

COMMITTEE ON NATURAL RESOURCES
114th Congress Disclosure Form
As required by and provided for in House Rule XI, clause 2(g)(5)

*Oversight hearing on “Exploring Current Natural Resource Research Efforts and the Future of America’s
Land-Grant Colleges and Universities” on April 20, 2016*

For Individuals:

Name:
Address:
Email Address:
Phone Number:

* * * * *

For Witnesses Representing Organizations:

Name: Dr. Jody Jellison
Name of Organization(s) You are Representing at the Hearing: Center for Agriculture, Food and the
Environment, UMass, Amherst
Business Address: [REDACTED]
Business Email Address: [REDACTED]
Business Phone Number: [REDACTED]

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For Nongovernment Witnesses ONLY:

1. Please attach/include current curriculum vitae or resume.
2. Please list any federal grants or contracts (including subgrants or subcontracts) related to the subject matter of the hearing that were received in the current year and previous two calendar years by you or the organization(s) you represent at this hearing, including the source and amount of each grant or contract.
No personal grants or contracts

3. Please list any contracts or payments originating with a foreign government related to the subject matter of the hearing that were received in the current year and previous two calendar years by you or the organization(s) you represent at this hearing, including the amount and country of origin of each contract or payment.
none

JODY L. JELLISON

**Director, Center for Agriculture, Food and the Environment
Director, Massachusetts Agricultural Experiment Station
Director, Massachusetts Extension Service
Assistant Vice Chancellor for Research and Engagement
University of Massachusetts
Amherst, Ma 01003**

LEADERSHIP AND EXECUTIVE EXPERIENCE:

• Director, Center for Agriculture, Food and the Environment, Director, Massachusetts Agricultural Experiment Station, Director, Massachusetts Extension Service, Assistant Vice Chancellor for Research and Engagement, University of Massachusetts

Leadership of agricultural and environmental research and outreach initiatives, oversight of farms and facilities, government grants and contract pertaining to agricultural initiatives, and interaction with federal and state government entities on agricultural issues.

•Associate Director, Virginia Agricultural Experiment Station (VAES),

Responsibilities include shared oversight of 11 off-site Agricultural, Forestry and Aquaculture Research and Extension Centers (7 of these centers include tenure track faculty), Plant Germplasm Release and negotiation of material transfer agreements for GMO plant products, Plant Variety Development, and shared responsibility for over 200 federally funded agricultural, animal health and forestry research projects. VAES research directly supports Agriculture, the state's largest industry, accounting for one in every five jobs and providing an economic impact of approximately \$55 billion annually with an additional annual contribution from the Forest Products industry of approximately \$27 billion.

•Director, University of Maine, School of Biology and Ecology,

Providing leadership for a large school comprising the former departments of Botany and Plant Pathology, Entomology and Zoology. Responsibility for 27 tenure track regular faculty members, 15 professionals and clerical staff, 47 graduate students and 5 undergraduate degree programs serving 484 undergraduate students in our majors. 2009-2011.

•NSF-ADVANCE steering team, University of Maine, 2009-2010, External Reviewer 2011-2013

•Interim Associate Director, Maine Agricultural and Forest Experiment Station (MAFES) and Director Maine Agricultural Center 2006-2007

•Assistant Director, MAFES 2004-2006

•ESCOP/ACOP Leadership Development Program, 2004-2005

•Maine Academic Management Institute, 2000-2001

•Leadership and collaborative participation on over \$16 million in Grant funding from NSF, USDA and industry (These are funds obtained by me individually or collaboratively to support research and/or institutional development)

•Strong International Work Experience, Germany, Sweden, Japan and Chile

•Management skills:

-Ability to interact with and motivate diverse groups

-Consensus building and group management

-Understanding of complex budgetary issues

-Prioritization of effort

-Interaction with government agencies, State and Federal funding sources and internal and external stakeholders

-Grant and patent/intellectual property issues and compliance

-Faculty evaluation and personnel management

EDUCATION:

Postdoctoral: Harvard University, 1983-1984.

Immunology, Molecular Plant Biology, Economic Botany

Ph.D. Oregon State University (OSU), 1983. Plant Virology: Minors: Plant Pathology; Biochemistry/Biophysics
M.S. Plant Pathology: OSU, 1980. Minors: Biochemistry/Biophysics; Statistics
B.S. University of New Hampshire, 1977. Botany and Plant Pathology
Undergraduate Biology: McGill University, Montreal, Canada, 1972-1973.

