Plant Physiology* 108:85-97.
- 78) MacKay, J.J., Liu, W., Whetten, R.W., Sederoff, R.R., and O'Malley, D.M. 1995. Genetic analysis of cinnamyl alcohol dehydrogenase (Cad) in loblolly pine. Single gene inheritance, molecular characterization and evolution. *Molecular and General Genetics* 247:537-545.
- 79) Tsang, E. Charest, P. and Sederoff, R. 1995. Transformation in conifers. In “ Recent Progress in Forest Biotechnology in Canada” pp 16-28.
- 80) Whetten, R. and Sederoff, R. 1995. Lignin Biosynthesis. *Plant Cell* 7:1001-1013.
- 81) Loopstra, C.A., No, E.-G., and Sederoff, R.R. 1995. Expression and function of arabinogalactan proteins in xylem of loblolly pine. *Proceedings of the 23rd SFTIC*, pp 153-160.

- 82) Grattapaglia, D., Bertolucci, F.L., Penchel, R., and Sederoff, R. 1995. Advances in Genetic mapping of *Eucalyptus grandis*. In "Eucalyptus plantations: Improving fiber yield and quality." CRCTHF-IUFRO Conference Proceedings. Hobart, Australia pp 392-397.
- 83) Sederoff, R. and Meagher, L. (1995) Access to intellectual property in biotechnology: constraints on the research enterprise. Proceedings of the NABC Symposium Report 7: 71-78.
- 84) O'Malley, D.M., Grattapaglia, D., Chaparro, J.X., Wilcox. P.L., Amerson, H.V., Liu, B.-H., Whetten, R., McKeand, S., Kuhlman, E.G., McCord, S., Crane, B., and Sederoff, R. 1996. Molecular markers, forest genetics and tree breeding. In "Genomes of Plants and Animals" 21st Stadler Genetics Symposium. Eds. Gustafson, J. Perry and Flavell, R.B. Plenum Press, N.Y. pp 87-102.
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1997: Statistical Genomics: Linkage, Mapping and Analysis, by Ben Hui Liu. CRC Press.

#### PATENTS

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2. Amerson, Henry V., Wilcox, P., Sederoff, R. R., Kuhlman, E. G., O'Malley, D. M., & Grattapaglia, D. (1999). Methods for within family selection of disease resistance in woody perennials using genetic markers. U.S. Patent No. 5,908,978. Washington, DC: U.S. Patent and Trademark Office.
3. MacKay, John, O'Malley, David, Whetten, Ross, Sederoff, Ronald. (1998). Method of altering lignin in trees. U.S. Patent No. 5,824,842. Washington, DC: U.S. Patent and Trademark Office.
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#### GRANT AWARDS AND CONTRACTS

- 2010 USDA: Sun Grant: PI Vincent Chiang, CoPi's Ron Sederoff,
- 2009 NSF: Predictive model of lignin biosynthesis. PI: Vincent Chiang, CoPIs: Ron Sederoff, John Ralph, Joel Ducoste, Fikret Isik. \$3.7 million, for 4 years.
- 2008 DOE-JGI: 'Advancing Pine Genomics through Targeted and Random BAC Sequencing', to JGI's Community Sequencing Program. PI, Dan Peterson, Co PIs, Jeff Dean, Dana Nelson, Ron Sederoff, Dan Rokhsar. (No funds to NCSU).
- 2006 NSF: Genomic tool Development for the Fagaceae: R. Sederoff, PI. CoPIs: J. Tomkins and Paul Sisco: 2.7 million for 4 years.
- 2005 CPBR: Consortium for Plant Biotechnology Research Bioenergy Competition. Genomic regulation of growth and lignin in Eucalyptus. R. Sederoff and M. Kirst. \$150,000 for two years.
- 2004 CPBR: Consortium for Plant Biotechnology Research. On the mechanism of formation of dihydroconiferyl alcohol subunits in lignin of a mutant loblolly pine. Sederoff, Stasolla, Kadla, Chiang. 152,000 for 2004.
- 2003 RAIZ. SNP Discovery, Diversity and Association Studies in Eucalyptus: Candidate Genes Associated with Wood Quality Traits. 1 year, \$20,000.
- 2001 NSF. Long-Term Evolutionary Response of Huon Pine to Climatic Fluctuation. R. Sederoff (PI), B. Weir, C. Clark, R. D'Arrigo, T. Meagher. 2 years, \$29,638.
- 2001 USDA/IFAFS. Short rotation loblolly pine with improved wood properties. H-M. Chang (PI) with (co-PI's) J. Kadla, D. O'Malley, B. Goldfarb, B. Li, and R. Sederoff. 4 years, \$3 million.
- 1999 Industrial Consortium on Genetic Control of Wood Formation. \$200,000 per year for 5 years. R. Sederoff, PI. CoPI's D. O'Malley, R. Whetten, A. Johnson.
- 1999 NSF. Integrative Graduate Training in Bioinformatics and Functional Genomics - IGERT Full Proposal. B. Sherry, B. Weir, M. King, Ron Sederoff. 4 years, \$1,571,981.
- 1999 Wood formation in the pine genome. NSF Plant Genome Program. \$4.45 million for three years. R. Sederoff (PI) with (co-Pi's) D. O'Malley, R. Whetten, B-H. Liu, A. Johnson, T. Kepler, D. Neale, C. Kinlaw, E. Retzel, C. Loopstra, J. MacKay, G. Peter.
- 1997 Pine Gene Discovery Project. Ross Whetten, PI and Ron Sederoff CoPI. Department of Energy. Agenda 2020. \$574,985, 1997-2001.
- 1997 Genetic modification of lignin in loblolly pine. USDA/NRI Wood Utilization. \$110,000 for two years. R. Sederoff and J. MacKay.

