

**William J. Campbell**  
**Associate Dean, College of Applied and Natural Sciences**

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**Academic and Research Positions**

- 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, US Department of Agriculture  
University of Illinois, Urbana, IL
- 1987 - 1990          Postdoctoral Research Associate,  
Department of Agronomy, WL Ogren 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

**Education**

- Ph.D.    Plant Physiology, University of Florida, Gainesville, FL  
Dissertation title: *Effects of Carbon Dioxide on the Physiology and Biochemistry of Photosynthesis in Soybean.*
- M.S.    Agricultural Engineering, University of Florida, Gainesville, FL

B.A. Zoology, University of South Florida, Tampa, FL

### **Recent Professional Service/Synergistic Activities**

CyBERS (Center for Biomedical Engineering and Rehabilitation Sciences)  
Leadership Team, Louisiana Tech University (2008 - present)  
Budget/Facilities Subcommittee, Athletics Council,  
Louisiana Tech University (2006 - present)  
Advisory Panel, Louisiana Applied Oil Spill Research and Development  
Program (2002 - present)  
University Research Council, Louisiana Tech University (1999 – present)  
University Graduate Council, Louisiana Tech University (1997 – present)  
University Graduate Faculty, Louisiana Tech University (1992 – present)

### **Awards and Honors**

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  
International Society of Photosynthesis Research

### **Grants Received and Cooperative Activities**

*CyberFlora Louisiana*, W.J. Campbell, PI subcontract award (\$31,646), National Science  
Foundation, T. Sasek, PI, University of Louisiana-Monroe (2009-2011)

*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 CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub>*, (\$1,000.) Summer Research Grant Award, Louisiana Tech University, (1995).

*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).

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

### **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 CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> 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. Heimburg, 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. Heimburg. 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.

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