Additional professional development includes a semester course in International Agriculture (2007) and more recent training sessions in:

- Organizational Development
- Time Management
- Inspiring and Managing Change
- Embracing Diversity
- Recruiting and Maintaining a Diverse Graduate Student Population
- Financial Operations

EMPLOYMENT:

Associate Director, Virginia Agricultural Experiment Station, Prof. Plant Pathology, Virginia Tech. Jan. 2011-current

VAES performs basic and applied research on agricultural, environmental, and natural and community resource issues related to the future needs of Virginia, the region, the nation, and the world. Apart from serving the needs of Virginia's animal, plant, and seafood industries, VAES-supported research fosters conservation of natural resources and benefits consumers and all citizens of the state in rural, urban and suburban communities. Current areas of responsibility include shared supervision of 11 farms and facilities, formula funded research projects, proposal development, germplasm release oversight, and chairing the College of Life Sciences and Agriculture committee on strategic planning. VAES works in close collaboration with Virginia Cooperative Extension, the College of Agriculture and Life Sciences, the College of Natural Resources and the Environment and the Virginia-Maryland Regional College of Veterinary Medicine. Areas of interest and participation include interaction with State and Federal agencies, involvement in Southern and National Experiment Station Directors Associations, participation in the Virginia Tech 229 Council and the initiation and coordination of multistate research projects.

Director, School of Biology and Ecology

Prof. of Molecular Plant Pathology, SBE, Coop. Professor of Microbiology, Coop. Professor of Forest Ecosystem Science. Member of Forest Biorefinery Research Initiative, Member Forest Sustainability Institute. 2009-2011

The School of Biology and Ecology offers five undergraduate degrees (Zoology, Botany, Biology, Ecology and Environmental Science, Clinical Laboratory Studies), two concentrations (Ecology and Pre-Medicine), and six graduate degree programs (Biological Sciences (MS, PhD), Entomology (MS), Plant Pathology (MS), Ecology and Environmental Science (MS and PhD) and provides service courses for over 17 majors. Responsibilities included school financial management, and undergraduate and graduate program supervision, coordination of distance education and off-campus offerings, faculty evaluation, personnel management, promotion and tenure, general school governance, external communication, alumni affairs, and representation of the unit on the University Research Council. A USDA NIFA review of the unit was completed in 2010 and is available upon request.

Associate Director School of Biology and Ecology 2008 –2009.

Shared responsibility with the Director and Assistant Director for administrative, teaching, research and financial issues in the School of Biology and Ecology. As associate director I was involved primarily with issues associated with the Maine Agricultural and Forest Experiment Station.

Sabbatical September 2007 – January 2008.

1) Biotechnology Institute, **Universidad Concepcion, Chile** Sept. – Oct. 2007.

2) **Georg-August Universitat Goettingen, Germany** Oct. 2007-Dec. 2007. Wood biology research, guest seminars and research visits to South American and German Institutes. This was also an opportunity to attend a semester course in International Agriculture sponsored by the Institute of Tropical and International Agriculture and Forestry, Goettingen.

Director, Maine Agricultural Center 2007. Collaborative leadership of a joint research and extension center at the University of Maine. The Maine Agricultural Center is an interface between the University of Maine and the agricultural community.

Interim Associate Director Maine Agricultural and Forest Experiment Station (MAFES) 2006- 2007. Included budgetary oversight and responsibility for MAFES's 5 research and extension farms and 3 research and demonstration facilities. Position included representation of the University at the Agricultural Council of Maine, State Legislature etc, and oversight of the MAFES Research Council. This position also included participation in Plan of Work and Federal reporting and compliance issues.

Assistant Director for Biological Sciences and Biotechnology, Maine Agricultural and Forestry Experiment Station (MAFES) 2004 - 2006. Included responsibility for Biotechnology, Biology and the Shur Tissue Culture and Greenhouse Research Facility.

Associate Chair, Biological Sciences Department 2005 – 2006.

Interim Associate Chair and Experiment Station Research Coordinator, Biological Sciences Department 2003 - 2004

Professor 2000-2010: School of Biology and Ecology, University of Maine
Cooperating Professor Microbiology
Cooperating Professor Forest Ecosystem Sciences
Microbial Ecology and Environmental Microbiology (MEEM)

Associate Professor 1996-1997: Dept. of Plant Biology and Pathology, University of Maine. 1997-2000: Department of Biological Sciences. Primary assignment: Teaching and coordination of large introductory biology class with up to 750 students and 32 laboratory sections.
Cooperating Associate Professor. 1996-2000: Forest Ecosystem Science.
Cooperating Associate Professor. 1996-2000: Microbiology

Sabbatical: Oct. 1995-Jan. 1996: **Swedish Agricultural University**, Uppsala, Sweden.