1996	Computers for DNA sequence informatics. National Science Foundation, \$120,000. R. Sederoff and B. Wiegmann.
1996	A high throughput DNA sequencing facility for NCSU. \$184,000 from North Carolina Biotechnology Center. R. Sederoff and B. Wiegmann.
1995	Molecular markers and management of fusiform rust resistance. USDA/NRI, Plant Pathology, H. Amerson, D. O'Malley and R. Sederoff. \$140,000, for 3 years.
1995	Transcription factors in wood formation. Department of Energy, Energy Biosciences. \$315,000 for three years. R. Sederoff, M. Campbell, R. Whetten and D. O'Malley.
1995	Expression and mapping of cDNAs in loblolly pine. USDA/NRI, Plant Genome Program. \$167,000 for two years. R. Whetten, M. Campbell, and R. Sederoff.
1994	Genomic map merging. Plant Genome Program USDA/NRI \$100,000 for two years. B. Liu and R. Sederoff.
1993	Extensin-like protein in the wood cell wall. USDA Wood Utilization Program. \$155,000 for 30 months. R. Sederoff, R. Whetten and M. Tierney.
1993	National Needs Graduate Research Training Grant in Plant Biotechnology. USDA. \$110,000 for three years. Graduate Research Training in Forest Biotechnology.
1993	Industrial Consortium on Genetic Engineering of Lignin Biosynthesis and Wood Properties. 1993-1998, \$700,000 for 5 years. R. Sederoff, D. O'Malley, R. Whetten, B. Liu.
1992	Genomic mapping of host factors for rust resistance. USDA Plant Genome Program. \$210,000 for three years. R. Sederoff, H. Amerson and D. O'Malley.
1992	Transcription Factors Regulating Lignin Biosynthesis in Xylem. Department of Energy. \$194,000 for two years. R. Sederoff, D. O'Malley and R. Whetten.
1992	Half sib RAPD analysis of QTLs underlying early shoot growth in loblolly pine. \$220,000 for three years. D. O'Malley, S. McKeand and R. Sederoff.
1991	Regulation of Phenylalanine ammonia-lyase in developing wood. USDA Competitive Grants (Wood Utilization Panel) \$94,000 for two years. 1991-1993 R. Whetten (PI) and R. Sederoff (co-PI).
1991	Molecular markers to accelerate breeding in loblolly pine. USDA Competitive Grants (Plant Genome Program) \$140,000 for two years. R. Sederoff (PI) and D. O'Malley (co-PI).
1991	Developmental regulation of cinnamyl alcohol dehydrogenase in pine. USDA Competitive Grants 1991-1993. \$110,000 two years. D. O'Malley (PI) R. Sederoff (Co-PI).
1990	Regulation of xylem specific gene expression in loblolly pine. USDA competitive grants 1990-1992, 2 years \$130,000. R. Sederoff (PI) and C.A. Loopstra (co-PI).
1989	Training Grant: McKnight Program in Plant Biology at North Carolina State University. \$750,000, 3 years. R. Sederoff was one of 12 faculty in the Program.
1988	Isolation of a lignin-biosynthetic gene from loblolly pine. USDA Competitive Grants, 1988-1990, \$140,000, 2 years. R. Sederoff (PI), A-M. Stomp and H-M. Chang (co-PI's).
1988	Molecular Studies of Wood Productivity. USDA Forest Service Cooperative Agreement (\$32,000). D. O'Malley and R. Sederoff.
1987	Mechanisms of inheritance and transmission of conifer organelle genomes, USDA Competitive Grants, 1987-1989, \$115,000, 2 years. R. Sederoff and D. Neale.
1987	Industrial Consortium on Genetic Engineering of Lignin Biosynthesis, 1987-1992, \$600,000, 5 years. A-M. Stomp, H-M.Chang, D.M. O'Malley, and R. Sederoff.
1986	Forest Biology program: Genetic Structure and Function. Alcohol dehydrogenase genes in pines, USDA Competitive Grants, \$97,000, 2 years. David Harry (PI), Claire Kinlaw and Ron Sederoff (co-PI's).
1985	A DNA transfer system for pine, Forest Biology Program: Genetic Structure and Function. USDA Competitive Grants, 1985-1988, \$184,000, 3 years. R. Sederoff (PI), A-M. Stomp (co-PI).
1985	A workshop in forest biotechnology, Forest Biology Program: Genetic Structure and Function. USDA Competitive Grants, 1986, \$44,000, 3 months, F.T. Ledig (PI), Sederoff, Stomp and Conkle (co-PI's).
1984	Genetic Engineering Technology for Loblolly Pine. USDA Forest Service: Cooperative Agreement Number A8fs-20, 147, 1984-1986, \$36,000, 1.5 years, H.V. Amerson and A-M. Stomp.

