Biographical Sketch: Melanie J. Correll

Assistant Professor
Department of Agricultural and Biological Engineering
University of Florida
P.O. Box 110570
Gainesville, FL 32611-0570
Ph: (352) 392-1864 ext. 209; E-mail: correllm@ufl.edu

Education:

Clemson University, B.S., Agricultural and Biological Engineering, 1994
Worcester Polytechnic Institute, Ph.D., Interdisciplinary in Biochemical Engineering/Plant Science, 2001

Appointments:

2004-present Assistant Professor, Agricultural and Biological Engineering Department, Univ. of Florida
2001–2004 Postdoctoral Associate, Department of Botany, Miami Univ.

Publications

Kiss, J.Z., P. Kumar, K.D.L. Millar, R.E. Edelmann, and M.J. Correll. 2009. Operations of a spaceflight experiment to investigate plant tropisms. Adv. Space Res. DOI:10.1016/j.asr.2009.06.007. Online at: http://dx.doi.org/10.1016/j.asr.2009.06.007.

Stimpson, A.J., R.S. Pereira, J.Z. Kiss, and M.J. Correll. 2009. Extraction and labeling methods for microarrays using small amounts of plant tissue. Physiol. Plant. 135(3):229-236.

Kiss, J.Z., P. Kumar, R.N. Bowman, M.K. Steele, M.T. Eodice, M.J. Correll, and R.E. Edelmann. 2007. Biocompatibility studies in preparation for a spaceflight experiment on plant tropisms (TROPI). Adv. Space Res. 39:1154-1160.

Molas, M.L., J.Z Kiss, and M.J. Correll. 2006. Gene profiling the red-light signaling pathways in roots. J. Exp. Bot. 57: 3217-3229.

Correll, M.J. and J.Z. Kiss. 2005. The roles of phytochromes in elongation and gravitropism of roots. Plant Cell Physiol. 46:317-323.

Correll, M.J., R.E. Edelmann, R.P. Hangarter, J.L. Mullen, and J.Z. Kiss. 2005. Ground-based studies of tropisms in hardware developed for the European Modular Cultivation System (EMCS). Adv. Space Res. 36:1203-1210.

Correll, M.J., K.M. Coveney, S.V. Raines, J.L. Mullen, R.P. Hangarter, and J.Z. Kiss. 2003. Phytochromes play a role in phototropism and gravitropism in Arabidopsis roots. Adv. Space Res. 31:2203-2210.

Kiss, J.Z., M.J. Correll, J.L. Mullen, R.P. Hangarter, and R.E. Edelmann. 2003. Root phototropism: how light and gravity interact in shaping plant form. Gravitational and Space Biology Bull.17: 16:55-60.

Kiss, J.Z., J.L. Mullen, M.J. Correll, and R.P. Hangarter. 2003. Phytochromes A and B mediate red-light-induced positive phototropism in roots. Plant Physiol. 131:1411-1417.

Correll, M.J. and J.Z. Kiss. 2002. Interactions between gravitropism and phototropism in plants. J. Plant Growth Reg. 21:89-101.

Correll, M.J., Y. Wu, and P.J. Weathers. 2001. Controlling hyperhydration of carnations (*Dianthus caryophyllus* L.) in a mist reactor. Biotech. Bioeng. 71(4):307-314.

Correll, M.J. and P.J. Weathers. 2001. Effects of light, CO_2, and humidity on carnation growth, hyperhydration, and cuticular wax development in a mist reactor. In Vitro Cell. Dev. Bio.-Plant. 37(3):405-413.
Correll, M.J. and P.J. Weathers. 2001. One step acclimatization of plantlets using a mist reactor. Biotech. Bioeng. 73(3):253-258.
Chatterjee, C., M.J. Correll, P.J. Weathers, B.E. Wyslouzil, and D.B. Walcerz. 1997. A simplified acoustic window bioreactor. Biotech. Tech. 11(3):155-158.
Buer, C.S., M.J. Correll, T.C. Smith, M.J. Towler, P.J. Weathers, M. Nadler, J. Seaman, and D.B. Walcerz. 1996. Development of a low cost nutrient-mist bioreactor with an acoustic window and relevant growth data. In Vitro Cell.Dev. Bio.-Plant. 32:299-304.

Awards and Honors

2007 Appreciation Award for Participation on the TROPI experiment, from European Space Agency and National Aeronautics and Space Administration
2007 Young Research Award, Florida Section of the American Society of Agricultural and Biological Engineers
1990-1994 USDA National Needs Fellowship

Synergistic Activities

(a) Editor, Advances in Space Research Volume 39, Issue 7, 2007, (b) Reviewer for scientific Journals (Advances in Space Research, Journal of Biological Engineering, In Vitro-Plant, HortScience, American Society of Space and Gravitational Biology Bulletin) (c) Mentor for high school students in the Student Science Training Program (2006, 2007), (d) 4-H workshop development and presentation on Space Agriculture (2008), (e) Development of a new undergraduate course and labs entitled “Applications in Biological Engineering” (f) Session chair Congress on Space Research (COSPAR 2008), (g) Publications committee member (Institute of Biological Engineers) (h) Speaker and mentor for the Center for Precollegiate Education on Biological Engineering for recruitment of minorities (i) Science for Life mentor for undergraduate research.

Recent Collaborations: Robert Bowmann (NASA-Ames), Ray Bucklin (Univ. of FL), Khe Chau (Univ. of FL), Joe H. Cho (Univ. of Central FL), Richard Edelmann (Miami Univ.), Mike Eoidice (NASA-Ames), Robert Ferl (Univ. of FL), Bin Gao (Univ. of FL), Maria Gallo (Univ. of Florida), Ruth Grene (Virginia Tech.), Roger P. Hangarter (Indiana Univ.), Jim Jones (Univ. of FL) Jack L. Mullen (Colorado State), M. Lia Molas (Argentin,a Dept. Agriculture), Sudipta Seal (Univ. of Central FL), Marianne Steele (NASA-Ames), C. Eduardo Vallejos (Univ. of FL), Steve Welch (Kansas State University), Jeff White (USDA-ARS, Tempe)

Graduate and Post Doctoral Advisors:

Pamela J. Weathers, Ph.D. Advisor, Worcester Polytechnic Institute, MA and postdoctoral advisor John Z. Kiss, Miami University, OH.

Graduate Students:

Thesis advisor (Chair): Ph.D. Current: Richard Lee, Hemant Gohil; M.S., John Truett, Guillermo Patino. Former: M.S. Yibing Fu. Undergraduates: Current (six); Former (eight).
Thesis advisor (committee): Ph.D. Abbay Koppar, David Palubin.