Assistant Professor 1989-1996: Dept. of Plant Biology and Pathology, University of Maine.
Cooperating Assistant Professor. 1989-1996: Forest Ecosystem Science
Cooperating Assistant Professor. 1989-1996: Microbiology

National Science Foundation-Science and Technology Agency Guest Researcher. 12/1990-6/1991. Bioconversion Chemistry Laboratory. (FFPRI) Forestry and Forest Products Research Institute, **Tsukuba, Japan.**

Assistant Research Professor 1985-1989. Dept. of Forest Biology, University of Maine.
Cooperating Assistant Research Professor. Dept. of Botany and Plant Pathology. Supported on USDA grant funding and contract work from the Pulp and Paper industry (SD Warren/SAPPI).

Postdoctoral Fellow 1983-1984. Dept. of Cellular and Developmental Biology, **Harvard University.** Molecular basis of race-specific disease resistance (NSF PCM-8302789).

INTERNATIONAL EXPERIENCE:

I have had experience living and working for extended periods in Africa, Canada, Japan, Chile, Sweden and Germany. International collaboration and travel has been a significant part of my professional scientific and administrative career. Recent collaborations include groups in the US, Germany, Japan, Denmark, the UK and Chile.

SPECIAL RECOGNITION:

- ESS representative on the **Board of Agriculture** Futuring Task Force 2014-current
- DOE site review team member for BioEnergy Center JBEI (Lawrence Livermore National Laboratory)
- National Experiment Station Representative, Steering Committee for the US Wheat and Barley Scab Initiative** 2012-2015
- Centro Biotecnologia Universidad de Concepcion, International Advisor**
- Institute for Critical Technology and Applied Science (ICTAS) Virginia Tech. (Advisory board member)
- Steering Committee, College of Agriculture Strategic Plan 2012-2018, chair**
- External Advisory Board Member, UMaine ADVANCE 2012-2014**
- Administrative advisor for Fescue Toxicity and for Peanut Variety Quality Evaluation Multi-state projects
- University representative, Tri-county Maine, Workforce Investment Board. 2007-2010
- Board Member, University of Maine representative, Biotechnology Association of Maine**, 2004-2010
- Member, Advanced Initiatives Council, University of Maine, 2009-2010
- ADVANCE steering team, University of Maine, 2009-2010
- Member, University Research Council, University of Maine, 2009-2010
- Chair, High-tech Instrumentation Committee, University of Maine, 2009-2010
- External Doctoral Opponent University of Waikato, New Zealand, 2009
- Peer reviewer, NSF, USDA continuing
- Invited Session Chair, International Biodegradation and Biodeterioration Meetings (Co-sponsored by the Federation of European Microbiologists) October 6-11, 2008 Messina, Italy.
- Invited Session Chair, International Biodegradation and Biodeterioration Meetings (Co-sponsored by the Federation of European Microbiologists) Riga, Latvia 8/2007.
- Outstanding Researcher in the College of Natural Sciences Forestry and Agriculture**, 2006.
- External Doctoral Opponent Swedish Agricultural University, 12/2006.
- Invited Symposium Speaker: “Molds in the Built Environment”, American Chemical Society National Meeting, March, 2005.
- Invited reviewer: NIH Superfund Research, 2005
- Invited reviewer: North Carolina Biotechnology Center, 2005
- Invited seminar speaker, Cellulose Research Institute, SUNY, NY. Nov. 29, 2004.
- Invited Seminar Speaker, Dept. of Forest Products, Oregon State University. March 3-5, 2004.
- Invited Panel Review Participant: USDA –NRI Wood Utilization. Washington, D.C. May 2002 and 2003.
- Invited Symposium Speaker, American Chemical Society, Biogeochemistry of Terrestrial Organic Matter. San Diego, April 1-5, 2001.
- Invited Symposium Speaker, American Chemical Society, Recent Developments in the Chemistry of Wood Biodegradation. San Diego, April 1-5, 2001.
- Work featured in “Developments to watch: Innovations” Polluter: Clean up ahead? “Business Week” Magazine Nov. 5, 2000 p. 165. Work also highlighted in interview on NPR.
- Invited Symposium Speaker, International Society of Biodegradation and Biodeterioration, Washington, D.C. Aug. 8-12, 1999
- G. Peirce and Florence Pitts Webber **Outstanding Researcher in Forest Resources**, 1998-1999.
- Chair, National Committee on Forest Pathology, American Phytopathological Society 1995-1996
- Guest Researcher, Forestry Department, Swedish Agricultural University Uppsala, Sweden Oct. 15, 1995-Jan. 12, 1996
- Cover Article/photo, Canadian Journal of Microbiology, Vol 41, 1995, Environmental scanning electron microscopic examination of the brown-rot fungus *Postia placenta*. Connolly J., Y. Chen, and J. Jellison.