1983	Variation of nuclear DNA in Zea, Pioneer Hi-bred International, 1983-1984, \$23,000, 1 year.
1982	Transcription of plasmid-like DNAs in maize mitochondria, USDA Competitive Grants: Genetic Mechanisms for Crop Improvement, 1982-1985 \$105,000, 3 years. C.S. Levings, III (PI), R. Sederoff (co-PI).
1981	Selection for improved cysteine and methionine content in crop plants, USDA Competitive Grants: Genetic Mechanisms for Crop Improvement, 1982, \$29,451, 1 year. J.C. Sorensen and R. Sederoff.
1980	Isolation of the triazine resistant genes in Brassica, USDA Competitive Grants: Genetic Mechanisms for Crop Improvement, 1980-1983, \$75,000, 3 years, R. Sederoff.
1979	Transposable elements in maize as potential vectors for genetic engineering, USDA Competitive Grants: Genetic Mechanisms for Crop Improvement. 1979-1982, \$167,000, 3 years, C.S. Levings, III (PI), R. Sederoff (co-PI).
1977	Genetic analysis of simple sequence DNA, National Institutes of Health, Genetics Program, General Medical Sciences. 1977-1980, \$202,000, 3 years.
1975	Polypyrimidines in Drosophila DNA, National Science Foundation: Genetic Biology, 1975-1977, \$30,000, 2 years.
1973	RNA synthesis during differentiation, National Institutes of Health, Genetics Program, General Medical Sciences, 1973-1977, \$117,000, 3 years.
1970	RNA synthesis during differentiation, National Institutes of Health, Genetics Section, General Medical Sciences, 1970-1973, \$108,000, 3 years.
1970	Properties of Y Chromosome specific DNA and RNA, National Science Foundation, Genetic Biology, 1970-1972, \$40,000, 2 years.

#### POSTDOCTORAL ASSOCIATES AND VISITING FACULTY

Wei Tang, Postdoctoral Research Associate 1998\_2003.  
 Claudio Stasolla, Postdoctoral Research Associate, NSERC fellow, 2001 – 2002.  
 Len Van Zyl, Postdoctoral Research Associate 1999 – 2001.  
 Kei'ichi Baba, Visiting Scientist, Wood Research Institute, Kyoto, Japan.  
 Kenji Kanazawa, Visiting Scientist, Hokkaido Agricultural Expt. Station, Japan.  
 Yasushi Sato, Monobusho Grant, Visiting Scientist, Ehime University, Japan.  
 Rongling Wu, Postdoctoral Research Associate 1996-1998.  
 Allan Wenck, Postdoctoral Research Associate 1997-1998.  
 Isabel Allona Alberich, Fulbright Postdoctoral Fellow 1995-1998.  
 Glen Dale, Fulbright Postdoctoral Fellow 1995.  
 Malcolm Campbell, Visiting Research Assistant Professor 1993-1996.  
 Jose X. Chaparro, Postdoctoral Research Associate 1993.  
 Kheng Cheah, Visiting Industrial Scientist 1992-1993.  
 Reza Yasdani, Visiting Scientist, Agricultural Genetics, University of Uppsala, Sweden 1992.  
 Ross Whetten, Postdoctoral Research Associate, NC State University 1989 to 1991.  
 Dominique Robertson, McKnight Postdoctoral Research Associate 1989-1991.  
 Wei-Young Wang, Visiting Scientist, National Forestry Institute, Taipei, Taiwan 1990.  
 Juhani Haggman, Visiting Scientist, The Finnish Forest Research Institute 1988-1989.  
 Hely Haggman, Visiting Scientist, Finnish Forest Research Institute 1988-1989.  
 David O'Malley, Postdoctoral Research Associate, NC State University, 1988-1990.  
 Claire S. Kinlaw, Postdoctoral Research Associate, USDA Forest Service 1986-1987.  
 David E. Harry, Postdoctoral Research Associate, USDA Forest Service 1986-1987.  
 David Neale, Postdoctoral Research Associate, USDA Forest Service 1986-1987.  
 Robert Teasdale, Visiting Scientist, NSF, USA-Australia Cooperative Exchange Program 1986 Aug.-Sept.  
     Professor, Griffith University, Australia.  
 Anne-Marie Stomp, Visiting Faculty from NC State University, Assistant Professor, Dept. of Forestry 1985-1986.  
 Steve Strauss, Visiting Faculty from Oregon State University, Dept. of Forestry 1985.  
 John Doebley, Postdoctoral Associate, now Professor, University of Minnesota, 1983-1984.

