

William J. Campbell

Associate Dean for Graduate Studies and Research
Associate Professor of Biological Sciences

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Academic and Research Experience

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|----------------|--|
| 2004-present | Interim Director, School of Biological Sciences
Louisiana Tech University, Ruston, LA |
| 2000-present | Associate Dean for Graduate Studies and Research
College of Applied and Natural Sciences
Louisiana Tech University, Ruston, LA. |
| 1999-2000 | Interim Associate Dean for Graduate Studies and Research
College of Applied and Natural Sciences
Louisiana Tech University, Ruston, LA. |
| 1998 - present | Associate Professor,
School of Biological Sciences,
Louisiana Tech University, Ruston, LA. |
| 1992 - 1998 | Assistant Professor,
School of Biological Sciences,
Louisiana Tech University, Ruston, LA. |
| 1990 - 1991 | Plant Physiologist,
Photosynthesis Research Unit,
United States Department of Agriculture,
Agricultural Research Service,
University of Illinois, Urbana, IL |
| 1987 - 1990 | Postdoctoral Research Associate,
Department of Agronomy,
(William L. Ogren's Laboratory)
University of Illinois, Urbana, IL |
| 1981 - 1986 | Graduate Research Assistant/Associate,
Department of Agronomy,
University of Florida, Gainesville, FL |

- 1980 - 1981 Graduate Research Assistant,
Agricultural Engineering Department,
University of Florida, Gainesville, FL
- 1973 - 1979 Laboratory Technologist,
Agricultural Engineering Department,
University of Florida, Gainesville, FL
- 1972 - 1973 Laboratory Technician,
Florida State Division of Health,
Orlando, FL

Education

- Ph.D. (1986) Plant Physiology, University of Florida, Gainesville, FL
Dissertation title: *Effects of Carbon Dioxide on the Physiology and Biochemistry of Photosynthesis in Soybean.*
- M.S. (1979) Agricultural Engineering, University of Florida, Gainesville, FL
- B.A. (1972) Zoology, University of South Florida, Tampa, FL

Awards

Herbert McElveen Endowed Professorship in Applied and Natural Sciences
College of Applied and Natural Sciences
Louisiana Tech University (2006-present)

Weathersby Professorship
College of Life Sciences/Applied and Natural Sciences
Louisiana Tech University (1995-1999, 1999-2000)

Outstanding Researcher Award
College of Applied and Natural Sciences
Louisiana Tech University, 1997

Professional Society Memberships

American Association for the Advancement of Science
American Society of Plant Biologists
Gamma Sigma Delta (Honor Society of Agriculture)
International Society of Photosynthesis Research

Grants Received and Cooperative Activities

"*Pipeline GIS Project*", W. Campbell, PI, Collaboration with M. Camille, University of Louisiana at Monroe, Louisiana Applied Oil Spill Research and Development Program, (2005-6)

"*Development of an Oil Brine Spill Restoration Plan: Preliminary Work (Y2) and Symposium*", M.C. Vavrek, D. Vavrek, W. Colgan III, W.J. Campbell, PI's, Louisiana Applied Oil Spill Research and Development Program, (2004-5).

"Development of an Oil Brine Spill Restoration Plan: Preliminary Work", M.C. Vavrek, H. Hunt, D. Vavrek, W. Colgan III, W.J. Campbell, PI's, (\$13,011.) Louisiana Applied Oil Spill Research and Development Program, (2003-4).

"Nanoscale Biotechnology: Molecules, Methods, Devices, and Applications", Donald Haynie, Yuri Lvov, Michael McShane, John McKillip, David Mills, William J Campbell, PI's (\$1,950,000.) Governor's Biotechnology Initiative, Baton Rouge, LA (2002-2007)

"Molecular-Based Sensors for Early Detection of Plant Stress", William J. Campbell, Milan C. Vavrek, John L. McKillip, PI's (\$21,940.). Center for Entrepreneurship and Information Technology, Louisiana Tech University, (2002-2003).

"Effects of Elevated CO₂ and an Altered Moisture Regime on an Artificial Pine Plantation Ecosystem" Milan C. Vavrek, William J. Campbell, PI'S (\$83,142.). Louisiana Board of Regents Support Fund-Research and Development Program, (2000-2003).

"Revegetation of Oil Brine Spill Sites" Milan C. Vavrek, Wesley Colgan III, William J. Campbell, PI's (\$44,896.) Louisiana Applied Oil Spill Research and Development Program, (2001-2002).

"The Role of Plant-Bacterial-Fungal Interaction in Remediation of Oak-Hickory-Pine Systems" Milan C. Vavrek, Wesley Colgan III, William J. Campbell, PI's (\$51,679.) Louisiana Applied Oil Spill Research and Development Program, (2000-2001).