- Foreign Lecturer Series Participant., Kinki Agricultural University, Japan. Invited lecturer on Microbial Degradation of Lignocellulose. March 1-11, 1993.
- Recipient Ron Cockroft Award (Sweden) to attend IRG meetings in Harrogate, U.K. and present work on plasma emission spectrophotometry cation analysis of fungally degraded wood. 1992.
- Keynote speaker at the International Research Group on Wood Preservation meeting (Biology Subgroup) held in Kyoto, Japan May 20, 1991. The action of siderophores isolated from *Gloeophyllum trabeum* on the structure and crystallinity of cellulose.
- Guest Researcher, Forestry and Forest Products Research National Institute, Japan Dec. 1990-June 1991.
- Cover Article/ illustration, Intervirology Vol 27, 1987, Exploratory numerical taxonomy based on biochemical and biophysical characteristics of the tymoviruses, J. Jellison.

PROFESSIONAL ASSOCIATIONS:

American Association for the Advancement of Science
 American Society for Microbiology
 American Phytopathological Society (APS), member and representative on the National Forest Pathology Committee, vice-chair 1994, chair 1995-96.
 (APS) Maine representative for the Office of International Programs
 Co-Editor, Forest Products Technical Bulletin Series
 Forest Products Society
 Gamma Sigma Delta, Agricultural Honor Society
 International Research Group on Wood Preservation - Biological Problems Section, elected member,
 Panel reviewer, USDA Wood Utilization program
 Panel Reviewer, NSF, STA-Japan program
 Peer Reviewer, NSF, Biochemical and Biomass Engineering
 Peer Reviewer, NSF, Interfacial, Transport and Thermodynamics Processes
 Peer Reviewer, USDA, Forest and Rangeland
 Peer Reviewer, USDA, Plant Pathology; Forest Biology; Wood Utilization
 Peer Reviewer, USDA National Research Initiative, Crop Ecosystems
 Peer Reviewer, USDA, Soils and Soil Biology
 Peer Reviewer, USDA Water Resources Assessment and Protection
 Peer Reviewer, NSF, Small Business Innovation Research
 Panel Reviewer, NSF, Small Business Innovation Research, combined panel for Biochemical and Biomass Engineering and Biotechnology
 Reviewer, National Institute of Health, Superfund program
 Reviewer, Utah State University, Agricultural Experiment Station, grant program
 Reviewer, University of New Hampshire, Agricultural Experiment Station, grant program
 Sigma Xi Scientific Honor Society, member, U. Maine Delegate to the 1986 National Meeting
 Society of Wood Science and Technology

Virginia Tech:

Germplasm release committee
 CALS Governance, Editorial Board and numerous other college level administrative roles
 CALS strategic planning committee, chair 2011
 Southern Association of Agricultural Experiment Station Directors
 National Association of Agricultural Experiment Station Directors
 EVAREC Advisory Board, ex-officio
 Regional and national administrative roles within the AES system and BAA

University of Maine:

University Research Committee, High Tech. Equipment, Chair
 Graduate Board Representative for Dept. of Plant Biology and Pathology
 College of Sciences Academic Advisory Committee

Graduate Admissions, Dept. Plant Biology and Pathology
 Seminar Coordinator
 Wood Utilization Research Initiative Steering Committee
 Analytical Chemist Search Committee
 Graduate School Curriculum Committee
 Wood Sciences and Engineering Institute; Advisory Board Member and Co-coordinator of Seminars
 Departmental Review Committee
 Safety Committee
 Health Professions Committee
 Assoc. Dean of Research Search Committee
 Mycology Search Committee (Chair)
 Forest Ecosystem Sciences Search Committee
 Deans Review Committee
 Maine Agricultural and Forest Experiment Station Research Council
 Hitchner Hall building Committee
 Chair and member, MAFES Committee
 Chair and member, Microbial Physiologist Search Committee
 Technology Manager Search Committee
 Departmental Review Committee
 Ober Chair Committee, College of Engineering
 Operations Manager Search Committee, Forest Management
 Peer Review committee, Biological Sciences
 Policy Advisory committee, Biological Sciences
 Search Committee, Dean of Library
 Sanders Chair Committee
 New Faculty mentor program Policy Advisory Committee, Biological Sciences
 College NSFA Dean Search Committee
 MAFES Research Council 3 years
 Committee of 5, College of Natural Sciences Forestry and Agriculture (NSFA)
 Executive committee, NSFA
 Search committee for Dean and Director of Extension
 Irving Chair Committee