Georgina Werner, Research Scientist, Union Carbide, 1981.  
C.D. Grace, Research Associate, University of Oregon 1975.  
Allan Mayer, Research Faculty, NYU School of Medicine 1974.

#### DISSERTATIONS AND THESES DIRECTED

Catherine Clark, Forestry, NC State University  
Matias Kirst, Genomics, NC State University  
Shuku Sun, Forestry, NC State University  
Alexander Myburg, Genetics, NC State University  
Yi Zhang, Genetics, NC State University  
Susan Rodzik, Biochemistry, NC State University  
Ying-Hsuan Sun, Forestry, NC State University  
Alison Morse, Genetics, NC State University  
David Remington, Forestry, NC State University  
Wilfred Vermeris, Genetics, NC State University  
Christina Almeida, Forestry, NC State University  
Bonnie Furman, Genetics, NC State University  
John MacKay, Genetics, NC State University  
Phillip Wilcox, Forestry, NC State University  
Kui Shin Voo, Genetics, NC State University  
Dario Grattapaglia, Genetics and Forestry, Co-major. NC State University  
Wei Wei Liu, Biochemistry, NC State University (Masters)  
Jose Chaparro, Horticulture, NC State University  
Wuli Bao, Forestry and Genetics Co-major, NC State University  
Carol Loopstra, Genetics and Forestry, Co-major, NC State University  
Ben A. Bergmann, Forestry, NC State University  
Babette Gwynn, NC State University (Masters)  
Shiaoman Chao, Genetics, NC State University  
Daniel Tisch, Genetics, NC State University (Masters)  
Marc Feigen, Biology, University of Oregon  
Parviz Minoo, Biology, Univ. of Oregon  
James Stone, Biological Sciences, Columbia Univ., NY (Masters)  
Linda Lowenstein, Biology, Columbia Univ., NY (MA and Ph.D.)  
Yara Cseko, Biological Sciences, Columbia Univ., NY (MA and Ph.D.)

#### MEMBERSHIP ON ADDITIONAL GRADUATE STUDENT COMMITTEES

2008 Jack Wang, Forestry and Environmental Resources  
2008 Hsi-Chuan Chen, Forestry and Environmental Resources  
2008 Enying Liu, Forestry and Environmental Resources  
2007- Evandro Novaes, Forest Resources and Conservation, University of Florida.  
2004 Rodrigo Laurencio, Forestry and Environmental Resources  
Christine Duarte, Bioinformatics  
Kitt Payne, Forestry.  
Christopher Whittier, DVM  
Cameron Morris, Wood and Paper Science  
Zhenjian Hu, Wood and Paper Science  
Victor Busov, Forestry  
Wendy Pline, Crop Science  
Wenjun Zhao, Genetics  
Patricia Eagle, Biochemistry  
Erin Egelkraut, Biochemistry  
Lynn Senior, Genetics

Ye-Hee Yi, Crop Science  
Ke Dong, Plant Pathology  
Ling Li, Genetics  
Jill Stevenson, Botany  
Erika Kosal, Zoology  
Liz Johnson, Crop Science

#### STANDING AND AD HOC NCSU COMMITTEES.

2008: New Faculty Search Committee: Wood and Paper Science.  
2008: New Faculty Search Committee: Forestry and Environmental Resources.  
2007: The Jordan Professorship Committee  
2006: O. Max Gardner Award Committee.  
2006: Lifelong Faculty Committee.  
2001, 2002, 2003 Post-Tenure Reviews: Dept of Forestry – College of Natural Resources  
2001, 2002, 2003 Human Rights Week

