

Publications

- Heidel-Fischer HM, Kirsch R, Reichelt M, Ahn SJ, Wielsch N, Baxter SW, Heckel DG, Vogel H, Kroymann J (2019) An insect counteradaptation against host plant defenses evolved through concerted neofunctionalization. *Mol Biol Evol*,
- Okamura Y, Sato A, Tsuzuki N, Murakami M, Heidel-Fischer H, Vogel H (2019) Molecular signatures of selection associated with host plant differences in Pieris butterflies. *Mol Ecol* 28(22), 4958-4970.
- Okamura Y, Sato A, Tsuzuki N, Sawada Y, Hirai MY, Heidel-Fischer H, Reichelt M, Murakami M, Vogel H (2019) Differential regulation of host plant adaptive genes in pieris butterflies exposed to a range of glucosinolate profiles in their host plants. *Sci Rep* 9(1), 7256.
- Barthel A, Vogel H, Pauchet Y, Pauls G, Kunert G, Groot AT, Boland W, Heckel DG, Heidel-Fischer HM (2016) Immune modulation enables a specialist insect to benefit from antibacterial withanolides in its host plant. *Nat Commun* 7, 12530.
- Kanost MR, Arrese EL, Cao X, Chen YR, Chellapilla S, Goldsmith MR, Grosse-Wilde E, Heckel DG, Herndon N, Jiang H, Papanicolaou A, Qu J, Soulages JL, Vogel H, Walters J, Waterhouse RM, Ahn SJ, Almeida FC, An C, Aqrawi P, Bretschneider A, Bryant WB, Bucks S, Chao H, Chevignon G, Christen JM, Clarke DF, Dittmer NT, Ferguson LC, Garavelou S, Gordon KH, Gunaratna RT, Han Y, Hauser F, He Y, Heidel-Fischer H, Hirsh A, Hu Y, Jiang H, Kalra D, Klinner C, König C, Kovar C, Kroll AR, Kuwar SS, Lee SL, Lehman R, Li K, Li Z, Liang H, Lovelace S, Lu Z, Mansfield JH, McCulloch KJ, Mathew T, Morton B, Muzny DM, Neunemann D, Ongeri F, Pauchet Y, Pu LL, Pyrousis I, Rao XJ, Redding A, Roesel C, Sanchez-Gracia A, Schaack S, Shukla A, Tetreau G, Wang Y, Xiong GH, Traut W, Walsh TK, Worley KC, Wu D, Wu W, Wu YQ, Zhang X, Zou Z, Zucker H, Briscoe AD, Burmester T, Clem RJ, Feyereisen R, Grimmelikhuijen CJ, Hamodrakas SJ, Hansson BS, Huguet E, Jermiin LS, Lan Q, Lehman HK, Lorenzen M, Merzendorfer H, Michalopoulos I, Morton DB, Muthukrishnan S, Oakeshott JG, Palmer W, Park Y, Passarelli AL, Rozas J, Schwartz LM, Smith W, Southgate A, Vilcinskas A, Vogt R, Wang P, Werren J, Yu XQ, Zhou JJ, Brown SJ, Scherer SE, Richards S, Blissard GW (2016) Multifaceted biological insights from a draft genome sequence of the tobacco hornworm moth, *Manduca sexta*. *Insect Biochem Mol Biol* 76, 118-147.
- Krempl C, Heidel-Fischer HM, Jiménez-Alemán GH, Reichelt M, Menezes RC, Boland W, Vogel H, Heckel DG, Joußen N (2016) Gossypol toxicity and detoxification in *Helicoverpa armigera* and *Heliothis virescens*. *Insect Biochem Mol Biol* 78, 69-77.
- Krempl C, Sporer T, Reichelt M, Ahn SJ, Heidel-Fischer H, Vogel H, Heckel DG, Joußen N (2016) Potential detoxification of gossypol by UDP-glycosyltransferases in the two Heliothine moth species *Helicoverpa armigera* and *Heliothis virescens*. *Insect Biochem Mol Biol* 71, 49-57.
- Edger PP, Heidel-Fischer HM, Bekaert M, Rota J, Glöckner G, Platts AE, Heckel DG, Der JP, Wafula EK, Tang M, Hofberger JA, Smithson A, Hall JC, Blanchette M, Bureau TE, Wright SI, dePamphilis CW, Eric Schranz M, Barker MS, Conant GC, Wahlberg N, Vogel H, Pires JC, Wheat CW (2015) The butterfly plant arms-race escalated by gene and genome duplications. *Proc Natl Acad Sci U S A* 112(27), 8362-8366.
- Heidel-Fischer HM, Vogel H (2015) Molecular mechanisms of insect adaptation to plant secondary compounds *Current Opinions in Insect Science*,

Köpke D, Schröder R, Fischer HM, Gershenzon J, Hilker M, Schmidt A (2015) Erratum to: Does egg deposition by herbivorous pine sawflies affect transcription of sesquiterpene synthases in pine? *Planta* 241(6), 1561.

Heidel-Fischer HM, Musser R, Vogel H (2014) Plant transcriptomic responses to herbivory In: Annual Plant Reviews; Plant Insect Interactions Wiley.

Heidel-Fischer HM, Vogel H, Heckel DG, Wheat CW (2010) Microevolutionary dynamics of a macroevolutionary key innovation in a Lepidopteran herbivore. *BMC Evol Biol* 10, 60.

Heidel-Fischer HM, Freitak D, Janz N, Söderlind L, Vogel H, Nylin S (2009) Phylogenetic relatedness and host plant growth form influence gene expression of the polyphagous comma butterfly (*Polymania c-album*). *BMC Genomics* 10, 506.

Pauchet Y, Freitak D, Heidel-Fischer HM, Heckel DG, Vogel H (2009) Immunity or digestion: glucanase activity in a glucan-binding protein family from Lepidoptera. *J Biol Chem* 284(4), 2214-2224.

Fischer HM, Wheat CW, Heckel DG, Vogel H (2008) Evolutionary origins of a novel host plant detoxification gene in butterflies. *Mol Biol Evol* 25(5), 809-820.

*equal contribution #corresponding author