TEACHING: (Undergraduate teaching responsibilities have been reduced since 2006)

•**Co-instructor and coordinator for Introductory Biology** (a combined majors and non-majors course with approx. enrollment of 250-850 per term, This is a lecture/lab course with up to 42 laboratory sections per term) Areas of responsibility: Units covering Biochemistry and Molecular Biology, Metabolism and Disease, Ecology) 1993, 1994, 1995, 1996, 1998, 1999, 2001.

•**Plants in Our World BOT 342**, (a class in economic botany for both majors and non-majors) 2003, spring and fall. 2004, 2005, 2008 fall, 3 cr. This is also a course that fulfilled the university general education requirement for population and the environment.

•Capstone course 2001

•Selected Topics, Wood Decay Graduate Seminar and Lecture, 1999-2000, 2006-2007

•Fungal Biology, 1996

•Fungal Physiology upper-level graduate, 1994, 2006

•Selected Topics, Electron Microscopy, 1993

•Selected Topics in Plant Pathology, Enzymatic Degradation 1989, 1990, 1992, 1993.

•Plants and Society, BOT 251, Fall 1991, 1992, 1994, 1996.

•Majoring in the Sciences SCS 100, Fall 1992, 1994.

•**Additional Teaching Activity:**

- Interview Skills and CV writing workshop (Showcase of Scientists, USDA National Needs Fellows, sponsored by CNRE and VT Advance), 2012
- Schoodic Experience for first year students, 2008, 2009 A three day adventure/learning experience for incoming students (participant)
- Extensive undergraduate advising including participation as an instructor of a first year one credit introduction to the major
- Expanding Your Horizons, participant laboratory, A program aimed at encouraging the interest of Middle School girls in STEM fields 1992 --2010
- Advisory board member for NIH teacher training grant 1993, 1994.
- Student intern program - NSF-MERIT, Summer 1993.
- Research, Teaching, and Education: (NIH Science Teaching Enhancement Award Program) Advisory committee member.
- Upward Bound, participant laboratory, Summer 1992-1998.
- Plant Therapy Program, NH State Mental Hospital, 1976-1977.
- Mathematics tutor, Montreal Family Services, 1972-1973.

GRADUATE STUDENTS: Primary advisor for the following:

- Betsy Carlson Wood biodegradation and the role of fungal metabolites. MS Botany and Plant Pathology, 2011. (Industry employment)
- Caitlin Howell Cellulose crystallinity and biomodification. MS, Biological Sciences. Dec. 2008. (Post-doctoral Fellow, Harvard)
- Jason Oliver. Bioremediation using degradative fungi. MS, Ecology and Environmental Sciences. Dec. 2008. (PhD student, Univ. Minnesota)
- Anne Christine Hastrop. Visiting graduate student from Danish Technical Institute, Denmark (non-degree). Recently received PhD from DTI, I served as an external advisor.
- Thomas Balzer. Fungal degradation of wood and wood products. Environmental Sciences, MS 2006.
- Jonathan Schilling. Fungal translocation of cations in the forest ecosystem. PhD, Biological Sciences, 2006. (Associate Professor, Univ. of Minnesota)
- Barbara Kitchin. Mold toxicity and growth on manufactured wood products. MS (non-thesis) Microbiology, 2005.
- Anja Froese. Guest graduate student from Berlin Free University, Germany, Biological Sciences, Sept. 2003-Dec. 2003.
- Marieke Schmutzer Guest graduate student from Vienna Technical Institute, Austria. Biological Sciences Jan. 2003-Aug, 2003.
- Weihong Qi. Biochemical studies of the extracellular iron repressible products of wood decay fungi. PhD Biological Sciences, December, 2002. (employed in bioinformatics)
- Cynthia Fuller. Bioremediation of toxic metals. MS Microbiology. 2000.
- Jianxin Zhang. Characteristics of wood decay fungi grown under various metal conditions. Non-thesis MS Microbiology. 1997. (Industry employment)
- Jon Connolly. Decomposition of red spruce sapwood by basidiomycete fungi: Extracellular matrix, calcium oxalate crystals, and cation mobilization. PhD Biology. 1996. (VP of Academic Affairs, Sheridan and Gillette Colleges)
- Vijay Easwaran. The purification and partial characterization of iron-binding compounds produced by *Gloeophyllum trabeum*. MS Microbiology. 1994. (Senior Manager, Proctor and Gamble)
- Ying Chen. Regulation of hyphal sheath formation and bio-chelator production by the brown-rot fungi *Gloeophyllum trabeum* and *Postia placenta*. MS Plant Biology and Pathology. 1994. (Employed in medical field)
- Vikas Chandhoke. Iron-binding compounds produced by the brown-rot fungus *Gloeophyllum trabeum*. PhD Forest Resources. 1991. (Dean of Science, George Mason University)