#### UNIVERSITY TEACHING

##### North Carolina State University

FOR 603 and FOR 803 - Grant Writing – combined course 2002-2008, guest lectures  
FOR 411 - Genomics and Gene Discovery, guest lecture 2002-2006  
BIT 815J - Microarray Course, 2002, guest lecture  
GN725 - Forest Genetics, Spring Semester 2001, guest lecture  
Genomics Journal Club, Spring 2001  
Microarray summer course, Biotechnology series 1999  
Mapping with RAPD markers, Biotechnology Summer Course series  
1992, 1993, 1994, 1995, 1996 with O’Malley, Liu, and McCord  
Forest Biotechnology Graduate Seminar series with David O’Malley 1992  
Molecular Genetics Laboratory, Advanced Graduate Level 1981, 1983  
Molecular Genetics, Graduate Level 1983  
Molecular Cytogenetics, Graduate Level, 1979, 1981, 1983  
Evolution, Undergraduate Level, 1980

##### University of Oregon

Genetics of Eukaryotes, Undergraduate Level, 1975, 1976, 1977  
Genetics of Drosophila Lab, Undergraduate Level, 1976, 1977, 1978  
Developmental Genetics, Graduate Level, 1976, 1978  
Genetics Seminar, Graduate Level, 1975, 1976, 1977, 1978  
Gene Action and Development, Undergraduate Level, 1977

##### Columbia University, New York

Introduction to Genetics, Undergraduate Level, 1970-1975  
Advanced Genetics, Graduate Level, 1970, 1972, 1974

##### University of California, Los Angeles

Introduction to Biology, 1967  
Human Anatomy Laboratory, 1963 (teaching assistant)  
Genetics Laboratory, 1962

#### INVITED SEMINARS, PRESENTATIONS AND SYMPOSIA (1983-present).

2009: Forest Health Initiative, Raleigh, NC  
Symposium speaker, CPBR, Washington, D.C.  
Invited seminar, University of Florida, Genomics Program.  
Speaker: annual meeting Fagaceae Project. Raleigh, NC.

- Forest Biotechnology Industrial Research Consortium (FORBIRC) NCSU, Raleigh NC.  
Cold Spring Harbor Symposium on Evolution, CSH, Long Island NY
- 2008: Departmental symposium, NCSU: Forestry and Environmental Resources. Invited speaker.  
CPBR Symposium. Washington, DC, Invited speaker.
- 2008: Speaker: annual meeting Fagaceae Project. CAES, New Haven, Connecticut.
- 2007: Bioinformatics Research Center, North Carolina State University, Invited seminar,  
Panel member for Workshop: Genetically Engineered Forest Trees, Raleigh NC.  
Schatz Symposium on Forest Trees, Mont Alto Penn. State University. Invited speaker.  
Marcus Wallenberg Prize Symposium, Invited lecture, Stockholm, Sweden.  
Species Protection through Disease Resistance: Workshop, Invited speaker, Raleigh, NC.  
Pine Genome Initiative, Washington DC. Invited speaker.
- 2006: Sackler Symposium, NAS, Washington DC, invited presentation.
- 2005: NE Chestnut working group, Hamilton NY.  
AF&PA visit to NCSU: invited presentation.  
Video Teleconference on Forest Biotechnology NCSU. Extension Forestry Issues Forum  
Gordon Conference: Quantitative Genetics and Genomics, Ventura CA, invited speaker.  
Department of Biology, University of Iowa, invited seminar.
- 2004: Invited lecture, Swedish Agricultural University, Uppsala  
Pine genome workshop, Jekyll Island, GA.  
CPBR workshop presentation, Washington DC.  
DOE invited presentation, Atlanta GA.
- 2003: Weyerhaeuser – invited seminar  
Bayer, RTP, NC – invited seminar
- 2002: Plant Genome Conference  
2002: Genome Canada Workshop, San Diego, CA  
Orlando, FL plenary symposium IATPC&B Congress
- 2001: Genetic Science and the New Millennium Symposium, Raleigh, NC.  
Quantitative Genetic Gordon Conference, Ventura, CA  
International Paper Co. Executive workshop, Durham, NC  
Genencore, Invited presentation, Palo Alto, CA  
Southern Section Amer. Soc. Plant Physiol. Raleigh, NC  
Western Forest Genetic Association, Davis, CA  
Wood Biotechnology, Bordeaux, France  
Lignin Biotechnology, Presymposium, Helsinki, Finland  
Conference on Agricultural GMO's. Stockholm, Sweden  
Animal Genomics Symposium, Raleigh, NC  
Friends of the Library, Raleigh, NC  
Swedish University of Agricultural Sciences, Uppsala, Sweden  
American Academy of Microbiology Colloquium, Ithaca, NY
- 2000: Forest Tree Workshop, Plant and Animal Genome, San Diego, CA  
Department of Biology, Debate on GMO's East Carolina University, NC  
Cell Wall Gordon Conference, Meriden, NH  
Workshop on Genetically Modified Crops, NC State University, Raleigh, NC  
International Wood Science Symposium, Taipei, Taiwan  
International Conference on Waste Management, Taipei, Taiwan  
Bio 2000, Session on Forest Biotechnology, Boston, MA  
Rotary Club, Raleigh, NC  
CAMCORE annual meeting, NC State University, Raleigh, NC  
Com Bio 2000, Wellington, NZ  
Forestry Research, Rotorua, NZ  
Banbury Conference, Cold Spring Harbor, NY
- 1999: National Academy of Sciences Symposium at NC State University, Raleigh, NC