"Phytoremediation of Petroleum: Identification of plant traits that enhance degradation." Milan C. Vavrek, William J. Campbell, PI's (\$56,015.) Louisiana Applied Oil Spill Research and Development Program, (1999-2000).

"Development of a Germination Index of Sensitivity to Applied Oil (Year 2)". William J. Campbell, Milan C. Vavrek, PI's (\$3,815.) Louisiana Applied Oil Spill Research and Development Program, (1998-1999).

"Incorporation of Applied and Research Skills in Undergraduate Environmental Science Education". Milan C. Vavrek, William J. Campbell, PI'S (\$30,000.). Board of Regents Support Fund-Enhancement Program, (1998-1999).

"Use of Donor Seed Banks in Terrestrial Vegetation Recovery After an Oil Spill". Milan C. Vavrek, William J. Campbell, PI's (\$33,762.) Louisiana Applied Oil Spill Research and Development Program, (1998-1999).

"Development of a Germination Index of Sensitivity to Applied Oil (Year 1)". Milan C. Vavrek, William J. Campbell, PI's (\$33,198.). Louisiana Applied Oil Spill Research and Development Program, (1997-1998).

"Accumulation of Photosynthetic Proteins at Elevated CO₂ Concentrations", William J. Campbell, PI (\$44,982.). U. S. Department of Agriculture, National Research Initiative Competitive Grants Program, (1996-1999)

"Developmental and Genetic Variation of Rubisco Activase Polypeptides", (\$840.) Summer Research Grant Award, Louisiana Tech University, (1998).

"Effects of Environmental Growth Conditions on the Levels of Rubisco Activase Polypeptides in Plants", (\$1,000.) Summer Research Grant Award, Louisiana Tech University, (1996).

"Quantification of Photosynthetic Proteins in Plants Grown at Different Concentrations of CO₂", (\$1,000.) Summer Research Grant Award, Louisiana Tech University, (1995).

"Light Regulation of Rubisco Activity in Leaf Tissue", (\$1,000.) Summer Research Grant Award, Louisiana Tech University, (1992).

"Analysis of a cytoskeleton-associated protein from cotton". (\$1,000.). Cooperative agreement with U.S. Department of Agriculture, Agricultural Research Service, Southern Regional Research Center, New Orleans, LA, (1994-1995).

Publications (excluding abstracts)

Campbell, W.J., Vavrek, M.C., Colgan, W. III (2002) Plant-microbe interactions in remediation of petroleum, *SAAS Bulletin Biochemistry and Biotechnology* 15:1-7

Campbell, W.J. (2002) Photosynthesis, In B. Ness, ed., *Magill's Encyclopedia of Science: Plant Life*, Salem Press, Pasadena, CA, pp 800-804.

Campbell, W.J., Rogers, S.H., Jayaraman, B., McDiarmid, R.E. (2001) Environmental regulation of leaf photosynthetic protein accumulation, *SAAS Bulletin Biochemistry and Biotechnology* 14:49-59

Vavrek, M.C., Colgan, W.III, Campbell, W.J. (2002) Revegetation of oil brine spill sites. Louisiana Applied Oil Spill Research and Development Program, *OSRADP Technical Report Series* 02-012

Vavrek, M.C., Colgan, W. III, Campbell, W.J. (2001) The role of plant-bacteria-fungal interaction in remediation of oak-hickory-pine systems. Louisiana Applied Oil Spill Research and Development Program, *OSRADP Technical Report Series* 01-256

Vavrek, M.C., Campbell, W.J. (2000) Phytoremediation of petroleum: Identification of plant traits that enhance degradation. Louisiana Applied Oil Spill Research and Development Program, *OSRADP Technical Report Series* 00-012

Vavrek, M.C., Campbell, W.J. (1999) Use of donor seed banks in terrestrial vegetation recovery after an oil spill. Louisiana Applied Oil Spill Research and Development Program, *OSRADP Technical Report Series* 99-009

Campbell, W.J., Vavrek, M.C. (1999) Development of a sensitivity index for plant responses to applied oil (Year 2). Louisiana Applied Oil Spill Research and Development Program, *OSRADP Technical Report Series* 99-001

Vavrek, M.C., Campbell, W.J. (1999) Development of a sensitivity index for plant responses to applied oil. Louisiana Applied Oil Spill Research and Development Program, *OSRADP Technical Report Series* 98-011