GRANTS:

Grants and Contracts: (selected, total awards exceed \$16 million)

- 2014-2015. ORNL Neutron Sciences, Unravelling brown rot fungal cellulose degradation mechanism for bioprocessing applications. Beam time awarded: 8 days (separate awards in 2014 and 2015)
- 2010-2015. NSF-ADVANCE: institutional transformation and advancement of women in STEM fields. A

- rising tide: Advancing women and leadership at the University of Maine. Hunter, S., Horton, K., Fried, A. Gardiner, S. and J. Jellison. \$3,953,259.
- 2010-2012. USDA-WUR Wood Biodegradation and Biomodification. Jellison \$68,135. (Total award to UM \$524,639)
 - 2010-2013. BBSRC US Partnering Award. New insights from shared expertise in wood-degrading animals and fungi into lignocellulose degradation mechanisms for biofuel applications. Craig, S., et al. £ 31,000.
 - 2010-2011. USDA/DOE Planning Proposal. Growth of microalgae on lignocellulose biomass sugars for enhanced bio-oil and food supplement production. Xie, Goodell, Perkins, Jellison, LeBlanc, Rubin, Hunt, and Wilson. \$50,000.
 - 2009-2011. USDA-WUR. Bioconversion capabilities of wood decay fungi. Jellison and Carlson \$70,000.
 - 2008-2013. USDA-FS. Cooperative agreement. Role of Fungi in Biotransformation and Nutrient Cycling in the Forest Ecosystem. Jellison and Shortle. Annual awards of 5-15K.
 - 2006-2009. NSF EPSCoR, Research Infrastructure Improvement Proposal “Investing in Maine Research Infrastructure: Sustainable Forest Bioproducts” Eckardt et al. \$6,900,000 sponsor share, total \$10.2 million).
 - 2006-2010. USDA-NRI. Novel Rheological tools for xylem structure property determination and formation. Frazier, Goodell and Jellison \$500,000.
 - 2007. USDA-ARS Production of a tetraploid seedling generation in support of potato varietal development. \$50,000 additional award (in support of the Shur Research Facility)
 - 2007. USDA-FS Additional funds, The role of fungi in biotransformation. \$5000
 - 2007. Contract. Seed Pro. Inc. \$4,821 (in support of the Shur Research Facility)
 - 2007-2008. USDA-HATCH Bioconversion capabilities of wood decay fungi. (Part of multi-state Wood Utilization Research on US Biofuels, Bioproducts, hybrid Biomaterials Composites Production, and Traditional Forest Products. CRIS Acc. No. 0211930) \$100,850.
 - 2006 - 2008. US Dept. of Defense. Process to produce multi-walled carbon nanotubes. Goodell et al. \$125,000.
 - 2006. Contract. Seed Pro. Inc. \$4,821 (in support of the Shur Research Facility)
 - 2006-2012. USDA-ARS. Production of a tetraploid potato seedling generation in support of varietal development. \$50,000/year (in support of the Shur Research Facility).
 - 2006-2009. USDA-WUR. Research on Wood Science and Wood Engineering—Wood Utilization. Goodell et al. \$728,545.
 - 2006-2007 Maine Technology Institute (MTI) additional funding. Qian et al. \$10,000.
 - 2005-2006. MTI Seed Funding, A Novel Process to Produce Multi-walled Carbon Nanotubulars. Qian, Goodell, Peterson, Jellison, and Thompson. \$15,000.
 - 2005-2006. Office of Naval Research ONR BAA 06-001. A Novel Process to Produce Multi-walled Carbon Nanotubes from Natural Cellulosic Materials. Qian, Goodell, Peterson, Jellison, Lopez-Anido, and Thompson. \$51,113.
 - 2005-2008. USDA-WUR. Physiological diversity among degradative microorganisms-Implications for lignocellulose bioconversion. Jellison and Schilling. \$98,000.
 - 2004-2007 USDA-WUR The effect of substrate, moisture and environment on the proliferation and toxicity of building molds. Jellison \$98,836.
 - 2004-2008. USDA-FS Cooperative agreement. Role of Fungi in Biotransformation and Nutrient Cycling in the Forest Ecosystem. Shortle and Jellison. \$10,000.
 - 2003-2008. USDA-FS Cooperative agreement. Role of Fungi in Biotransformation and Nutrient Cycling in the Forest Ecosystem. Shortle and Jellison. \$4000-10,000/yr.
 - 2003-2006 USDA-WUR. New England Wood Utilization Research. Biological Degradation of Manufactured Wood Composites. Jellison. \$87,670.
 - 2002-2005. USDA-WUR Physiological factors contributing to wood biodegradation: biochemical and molecular investigations. J. Jellison \$109,391
 - 2002-2007. McIntire-Stennis Microbial degradation of lignocellulose. Jellison ME09452
 - 2001-2003. USDA-WUR. Metal transport and toxicity in the brown rot fungi. J. Jellison \$92,000.
 - 2000-2003 USDA-NRI. Wood modification by brown rot fungi. J. Jellison and B. Goodell \$176,000.

