

Curriculum vitae



CONTACT INFORMATION

Name: Dr. Christian Hettenhausen
Address: Key Laboratory of Economic Plants and Biotechnology
Kunming Institute of Botany, Chinese Academy of Sciences
Lanhei Road 132
650201 Kunming
China

Webpage:

Email: hettenhausen@mail.kib.ac.cn

Phone: +86-871-5229552

Fax: +86-871-5238769

EDUCATION

	Ph.D. Plant Molecular Biology and Genetics	Department of Molecular Ecology (Prof. Ian T. Baldwin), Max Planck Institute for Chemical Ecology, Jena, Germany
02.2007- 12.2011	Thesis: MPK4 is a novel MAPK in <i>Nicotiana attenuata</i> 's resistance to herbivore <i>Manduca sexta</i> and pathogen <i>Pseudomonas syringae</i> pv. <i>tomato</i> DC3000	

	Diploma Biochemistry/Molecular Biology	Department of Molecular Ecology (Prof. Ian T. Baldwin), Max Planck Institute for Chemical Ecology, Jena, Germany
10.1997 - 02.2006	Thesis: Characterization of a trypsin protease inhibitor-deficient ecotype of <i>Nicotiana attenuata</i> collected from Arizona.	

WORK EXPERIENCE

Since 04.2012 **Postdoc**, Key Laboratory of Economic Plants and Biotechnology
Kunming Institute of Botany, Chinese Academy of Sciences, Kunming,
China
Research focus:
1) The role of MPK4 in the defense of *Nicotiana attenuata* against
surface-deposited bacterial pathogens.

2) Functional study of the mechanisms underlying soybean resistance to insect herbivores.

06.2002 – 06.2004: **Postdoc**, Department of Molecular Ecology, Max Planck Institute for Chemical Ecology, Jena, Germany

Research focus:

Herbivory-induced systemic responses in *Nicotiana attenuata*.

03.2006 – 12.2006: **Research Assistant**, Department of Molecular Ecology, Max Planck Institute for Chemical Ecology, Jena, Germany

06.2002 – 06.2004: **Student Assistant**, Department of Molecular Ecology, Max Planck Institute for Chemical Ecology, Jena, Germany

PUBLICATIONS (* indicates first author with equal contribution)

Book Chapters

Galis, I., Schuman, M., Gase, K., **Hettenhausen, C.**, Hartl, M., Dinh, T. S., Wu, J.

Bonaventure, G., Baldwin, I. T. (in press). The use of VIGS technology to study plant-herbivore interactions. A. Becker (Ed.), Virus-induced gene silencing: Methods and protocols.

Review Articles

Yang D.H., **Hettenhausen C.**, Baldwin I.T., Wu J. The multifaceted function of BAK1/SERK3: plant immunity to pathogens and responses to insect herbivores. **Plant Signaling & Behavior** (in press).

Research Papers

Yang, D.H. *, **Hettenhausen, C.** *, Baldwin, I.T., Wu, J. (2012). *Nicotiana attenuata* Calcium-Dependent Protein Kinases, CDPK4 and CDPK5, Strongly Downregulate Wound- and Herbivory-Induced Jasmonic Acid Accumulations. **Plant Physiology**.

<http://www.ncbi.nlm.nih.gov/pubmed/22715110>

Hettenhausen, C., Baldwin, I.T., Wu, J (2011). Silencing MPK4 in *Nicotiana attenuata* enhances photosynthesis and seed production but compromises abscisic acid-induced stomatal closure and guard cell-mediated resistance to *Pseudomonas syringae* pv. *tomato* DC3000. **Plant Physiology** **158**, 759-776.

<http://www.ncbi.nlm.nih.gov/pubmed/22147519>

Gilardoni, P. A., **Hettenhausen, C.**, Baldwin, I. T., Bonaventure, G. (2011). The *Nicotiana attenuata* NaLecRK1 gene suppresses the salicylic acid-mediated inhibition of induced defense responses during *Manduca sexta* herbivory. **Plant Cell** **23**, 3512-3532.