- Higginbotham L, Campbell WJ, Triplett BA (1996) Assay and quantification of actin in developing cotton fibers. In P. Dugger and D. Richter, eds, *Proceedings Beltwide Cotton Conferences*, National Cotton Council, pp. 1259-1261
- Campbell WJ, Ogren WL (1995) Rubisco activase activity in spinach leaf extracts. *Plant Cell Physiology* 36:215-220
- Holbrook GP, Campbell WJ, Rowland-Bamford A, Bowes G (1994) Intraspecific variation in the light/dark modulation of ribulose 1,5-bisphosphate carboxylase-oxygenase activity in soybean. *Journal of Experimental Botany* 45:1119-1126
- Campbell WJ, Ogren WL (1992) Light activation of rubisco by rubisco activase and thylakoid membranes. *Plant Cell Physiology* 33:751-756
- Campbell WJ, Ogren WL (1990) Electron transport through photosystem I stimulates light activation of ribulose bisphosphate carboxylase/oxygenase by rubisco activase. *Plant Physiology* 94:479-484
- Campbell WJ, Allen LH, Jr, Bowes G (1990) Response of soybean canopy photosynthesis to CO₂ concentration, light, and temperature. *Journal of Experimental Botany* 41:427-433
- Campbell WJ, Ogren WL (1990) A novel role for light in the activation of ribulosebisphosphate carboxylase/oxygenase. *Plant Physiology* 92:110-115
- Campbell WJ, Ogren WL (1990) Glyoxylate inhibition of ribulosebisphosphate carboxylase/oxygenase activation in intact, lysed, and reconstituted chloroplasts. *Photosynthesis Research* 23:257-268
- Allen LH, Jr, Bisbal EC, Campbell WJ, Boote KJ (1990) Carbon dioxide effects on soybean developmental stages and expansive growth. *Soil and Crop Science Society of Florida Proceedings* 49:124-131
- Campbell WJ, Allen LH, Jr, Bowes G (1988) Effects of CO₂ concentration on rubisco activity, amount, and photosynthesis in soybean leaves. *Plant Physiology* 88:1310-1316
- Campbell WJ, Allen LH, Jr, Bowes G (1987) Effects of short-term and long-term exposures to varying CO₂ concentrations on soybean photosynthesis. In J. Biggins, ed, *Progress in Photosynthesis Research*, Vol. 4. Martinus Nijhoff, pp. 253-256
- Holbrook GP, Campbell WJ, Bowes G (1987) Effect of light intensity during growth on the activation state of RuBP carboxylase from leaves in the light and dark. In J. Biggins, ed, *Progress in Photosynthesis Research*, Vol. 3. Martinus Nijhoff, pp. 399-402
- Valle R, Mishoe JM, Campbell WJ, Jones JW, Allen LH, Jr (1985) Photosynthetic responses of 'Bragg' soybean leaves adapted to different CO₂ environments. *Crop Science* 25:333-339

Allen, L.H., Jr., K.J. Boote, J.W. Jones, P.H. Jones, R.R. Valle, E.C. Bisbal, and W.J. Campbell, K.F. Heimborg, S.S. Jagtap. 1985. Response of Vegetation to Carbon Dioxide, 031. Subambient and superambient carbon dioxide effects on growth, nonstructural carbohydrates, biochemistry of photosynthesis, and transpiration of soybeans, 1984 Progress Report. Joint Program of DOE and USDA, University of Florida, Gainesville. 257 pp.

Jones P, Allen LH, Jr, Jones JW, Boote KJ, Campbell WJ (1984) Soybean canopy growth, photosynthesis, and transpiration responses to whole-season carbon dioxide enrichment. *Agronomy Journal* 76:633-637

Allen, L.H., Jr., K.J. Boote, J.W. Jones, J.W. Mishoe, P.H. Jones, C.V. Vu, R.R. Valle, W.J. Campbell, P.R. Harris, and K.F. Heimborg. 1984. Response of Vegetation to Carbon Dioxide, 014. Effects of increased carbon dioxide and water stress on photosynthesis and agricultural productivity, 1983 Progress Report. Joint Program of DOE and USDA, University of Florida, Gainesville. 142 pp.

Allen, L.H., Jr., K.J. Boote, J.W. Jones, J.W. Mishoe, P.H. Jones, R. Valle, C.V. Vu, and W.J. Campbell. 1983. Response of Vegetation to Carbon Dioxide, 007. Effects of increased carbon dioxide on photosynthesis, transpiration, water-use efficiency, and productivity of soybeans, 1982 Progress Report. Joint Program of DOE and USDA, University of Florida, Gainesville. 150 pp.

Allen, L.H., Jr., K.J. Boote, J.W. Jones, J.W. Mishoe, P.H. Jones, R. Valle, C.V. Vu, and W.J. Campbell. 1982. Response of Vegetation to Carbon Dioxide, 003. Effects of increased carbon dioxide on photosynthesis and agricultural productivity of soybeans, 1981 Progress Report. Joint Program of DOE and USDA, University of Florida, Gainesville. 131 pp.