- 2000-2002 USDA-WUR The production of the enzymes cellobiose dehydrogenase and benzoquinone reductase by wood inhabiting fungi. J. Jellison \$80,100
- USDA-WUR. Detection and characterization of wood biodegradation. J. Jellison. \$106,860.
- 1999-2002. US Forest Service Cooperative Award. Role of Fungi in Biotransformation and Nutrient Cycling in the Forest Ecosystem: Determination of strontium isotope ratios. J. Jellison \$25,000.
- 1999-2002. US Forest Service Cooperative Award. Role of Fungi in Biotransformation and Nutrient Cycling in the Forest Ecosystem. J. Jellison \$12,000.
- 1998-2001. USDA-WURI. Fungal biodegradation and remediation of wood: Physiological studies. J. Jellison. \$108,065.
- 1998-2000. Clariant Corp. Non-enzymatic generation of oxygen radicals - Applications for pulp and paper and bioremediation of wastes. B. Goodell and J. Jellison. \$100,000
- 1997-2002. USFS Cooperative grant. Microbial colonization and cation mobilization in the forest ecosystem. J. Jellison and W. Shortle. \$12,000.
- 1997-1999. USDA-WURI. Wood fiber modification by brown rot fungi. J. Jellison and J. Connolly. \$101,559.
- 1996-1999. USDA-WURI. Wood colonization and biodegradation by white rot fungi and non-decay microorganisms. J. Jellison. \$114,103.
- 1996. Broderna Edlunds Donationfund. Understanding the mechanisms required for function and control of brown-rot decay in wood. G. Daniel, B. Henningson, T. Nilson, B. Goodell, and J. Jellison 112,000 SEK.
- 1995-1998. USDA-WURI. Novel Technology for the Detection of Wood Degrading Fungi. J. Jellison, B. Kropp, and B. Goodell. \$95,245.
- 1995. USDA-WURI. Request for a gas chromatograph/mass spectrometer (GC/MS) for wood science research. B. Goodell, B. Cole, and J. Jellison. \$65,000.
- 1995-1997. USDA-WURI. Degradation of wood by decay fungi: electrochemical analysis of fungal biochelator chemistry and analysis of cellulosic breakdown products. \$95,245.
- 1994-1998. USDA-WURI Biological Degradation of Wood by Brown-Rot Fungi. J. Jellison, F. Fekete, and B. Goodell. \$116,735.
- 1994-1998. USDA-WURI. Oxidative degradation of lignocellulose. B. Goodell, J. Jellison, J. Liu, F. Fekete, A. Paszcynski, M. Bruce, A. Bruce, and B. Mundy. \$108,850.
- 1993-1995 USDA special grants (Improved utilization of northeastern wood species) Wood Microbiology and Biotechnology. J. Jellison. \$65,320.
- 1993-1995. USDA-NRICGP. The Role of Biological Chelators Produced by Fungi in Lignocellulose Degradation. B. Goodell, J. Jellison, and F. Fekete. \$68,940.
- 1993-1999. Maine Agricultural and Forest Experiment Station Microbial Degradation of Lignocellulose. J. Jellison. (approx. \$2500/yr.)
- 1993. Maine Science and Technology Commission - NSF MERITS program. Funding for Student Intern. J. Jellison. \$1,250.
- 1993. Kinki University Foreign Scientist Fund. Collaborative studies - Japan. J. Jellison. \$4,500 in travel expenses.
- 1992-1995. National Science Foundation EPSCoR Program. Wood Sciences and Engineering Research Cluster. B. Goodell, J. Jellison, B. Cole, and H. Dagher. \$1,063,626. (Multi PI grant. \$62,082/yr available to J. Jellison.)
- 1992. DOE Reactor Sharing Program. Neutron Activation Analysis. J. Jellison. \$1,250.
- 1992. S. D. Warren Research. Biological Degradation Studies. J. Jellison. \$21,797.
- 1991. College of Sciences; Maine Agricultural Experiment Station; and Maine Science and Technology Commission Plant and Microbe Biotechnology Seminar Series. J. Jellison. \$2,100.
- 1991. Maine Agricultural Experiment Station. Competitive McIntire-Stennis Program. Non-enzymatic systems involved in microbial degradation of wood. J. Jellison. \$5,000.
- 1991-1993. USDA. Forest Service Cooperative Grant. Microbial colonization and wood ionization. J. Jellison. \$25,000.
- 1991. S.D. Warren Research. Changes in ionic status associated with biological degradation. J. Jellison. \$43,594.
- 1990. National Science Foundation. JUSE Postdoctoral Fellowship Award for Six Month Study in Japan. Biological degradation of cellulose and hemicellulose by brown-rot fungi. J. Jellison. NSF. INT-9020661.

