

CURRICULUM VITAE

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Education

BA, State University of New York (SUNY), Potsdam, NY (1970)
MS, SUNY, College of Environmental Science & Forestry, Syracuse, NY (1973)
PhD, University of Georgia, Athens, GA (1978)

Professional Appointments

2001- present Research Professor, Biochemistry Dept., University of Missouri
1992-2001 Research Associate Professor, Biochemistry Dept., University of Missouri
1986-1992 Research Assistant Professor, Biochemistry Dept., University of Missouri
1983-1986 Research Associate, Botany Dept., University of Minnesota, St. Paul, MN
1980-1983 NIH Postdoctoral Fellow, lab of Dr. T. Guilfoyle, University of Minnesota
1978-1980 Postdoctoral Fellow, lab of Dr. I. Rubenstein, University of Minnesota

Professional Society Membership

American Society of Plant Biologists
American Society for Biochemistry and Molecular Biology

Publications (last 10 years)

Ulmasov T, Hagen G and Guilfoyle TJ. 1997. ARF1, a transcription factor that binds auxin response elements. *Science* 276: 1865-1868

Xu N, Hagen G and Guilfoyle TJ. 1997. Multiple auxin response modules in the soybean SAUR15A promoter. *Plant Sci.* 126: 193-201

Liu Z-B, Hagen G and Guilfoyle TJ. 1997. A G-box binding protein from soybean binds to the E1 auxin response element in the soybean GH3 promoter and contains a proline-rich repression domain. *Plant Physiol.* 115: 397-407

Ulmasov T, Murfett J, Hagen G and Guilfoyle TJ. 1997. Aux/IAA proteins repress expression of reporter genes containing natural and highly active synthetic auxin response elements. *Plant Cell* 9: 1963-1971

Guilfoyle TJ, Ulmasov T and Hagen G. 1998. The ARF family of transcription factors and their role in plant hormone responsive transcription. *Cell Mol. Life Sci.* 54: 619-627

Guilfoyle TJ, Hagen G, Ulmasov T and Murfett J. 1998. How does auxin turn on genes? *Plant Physiol.* 118: 341-347

Ulmasov T, Hagen G and Guilfoyle TJ. 1999. Activation and repression of transcription by auxin-response factors. *Proc. Natl. Acad. Sci. USA* 96:5844-5849

Larkin RM, Hagen G and Guilfoyle TJ. 1999. Arabidopsis thaliana RNA polymerase II subunits related to yeast and human RPB5. *Gene* 231: 41-47

Guilfoyle TJ and Hagen G. 1999. Potential use of hormone responsive elements to control gene expression in plants. In: *Inducible Gene Expression in Plants* (PHS Reynolds, ed) CABI Publishing, Wallingford-Oxon UK. pp. 219-236

Li Y, Wu YH, Hagen G and Guilfoyle T. 1999. Expression of the auxin-inducible GH3 promoter/GUS fusion gene as a useful molecular marker for auxin physiology. *Plant Cell Physiol.* 40: 675-682

Ulmasov T, Hagen G and Guilfoyle TJ. 1999. Dimerization and DNA binding of auxin response factors. *Plant J* 19: 309-319

Murfett J, Wang X-J, Hagen G and Guilfoyle TJ. 2001. Identification of Arabidopsis histone deacetylase HDA6 mutants that affect transgene expression. *Plant Cell* 13: 1047-1061

Tiwari SB, Wang X-J, Hagen G and Guilfoyle TJ. 2001. Aux/IAA proteins are active repressors and their stability and activity are modulated by auxin. *Plant Cell* 13: 2809-2822

Guilfoyle TJ and Hagen G. 2001. Auxin response factors. *J. Plant Growth Regul.* 20: 281-291

Hagen G and Guilfoyle T. 2002. Auxin-responsive gene expression: genes, promoters and regulatory factors. *Plant Mol. Biol.* 49: 373-385

Tiwari SB, Hagen G and Guilfoyle T. 2003. The roles of auxin response factor domains in auxin-responsive transcription. *Plant Cell* 15: 533-543

Tiwari SB, Hagen G and Guilfoyle T. 2004. Aux/IAA proteins contain a potent transcriptional repression domain. *Plant Cell* 16: 533-543

Hardtke CS, Ckurshumova W, Vidaurre DP, Singh SA, Stamatiou G, Tiwari SB, Hagen G, Guilfoyle TJ, Berleth T. 2004. Overlapping and non-redundant functions of the

Arabidopsis Auxin Response Factors MONOPTEROS and NONPHOTOTROPIC HYPOCOTYL. *Development* 131: 1089-1100

Saito Y, Yamasaki S, Fujii N, Hagen G, Guilfoyle T, Takahashi H. 2004. Isolation of cucumber CsARF cDNAs and expression of the corresponding mRNAs during gravity-regulated morphogenesis of cucumber seedlings. *J Exp Bot* 55: 1315-1323

Hagen G, Guilfoyle TJ and Gray WM 2004. Auxin signal transduction. In: *Plant Hormones*, PJ Davies, ed (Dordrecht: Kluwer Academic Publishers) pp 282-303

Tiwari SB, Wang S, Hagen G and Guilfoyle TJ 2005. Transfection assays with Arabidopsis protoplasts containing integrated reporter genes. In: *Methods in Molecular Biology*, vol. 323: Arabidopsis Protocols, Second Edition (Salinas J, Sanchez-Serrano JJ, eds). Humana Press, Totowa NJ. pp 241-249

Wang S, Tiwari SB, Hagen G and Guilfoyle TJ 2005 AUXIN RESPONSE FACTOR7 restores the expression of auxin-responsive genes in mutant Arabidopsis leaf mesophyll protoplasts. *Plant Cell* 17: 1979-1993

Wilmoth JC, Wang S, Tiwari SB, Joshi AD, Hagen G, Guildoyle TJ, Alonso JM, Ecker JR and Reed JW 2005. NPH4/ARF7 and ARF19 promote leaf expansion and auxin-induced lateral root formation. *Plant J* 43: 118-130

Nagpal P, Ellis CM, Weber H, Ploense S, Barkawi LS, Guilfoyle TJ, Hagen G, Alonso JM, Cohen JD, Farmer EE, Ecker JR, and Reed JW 2005. Auxin response factors ARF6 and ARF8 promote jasmonic acid production and flower maturation. *Development* 132: 4107-4118

Ellis CM, Nagpal P, Young JC, Hagen G, Guilfoyle TJ and Reed JW 2005. AUXIN RESPONSE FACTOR1 and AUXIN RESPONSE FACTOR2 regulate senescence and floral organ abscission in Arabidopsis thaliana. *Development* 132: 4563-4574

Tiwari SB, Wang S, Hagen G, Guilfoyle TJ 2006. Transfection assays with Arabidopsis protoplasts containing integrated reporter genes. In: *Methods in Molecular Biology*, Vol. 323, Arabidopsis Protocols, Second Edition (Salinas J, Sanchez-Serrano JJ eds). Humana Press, Totowa NJ. pp. 241-249

Guilfoyle TJ and Hagen G 2007. Auxin response factors. *Current Opinion in Plant Biology* 10: 1-8