<http://www.ncbi.nlm.nih.gov/pubmed/21926334>

Yang, D.H., **Hettenhausen, C.***, Baldwin, I.T., Wu, J*. BAK1 regulates the accumulation of jasmonic acid and the levels of trypsin proteinase inhibitors in *Nicotiana attenuata*'s responses to herbivory. **Journal of Experimental Botany** **62**, 641-52.

<http://www.ncbi.nlm.nih.gov/pubmed/20937731>

Jassbi, A. R., Gase, K., **Hettenhausen, C.**, Schmidt, A., Baldwin, I. T. (2008). Silencing geranylgeranyl diphosphate synthase in *Nicotiana attenuata* dramatically impairs resistance to tobacco hornworm. *Plant Physiology*, 146(3), 974-986. [ITB241]

<http://www.ncbi.nlm.nih.gov/pubmed/17965175>

Wu, J., **Hettenhausen, C.**, Schuman, M.C., and Baldwin, I.T.* (2008). A comparison of two *Nicotiana attenuata* accessions reveals large differences in *Manduca sexta*-induced signaling events. **Plant Physiology** **146**, 927-39.

<http://www.ncbi.nlm.nih.gov/pubmed/18218965>

Wu, J., **Hettenhausen, C.**, Meldau, S., and Baldwin, I.T.* (2007). Herbivory rapidly activates MAPK signaling in attacked and unattacked leaf regions but not between leaves of *Nicotiana attenuata*. **Plant Cell** **19**, 1096-1122.

<http://www.ncbi.nlm.nih.gov/pubmed/17400894>

Wu, J., Kang, J.H., **Hettenhausen, C.**, and Baldwin, I.T.* (2007). Nonsense-mediated mRNA decay (NMD) silences the accumulation of aberrant trypsin proteinase inhibitor mRNA in *Nicotiana attenuata*. **Plant Journal** **51**, 693-706.

<http://www.ncbi.nlm.nih.gov/pubmed/17587303>

Wu, J., **Hettenhausen, C.**, Baldwin, I.T.* (2006). Evolution of proteinase inhibitor defenses in North American allopolyploid species of *Nicotiana*. **Planta** **224**, 750-760.

<http://www.ncbi.nlm.nih.gov/pubmed/16534618>

TALKS

- From wild tobacco to soybean - defense responses help plants to survive. Kunming Institute of Botany, Chinese Academy of Sciences, July 2012
- MPK4 mediates plants' resistance to herbivores and pathogens. 9th IMPRS Symposium, MPI for Chemical Ecology, Dornburg, DE, Feb 2010
- MPK4 and its function in *N. attenuata*. 6th Biannual IMPRS Symposium, MPI for Chemical Ecology, Dornburg, DE, Mar 2007

POSTER PRESENTATIONS

- Yang D.*, **Hettenhausen, C.**, Wu J., Baldwin I.T. Common signaling partner? BAK1 regulates particular BRI1-independent components of *Nicotiana attenuata*'s response to its specialist herbivore *Manduca sexta*. 5th EPSO Conference "Plants for Life", European Plant Science Organisation, Kittila, FI, Sep 2010
- Wu J.*, **Hettenhausen, C.**, Meldau S., Baldwin I.T. MAPKs Regulate Plants' Responses to Herbivory in *Nicotiana attenuata*. Gordon Research Conference - Evolutionary and Ecological Functional Genomics, Tilton, US, Jul 2009
- **Hettenhausen, C.** Lost in a desert? – make sure you brought a MAP kinase! 5th Plant Science Student Conference, Halle (Saale), DE, Jun 2009
- **Hettenhausen, C.** Silencing MPK4 impairs ABA-mediated stomata closure in *Nicotiana attenuata*. ICE Symposium, MPI for Chemical Ecology, Jena, DE, Jun 2009
- **Hettenhausen, C.** Lost in a desert? – make sure you brought a MAP kinase! 8th IMPRS Symposium, MPI for Chemical Ecology, Dornburg, DE, Mar 2009
- **Hettenhausen, C.** MPK4-a Mediator of Herbivore Defense in *N. attenuata*. 7th IMPRS Symposium, MPI for Chemical Ecology, Dornburg, DE, Feb 2008
- Meldau S.*, **Hettenhausen, C.**, Yang D., Wu J., Baldwin I.T. 5: Roles of MAP kinases and a CDPK in regulating defense responses to herbivory in *Nicotiana attenuata*. SAB Meeting 2008, MPI for Chemical Ecology, Jena, DE, Jan 2008