- 1990. USDA. Competitive Grant. Fungal siderophores and their role in wood biodegradation. B. Goodell, J. Jellison, F. Fekete. \$52,100.
- 1990. Bird and Bird Instructional Development. Enrichment materials for the course "Plants and Society." J. Jellison. \$222.
- 1990. Marine Science and Technology Commission (NSF-EPSCOR). Determining the role of fungal siderophores in lignocellulose degradation: Research Excellence Partnership Maine Faculty Enhancement Program. F. Fekete, J. Jellison (Submitted through Colby College). \$5,000.
- 1990. S. D. Warren Research. Electrochemical changes associated with biological degradation. J. Jellison. \$43,000.
- 1989. Canadian American Center. Gas Chromatography/Mass Spectrometry Analysis of Fungal Siderophores. J. Jellison. \$513.
- 1989-1990. Equipment Start-up Funds. Awarded by Vice-President for Research, G. Brown, University of Maine. J. Jellison. \$18,000.
- 1989. NIH Biomedical Research Support Grant Program. Novel iron-chelating compounds of fungal origin and their effect on chronic iron toxicity. J. Jellison. \$1,850.
- 1989. Maine Science and Technology Commission. Forest Products Innovation. Awarded to College of Forest Resources on basis of grant previously submitted by Jellison, Murdoch and Knight. \$25,000.
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ABSTRACTS/PRESENTATIONS/INVITED TALKS:

Over 150 presented in 17 different countries (US, Canada, Austria, China, Korea, Finland, Japan, Sweden, Scotland, The Netherlands, Wales, Chile, Slovenia, Norway, Germany, Latvia, Italy, Malaysia and France)

PRE-PATENT DISCLOSURES:

- Jellison, J., V. Chandhoke, B. Goodell and F. Fekete. 1990. Biological control of microorganisms in wood and soil by siderophores produced by basidiomycetous fungi and/or by modification of transition metal concentrations.
- Jellison, J., F. Fekete, V. Chandhoke and B. Goodell. 1989. Use of biological chelators for biological pulping and biological bleaching of wood pulp chips.
- Jellison, J., V. Chandhoke, and F. Fekete. 1989. Therapeutic use of siderophores isolated from wood decay fungi for iron-chelation in patients.

PATENTS:

- Patent #8,632,744** (Divisional application of patent #8,080,227): Process for producing carbon nanotubes and carbon nanotubes produced thereby filed June 29, 2011, amendment filed Feb. 15, 2013. Awarded: Jan. 21, 2014
- Patent #8,808,227**: Method of producing carbon nanotubes using natural fiber as the starting substrate. Awarded Dec. 20, 2011
- Patent #7,396,974**: Oxidation using a non-enzymatic free radical system mediated by redox cycling chelators. Awarded Feb 1, 2007.
- Patent #6,046,375**: Degradation and protection of organic compounds mediated by low molecular weight chelators. Awarded April 4, 2000.