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Education

M.S.	2007	Information Science	University of Tennessee
M.S.	1993	Botany	University of Georgia
B.S.	1988	Botany	University of Florida

Research Interests/Current Activities

Biology of *Populus*, Bioenergy, biosynthesis, plant-microbe interactions, and ecosystem genomics. Current research focuses on discovery and characterization of genes involved in plant cell wall biosynthesis through bioinformatics, association studies, cisgenics and mapping; elucidating plant-microbe co-expression networks; genomics of CAM (Crassulacean Acid Metabolism) plants; and genomics and adaptation of *Sphagnum*.

Research Experience

2003-present	Technical Staff, Plant Systems Biology Group, Biosciences Division, Oak Ridge National Laboratory, Oak Ridge, TN
2001-2003	R&D Associate, Genomics, Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN
1998-2001	R&D Assistant, Genomics, Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN
1994-1998	Post-Master's Research Assistant, Environmental Sciences Division, Oak Ridge National Laboratory. U.S. Department of Energy Laboratory Cooperative Postgraduate Research Training Program, Oak Ridge, TN

Publications

Geraldes, A; Hannemann, J; Grassa, C; Farzaneh, N; Porth, I; McKown, A; Skyba, O; Li, E; Mike, F; Friedmann, M; Wasteneys, G; Guy, R; El-Kassaby, Y; Mansfield, S; Cronk, Q; Ehltling, J; Douglas, C; DiFazio, SP; Slavov, G; Ranjan, P; Muchero, W; **Gunter**, LE; Wymore, A; Tuskan, GA; Martin, J; Schackwitz, W; Pennacchio, C; Rokhsar, D. A 34K SNP genotyping array for *Populus trichocarpa*: design, application to the study of natural populations and transferability to other *Populus* species (in preparation).

Muchero, W; Sewell, MM; **Gunter**, LE; Tschaplinski, TJ; Yin, TM; DiFazio, SP; Tuskan, GA. Genome anchored QTLs for biomass productivity in Hybrid *Populus*: Heterosis and detection across Contrasting Environments. *NEW PHYTOLOGIST* (in review).

Martin, MZ; **Gunter**, LE; Jawdy, SS; Wullschleger, SD; Wheeler, CS; Jha, A. Genetic improvement, sustainable production and scalable small microenterprise of *Jatropha* as a biodiesel feedstock. *BIOENERGY RESEARCH* (in review).

Karve, AA; Weston, DJ; Jawdy, SS; **Gunter**, LE; Allen1, SM; Yang, XH; Tuskan, GA; Wullschleger, SD. Initial characterization of shade avoidance response suggests functional diversity between *Populus* phytochrome B genes. *NEW PHYTOLOGIST* (accepted)

Slavov GT, DiFazio SP, Martin J, Schackwitz W, Muchero W, Rodgers-Melnick E, Lipphardt MF, Pennacchio CP, Hellsten U, Pennacchio LA, **Gunter** LE, Ranjan P, Vining K, Pomraning KR, Wilhelm LJ, Pellegrini M, Mockler TC, Freitag M, Geraldes A, El Kassaby YA, Mansfield SD, Cronk QCB, Douglas CJ, Strauss SH, Rokhsar D, Tuskan GA. **2012**. Genome resequencing reveals multiscale geographic structure and extensive linkage disequilibrium in the forest tree *Populus trichocarpa*. *New Phytologist* DOI: 10.1111/j.1469-8137.2012.04258.x