Weyerhaeuser Workshop on Forest Biotechnology, Tacoma, WA  
Plant Research Laboratory, Michigan State University  
Department of Genetics, University of Wisconsin  
Plant Breeding Group, University of Wisconsin  
Genomics Symposium, Duke University, Durham, NC  
CHI Agricultural Biotechnology Symposium, Minneapolis, MN  
CBWG Symposium on wood formation, Oxford, England, UK  
North Carolina Agriculture and Technology University, Greensboro, NC  
NSF Plant Genome Awardees Conference, Washington, DC  
AF&PA Research cooperative Conference, Atlanta, GA  
Tree Biotechnology Symposium lecture, Pune, India

- 1998   Forest Tree Workshop, Plant and Animal Genome VI, San Diego, CA  
Tuesday Forum, NC State University  
Department of Forestry, NC State University  
Conference on Statistical Genetics, Purdue University, IN  
Bioscience Symposium, Royal Academy of Sweden, Stockholm, Sweden  
REDBIO, Agricultural Biotechnology Conference, Havana, Cuba  
Conifer Biotechnology Working Group Conference, Rutgers, New Jersey  
Conference in Forest Biotechnology, HRI, Shell Ltd. E. Malling, UK  
Department of Plant Science, Oxford, England, UK  
Cold Spring Harbor Laboratory, Arabidopsis Course, NY  
DuPont, Agricultural Biotechnology, Wilmington Delaware  
International Congress of Genetics, Beijing, China  
Chinese Academy of Forestry, Beijing, China  
Nanjing Forestry University, China  
IUFRO International Congress, Beijing, China  
University of Madrid, Spain  
IBET, Biotechnology Institute, Lisbon, Portugal  
Monsanto, St. Louis, MO  
Virginia Tech University, Biotechnology  
University of Georgia  
Weyerhaeuser Research Center, Tacoma, Washington
- 1997   Forest Tree Workshop, Plant & Animal Genome 5, San Diego, CA  
Department of Chemistry, University of Ohio, Athens  
ForBio Research Ltd. Brisbane, Australia  
University of Chicago, Genetics Minisymposium  
University of Arizona, Tucson  
Sigma Xi, BASF, Research Triangle Park, NC.  
Institute of Paper Science and Technology, Atlanta, GA  
Chinese Academy of Forestry, Beijing, China  
Nanjing Forestry University, Nanjing, China  
Swedish Plant Physiology Society, Uppsala, Sweden  
Workshop presentation, Agricultural Biotechnology, Uppsala, Sweden  
Presidents Circle, National Academy, Woods Hole, MA  
American Association of Plant Physiology, Vancouver, Canada  
Molecular Genetics of Forest Trees, IUFRO, Quebec, Canada  
Eucalypt: IUFRO meeting, Salvador, Brazil  
Forest Biotechnology Conference, Blomfontein, South Africa  
University of Stellenbosch, South Africa  
International Society of Plant Molecular Biology, Congress in Singapore
- 1996   Regional Symposium of the NAS, Duke University, Duke, NC

Agricultural Biotechnology, Dupont, Wilmington, DE  
Annual Meeting ForBio Ltd. Brisbane, Australia  
Plant Cell Mol. Biol. University of Georgia, Athens  
SRIEG Conference on Molecular Markers, Houston, TX  
Cold Spring Harbor Arabidopsis Course  
Union Camp Research Center, Princeton, NJ  
Agricultural Biotechnology Course, San Sebastian, Spain  
Department of Horticulture, Helsinki University  
Forest Biotechnology Symposium, Bioscience Days, Helsinki  
TAPPI Meeting, Seattle, WA  
Pioneer International, Johnson City, Iowa  
Workshop presentation on Intellectual Property Rights, NRC, Washington DC  
Horticultural Research, Auckland, New Zealand  
Forestry Research Institute, Rotorua, New Zealand

