

DANIEL J. KLIEBENSTEIN

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MAJOR RESEARCH INTEREST

Evolution of plant metabolic defenses against abiotic stress; network genetics, quantitative genetics theory

EDUCATION

Iowa State University	Genetics	B.Sc.	1993
Cornell University	Genetics	Ph.D.	1999

APPOINTMENTS

2007 – present Assist. and Assoc, Dept. of Plant Sciences, UC Davis
1999 – 2001 Research Associate, Max Planck Inst for Chem Ecol., Jena, Germany
1993 – 1999 NIH Training Grant Fellow, Boyce Thompson, Cornell, Ithaca, NY

RECENT PUBLICATIONS MOST CLOSELY RELATED TO THE PROGRAM

1. Kliebenstein, DJ (2009) Quantitative Genomics; analyzing intra-specific variation using global gene expression polymorphisms or eQTLs. *Annual Reviews Plant Biology* **60**(1):93-114.
2. Lankau, RA Kliebenstein, DJ (2009) Competition and herbivory interact to determine the accumulation and fitness consequences of a secondary compound. *Journal of Ecology* **97**(1):78-88.
3. Rowe, HC, Hansen, BG, Halkier, BA, Kliebenstein, DJ (2008) Biochemical networks and epistasis shape the Arabidopsis metabolome. *The Plant Cell* **20**(5):1199-1216.
4. Wentzell, AM, Boeye, I, Zhang, Z-Y, Kliebenstein, DJ (2008) Genetic networks controlling structural outcome of glucosinolate activation across development. *PLoS Genetics* **4**(10):e1000234.
5. Wentzell, AM, Rowe, HC, Hansen, BG, Ticconi, C, Halkier, BA, Kliebenstein, DJ (2007) Linking metabolic QTL with network and cis-eQTL controlling biosynthetic pathways. *PLOS Genetics*. **3**(9):e162.

OTHER RECENT PUBLICATIONS

1. Rowe, HC, Kliebenstein, DJ (2008) Complex genetics control natural variation in *Arabidopsis thaliana* resistance to *Botrytis cinerea*. *Genetics* **180**(4):2237-2250.
2. Hansen, BG, Kerwin, RE, Ober, JA, Lambrix, VM, Mitchell-Olds, T, Gershenzon, J, Halkier, BA, Kliebenstein, DJ (2008) A novel 2-oxoacid dependent dioxygenase involved in the formation of the goiterogenic 2-hydroxybut-3-enyl glucosinolate and generalist insect resistance in *Arabidopsis thaliana*. *Plant Physiology* **148**(4):2096-2108.

3. West, MAL, Kim, K, Kliebenstein, DJ, van Leeuwen, H, Michelmore, RW, Doerge, RW, St. Clair, DA (2007). Global eQTL mapping reveals the complex genetic architecture of transcript level variation in Arabidopsis. *Genetics* **175**(3):1441-50.
4. Kliebenstein, DJ, West, MAL, van Leeuwen, H, Kim, K, Doerge, RW, St. Clair DA (2006) Identification of QTL Controlling Gene Expression Networks Defined A *Priori*. *BMC Bioinformatics* **7**(1):308.
5. Zhang, Z, Ober, JA, Kliebenstein, DJ (2006) The Gene Controlling the Quantitative Trait Locus *EPITHIOSPECIFIER MODIFIER1* Alters Glucosinolate Hydrolysis and Insect Resistance in Arabidopsis. *Plant Cell* **18**(6):1524-36.

SYNERGISTIC ACTIVITIES

NSF Proposal Review Panels	Metabolic Biochemistry	2008-2009
	Plant Genome	2009

COLLABORATORS

Dr. Katherine J. Denby, University of Capetown

Dr. Barbara Halkier, University of Copenhagen

GRADUATE AND POSTDOCTORAL ADVISORS

Dr. Steven Howell; Iowa State University

Dr. Robert L. Last; Cereon, LLC

Dr. Thomas Mitchell-Olds; Max Planck Institute for Chemical Ecology

Dr. Steven Winans; Cornell University

GRADUATE AND POSTDOCTORAL ADVISEES

Dr. Zhiyong Zhang, UC Davis

Adam Wentzell, UC Davis

Heather Rowe, UC Davis