- **Hettenhausen, C.** MPK4 - a Mediator of Herbivore Defense? IMPRS Evaluation Symposium, MPI for Chemical Ecology, Jena, DE, Sep 2007
- **Hettenhausen, C.**, Wu J., Baldwin I.T. Is MPK4 a Mediator of Herbivore Defense in *Nicotiana attenuata*? International Summerschool - Environmental signaling: Arabidopsis as a model, Utrecht University, Faculty of Biology, Phytopathology, Utrecht, NL, Aug 2007
- Jassbi A.R.*, Zamanizadehnajari S., Kessler D., **Hettenhausen, C.**, Gase K., Baldwin I.T. Anti-feeding diterpene glycosides from *Nicotiana attenuata*. 8th Tetrahedron Symposium (50th Anniversary Meeting), Elsevier, Berlin, DE, Jun 2007
- Jassbi A.R.*, Gase K., **Hettenhausen, C.**, Schmidt A., Baldwin I.T. Silencing prenyl transferase genes in *Nicotiana attenuata* to examine the defensive role of terpenoids against *Manduca sexta* attack. 50 Years of the Phytochemical Society of Europe, Phytochemical Society of Europe, Churchill College, Cambridge, GB, Apr 2007
- **Hettenhausen, C.**, Schuman M., Baldwin I.T., Gase K., Jassbi A.R., Wu J. Another one bites the dust: Herbivore-induced defense strategies in *Nicotiana attenuata*. SAB Meeting 2006, MPI for Chemical Ecology, Jena, DE, Oct 2006
- Meldau S.*, **Hettenhausen, C.**, Wu J., Baldwin I.T. MAPK signaling mediates herbivore-specific responses in *Nicotiana attenuata*. SAB Meeting 2006, MPI for Chemical Ecology, Jena, DE, Oct 2006
- Anssour S., **Hettenhausen, C.**, Schuman M. Variation in JA-controlled herbivore defense systems within *Nicotiana*. ICE Symposium, MPI for Chemical Ecology, Jena, DE, Jun 2006

THESES SUPERVISED

06.2010 – 10.2010. Yvonn Stampnik, bachelor thesis: Silencing BAK1 in *Nicotiana attenuata* impairs the upregulation of herbivory-induced Jasmonic Acid and its conjugate Jasmonic Acid - Isoleucine

08.2010 – 03.2011. Astemir Ozarev, Marcus Spörlein und Felix Zirnsack, seminar paper: Die Organisation des Abwehrsystems der wilden Tabakpflanze gegen natürliche Fraßfeinde

10 chapter books that are perfect to read aloud to children ages 4 to 6 years old. The book list includes a mix of classic and contemporary titles to share.Â Wholesome Middle Grade Chapter Books for Girls Ages 9 - 12. From reader requests, I've made a wholesome middle grade chapter book list for girls ages 9 - 12 with nice (not catty or mean) female main characters you'd want to be friends with your own kids. A chapter book or chapterbook is a story book intended for intermediate readers, generally age 7â€“10. Unlike picture books for beginning readers, a chapter book tells the story primarily through prose, rather than pictures. Unlike books for advanced readers, chapter books contain plentiful illustrations. The name refers to the fact that the stories are usually divided into short chapters, which provide readers with opportunities to stop and resume reading if their attention spans are not long enough to This chapter explores whether, when, and how more inclusive framings might enable more socially relevant and impactful research, and lead to more effective action. Discussion begins by establishing what a frame is and then de ning what is meant by an â€œinclusive frameâ€ for interdisciplinary research on environmental problems.Â The Wetland book I: structure and function, management and methods. Dordrecht, Netherlands: Springer. pp.1243-1250. Keywords.