- 1995    Gordon Conference on Quantitative Genetics and Biotechnology  
Program in Genetics, Duke University  
Inland Empire Tree Improvement Cooperative  
Departments of Forestry and MMBB, University of Idaho  
Institute of Paper Science and Technology, Atlanta, GA  
Howard Hughes Undergraduate Science Discovery Speaker, Rutgers University, NJ  
Biodiversity Program, Rutgers University, Newark, NJ  
22nd Stadler Genetics Symposium, Columbia MO  
NCSU Tree Improvement Workshop, Atlanta, Georgia  
National Agricultural Biotechnology Council Workshop, Washington, DC  
REDBIO Agricultural Biotechnology Symposium, Iguazu, Argentina  
Aracruz Cellulose, Aracruz, Brazil  
CENARGEN, EMBRAPA, Brasilia, Brazil  
CBWG, Conference, Brisbane, Australia  
American Society of Plant Physiology, Charlotte, NC  
Pasteur Institute Symposium, Paris, France  
IUFRO Conference on Molecular Genetics of Trees, Gent, Belgium  
ESPRA Symposium, SUNY, Syracuse, NY
- 1994:    Agricultural Biotechnology Keystone Symposium Speaker, Keystone, CO  
Plant Genome II, Symposium Speaker, San Diego, CA  
Laval University, Quebec City, Quebec, Canada  
Laboratory of Genetics, University of Gent, Gent, Belgium  
Dept. of Forest Genetics, Swedish Agricultural University, Uppsala  
Joint meeting of the Nordic Fund Programs in Plant Biotechnology, Finland  
Applied Biosystems (Perkin Elmer Cetus), Redwood City, CA  
International Plant Molecular Biology Symposium, Amsterdam, The Netherlands  
Shell Research, Sittingbourne, England  
Zeneca Seeds, Jealotts Hill, Bracknell, Berkshire, England.  
American Society of Plant Physiology, Corvallis, Oregon  
International Wood Biotechnology Symposium, Tokyo, Japan  
Forest Research Institute Rotorua, New Zealand  
Department of Botany, University of Melbourne, Australia  
Wood Research Institute, Clayton, Australia  
Forestry Research, Canberra, Australia  
Plant Biotechnology, Canberra, Australia  
ForBio, Brisbane, Australia  
Biochemistry and Plant Physiology Conference, Australia  
Australian Plant Physiology Conference

Department of Plant Pathology, University of Nebraska  
Boyce Thompson Institute, Cornell University, Ithaca, NY  
Cold Spring Harbor Mapping Course, Cold Harbor Springs, NY  
John Innes Institute, Norwich England  
Weyerhaeuser Technical Center, Tacoma, WA

- 1993: International Paper Company, Bainbridge GA.  
Cell Wall Keystone Meeting, Keystone, CO  
NC Biotechnology Center, Biotech Retreat, Beaufort, NC  
Joint McKnight Retreat, NC State University-Purdue University  
Quantitative Genetics Gordon Conference, Ventura CA  
Southern Forest Tree Improvement Conference, Atlanta, GA  
Agronomy Society, Minneapolis, MN  
Phytochemistry Meetings, Asilomar, CA  
Genomic Fingerprinting Workshop Madrid, Spain  
IUFRO Somatic Cell Genetics, Balsain, Spain  
Soporcet, Lisbon, Portugal  
NBIAP Workshop, Washington, DC  
International Congress of Botany: Cell walls & Tree Breeding  
Tokyo University of Agriculture and Technology,  
International Symposium of Wood Biotechnology, Japan  
Nippon Paper Co., Tokyo, Japan  
Cold Spring Harbor Mapping course, Cold Spring Harbor, NY
- 1992 AAAS, Chicago, IL  
Plant Genome Meeting, San Diego CA  
Moderator and discussion session, Genetic markers Conference, Rutgers University, NJ  
Swedish Agricultural University, Uppsala – invited seminar.  
Joensuu, Finland  
Tromso, Norway  
University of Sweden  
Purdue University, Indiana, IN  
Plant Physiology Regional Meeting, Duke University, Durham, NC  
University of Georgia, Athens, GA  
International Cell and Tissue Culture Meeting, Orlando, FL  
Virginia Polytechnic University, Blacksburg, VA  
University of Florida, Gainesville, FL  
Agronomy/Horticulture Society, Minneapolis, MN  
Cold Spring Harbor Mapping Course, Cold Spring Harbor, NY  
Washington University, St. Louis, MO
- 1991 International Symposium on Forest Biotechnology and Application, Columbus, OH  
Institute of Paper Science and Technology, Atlanta, GA  
Meeting on Marker Aided Selection, Gatlinburg, TN  
International Course in Forest Biotechnology at the Institute for Advanced Studies, Caracas, Venezuela  
Department of Forestry and the Biotechnology Program, Oregon State University  
Department of Biochemistry Biotechnology, Washington State University, Pullman  
Plant Biotechnology Institute, University of Saskatchewan, Saskatoon, Canada  
Biotechnology Institute, University of British Columbia, Vancouver, Canada  
Swedish Agricultural University, Uppsala, Sweden  
Department of Forestry, University of Joensuu, Finland  
Nordic Fund Conference on DNA transfer in Nordic Tree Species, Finland
- 1990 Texas A&M University, Department of Forestry