- Hsu, CY; Adams, JP; Kim, H; No, K; Ma, C; Strauss, SH; Drnevich, J; Vandervelde, L; Ellis, JD; Rice, BM; Wickett, N; **Gunter**, LE; Tuskan, GA; Brunner, AM; Page, GP; Barakat, A; Carlson, JE; dePamphilis, C; Luthe, DS; Yuceer, C. **2011**. FT Duplication Coordinates Reproductive and Vegetative Growth in Perennial Poplar. PNAS June 28, 2011 vol. 108 no. 26 10756-10761.
- Yang, XH; Li T; Weston, D; Karve, AA; Labbe, JL; **Gunter**, LE; Sukumar P; Borland, A; Chen, JG; Wullschlegler, SD; Tschaplinski, TJ; Tuskan, GA. Innovative Biological Solutions to Challenges in Sustainable Biofuels Production. **2011**. In Biofuel Production-Recent Developments and Prospects, Marco Aurélio dos Santos Bernardes (Ed.), ISBN: 978-953-307-478-8, InTech, Available from: <http://www.intechopen.com/articles/show/title/innovative-biological-solutions-to-challenges-in-sustainable-biofuels-production>
- Weston, DJ; Karve, AA; **Gunter**, LE; Jawdy, SS; Yang XH; Allen, SA; Wullschlegler, SD. **2011**. Comparative physiology and transcriptional networks underlying the heat shock response in *Populus trichocarpa*, *Arabidopsis thaliana* and *Glycine max*. PLANT, CELL AND ENVIRONMENT 34: 1488–1506. doi: 10.1111/j.1365-3040.2011.02347.x
- Yang, XH; Tschaplinski, TJ; Hurst, GB; Jawdy, S; Abraham, PE; Lankford, PK; Adams, RM; Shah, MB; Hettich, RL; Lindquist, E; Kalluri, UC; **Gunter**, LE; Pennacchio, C; Tuskan, GA. **2011**. Discovery and annotation of small proteins using genomics, proteomics, and computational approaches. GENOME RESEARCH 21 (4): 634-641. DOI: 10.1101/gr.109280.110
- Yin, TM; Zhang, XY; **Gunter**, L; Ranjan, P; Sykes, R; Davis, M; Wullschlegler, SD; Tuskan, GA. **2010**. Differential Detection of Genetic Loci Underlying Stem and Root Lignin Content in *Populus*. PLOS ONE 5 (11): art. no.-e14021. DOI: 10.1371/journal.pone.0014021
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- Chang, SJ; Winkeler, K; Collins, C; Thomas, R; Johnson, J; Wood, L; Rottmann, W; **Gunter**, L; Tuskan, J; Hinchee, M. **2009**. *Populus deltoides* Transformation to Identify Genes That Contribute to Recalcitrance in Conversion of Lignocellulosics to Bioethanol. IN VITRO CELLULAR & DEVELOPMENTAL BIOLOGY-ANIMAL 45: S80-S81, Suppl. S.
- Islam-Faridi, MN, CD Nelson, SP DiFazio, L.E. **Gunter**, and G.A. Tuskan. **2009**. Cytogenetic analysis of *Populus trichocarpa*— ribosomal DNA, telomere repeat sequence, and marker-selected BACs. CYTOGENETICS & GENOME RESEARCH 125:74-80 (DOI: 10.1159/000218749)
- Yang, XH., Kalluri U; Yin, TM; Jawdy, SS; **Gunter**, LE; Yin, TM; Tschaplinski, TJ; Weston, DJ; Ranjan, P; Tuskan, GA. **2008**. F-box gene family is expanded in herbaceous annual plants *Arabidopsis* and rice relative to woody perennial plant *Populus*. PLANT PHYSIOLOGY 148 (2):
- Weston, DJ; **Gunter**, LE; Rogers, A; Wullschlegler, SD. **2008**. Connecting Genes, Signaling Networks, and Molecular Signatures to Environmental Stress Phenotypes in Plants BMC SYSTEMS BIOLOGY 2:16. <http://www.biomedcentral.com/1752-0509/2/16>.
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- Yin, TM; DiFazio, S P; **Gunter**, LE; Zhang, XY; Sewell, MM; Woolbright, S; Allan, GJ; Kelleher, CT; Douglas, C J; Tuskan, G A. **2008**. Genome structure and emerging evidence of an incipient sex chromosome in *Populus* GENOME RESEARCH 18: 422-430.
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