Monsanto Corporation, St. Chesterfield, MO  
IUFRO Conference on Molecular Genetics of Forest Trees, Fallen Leaf Lake, CA.  
South Carolina Meeting of the Society of American Foresters  
Laboratorium voor Genetica, University of Ghent, Belgium  
IUFRO Congress, Molecular Genetics section, Montreal, Canada  
Center for Environmental Research, GSF at Munich, Germany  
Conifer Biotechnology Working Group, Sittingbourne, England  
John Innes Institute, Norwich, England

- 1989    American Association of the Advancement of Science, San Francisco CA  
Sino-American Workshop in Forest Biotechnology, Taipei, Taiwan  
Bioscience Days, Helsinki, Finland  
Department of Forestry, Joennsu University, Finland  
Symposium for the National Tissue Culture Meeting, Orlando, Florida  
Graduate Ethics Colloquium, North Carolina State University  
Annual meeting of the Noble Foundation, Ardmore, Oklahoma  
Cold tolerance in eucalyptus, Raleigh, NC
- 1988    Universite de Laval, Department of Forest Biology, Quebec, Canada  
Natural Resource Societies Science Day (Forest Biotechnology), Washington, DC  
Department of Genetics, NC State University  
Department of Biochemistry, NC State University  
Department of Biology, University of Nebraska, Lincoln  
International Conifer Tissue Culture Working Group, Saskatoon, Saskatchewan, Canada
- 1987    Plant Biotechnology Institute, Saskatoon, Saskatchewan, Canada  
USDA Forest Service, Southeast Station, Annual Meeting, Jekyl Island, SC  
Biotechnology Group, University of British Columbia  
Department of Forestry, University of British Columbia  
Department of Biology, University of Victoria, British Columbia  
USDA Forest Service, Washington Office, Washington DC  
Biotechnology of Forest Trees, Aqueduct, NC
- 1986    Carnegie Institute of Washington, Stanford University, CA  
American Society of Naturalists, National Meeting  
Biotechnology of Woody Crops, Uppsala, Sweden  
Department of Plant Pathology, University of California, Berkeley
- 1985    International Paper Company, Tuxedo Park, New York  
Department of Forestry, University of California, Berkeley  
Stauffer Chemical Company, Richmond, California  
Southern Forest Tree Improvement Conference, Long Beach, MS  
University of Alberta, Canadian Pacific Symposium  
IUFRO Molecular genetics working party, Ohio State University  
Forest products laboratory, Richmond, CA
- 1984    Forest Genetics, PSW, Berkeley, CA  
Weyerhaeuser Research Center, Tacoma, WA  
Crown Zellerbach Research Center, Portland, OR  
Zoecon, Inc., Palo Alto, CA  
Calgene, Davis, California  
Workshop on Biotechnology, Institute of Forest Genetics, Placerville, CA
- 1983    Southern Forest Tree Improvement Workshop, Quail Roost, NC

Annual Meeting of the Tissue Culture Forestry Cooperative, NC State University  
Columbia University Medical School, Department of Human Genetics, NY

CONFERENCES CO-ORGANIZED

- 2000 The Arabidopsis Genome and the Genetics of Trees, Banbury Conference
- 1997 International Wood Biotechnology Conference, Canberra, Australia
- 1997 International Wood Biotechnology Conference, Canberra, Australia
- 1994 Forest Biotechnology International Conference Minneapolis MN
- 1994 International Wood Biotechnology Conference, Tokyo, Japan
- 1992 International Forest Biotechnology Working Group, Raleigh NC

MEDIA INTERVIEWS

- 2003 Tree that towers is kin to lowly flower, News & Observer, Raleigh, NC
- 2000 News and Observer, Raleigh NC, Genomics at NC State University  
National Public Radio, The Environment Show, interviewed by Peter Burley on  
the genetic modification of trees.