Publications in refereed journals

2020

194. Kapranas A., I. Sbaiti, T. Degen & T.C.J. Turlings (2020). Biological control of cabbage fly *Delia radicum* with entomopathogenic nematodes: selecting the most effective nematode species and testing a novel application method. ***Biological Control*** 144: 104212

193. Bruno P., R.A.R. Machado, G. Glauser, A. Köhler, R. Campos-Herrera, J. Bernal, S. Toepfer, M. Erb, C.A.M. Robert, C.C.M. Arce and T.C.J. Turlings (2020). Entomopathogenic nematodes from Mexico that can overcome the resistance mechanisms of the western corn rootworm. ***Scientific Reports*** (*in press*).

192. De Lange, E., D. Laplange, H. Guo, W. Xu, M. Vlimant, M. Erb, J. Ton, and T.C.J. Turlings (2020). *Spodoptera frugiperda* caterpillars suppress herbivore-induced volatile emissions in maize. ***Journal of Chemical Ecology*** (*online: doi: 10.1007/s10886-020-01153-x*)

191. Jaffuel, G., I. Sbaiti, and T.C.J. Turlings (2020). Encapsulated entomopathogenic nematodes can protect maize plants from *Diabrotica balteata* larvae. ***Insects*** 11(1): 27; *https://doi.org/10.3390/insects11010027*

190. Xu H., G. Zhou, S. Dötterl, I. Schäffler, M. von Arx, G. Roeder, T. Degen, L. Chen, and T.C.J. Turlings (2020). Distinct roles of cuticular aldehydes as pheromonal cues in two *Cotesia* parasitoids. ***Journal of Chemical Ecology*** 46:128-137

2019

189. Xu H., G. Zhou, S. Dötterl, I. Schäffler, M. von Arx, G. Roeder, T. Degen, L. Chen, and T.C.J. Turlings (2019). The combined use of an attractive and repellent sex pheromone by a gregarious parasitoid. ***Journal of Chemical Ecology*** 45: 559-569

188. Abdala-Roberts L., T. Quijano-Medina, X. Moreira, V. Parra-Tabla, J. Berny-Mier y Teran, Grandi, G. Glauser, T.C.J. Turlings, and B. Benrey (2019). Bottom-up effects of plant defenses and climate on geographic variation in insect herbivory on wild cotton (*Gossypium hirsutum*). ***American Journal of Botany*** 106:1059-1067

187. Zhang P.-J., J.-N. Wei, C. Zhao, Y.-F. Zhang, C.-Y. Li, S.-S. Liu, M. Dicke, X.-P. Yu, and T.C. J. Turlings (2019). Airborne host-plant manipulation by whiteflies via an inducible blend of plant volatiles. ***Proc. Natl. Acad. Science USA*** 116: 7387-7396

186. Imperiali N., G. Jaffuel, K. Shelby, R. Campos-Herrera, R. Geisert, M. Maurhofer, J. Loper, C. Keel, T.C.J Turlings, and B.E. Hibbard (2019). Protecting maize from rootworm damage with the combined application of arbuscular mycorrhizal fungi, *Pseudomonas* bacteria and entomopathogenic nematodes. ***Scientific Reports*** 9, 3127

185. Abdala-Roberts L., B. Pérez Niño, X. Moreira, V. Parra-Tabla, L. Grandi, G. Glauser, B. Benrey, and T.C. J. Turlings (2019). Effects of early-season insect herbivory on subsequent pathogen infection and ant abundance on wild cotton (*Gossypium hirsutum*). ***Journal of Ecology*** 107: 1518-1529

184. Jaffuel G., V. Půža, A.-S. Hug, R. G. Meuli, J. Nermuť, T.C.J. Turlings, G. A. Desurmont, and R. Campos-Herrera (2019). Molecular detection and quantification of slug parasitic nematodes from the soil and their hosts. ***Journal of invertebrate pathology*** 160: 18-25

183. Gasmi L., M.Martínez-Solís, A. Frattini, M. Ye, M.C. Collado, T.C.J. Turlings, M. Erb, and S. Herrero (2019). Can herbivore-induced volatiles protect plants by increasing the herbivores' susceptibility to natural pathogens? ***Applied and Environmental Microbiology*** (*online: DOI: 10.1128/AEM.01468-18*)

182. Machado R.A.R., P. Bruno, C.C.M. Arce, N. Liechti, A. Köhler, J. Bernal, R. Bruggmann, and T.C.J. Turlings (2019). *Photorhabdus khanii* subsp. guanajuatensis subsp. nov., isolated from *Heterorhabditis atacamensis,*

and *Photorhabdus luminescens subsp. mexicana* subsp. nov., isolated from *Heterorhabditis mexicana entomopathogenic nematodes*. ***International Journal of Systematic and Evolutionary Microbiology*** (*online: doi: 10.1099/ijsem.0.003154*)

2018

181. Girod, P., O. Lierhmann, T. Urvois, T.C.J. Turlings, M. Kenis, and T. Haye (2018). Host specificity of Asian parasitoids for potential classical biological control of *Drosophila suzukii*. ***Journal of Pest Science*** 91: 1241-1250

180. De Lange, E.S. K. Farnier, T. Degen, B. Gaudillat, R. Aguilar-Romero, F. Bahena-Juárez, K. Oyama and T.C.J. Turlings (2018). Parasitic wasps can reduce mortality of teosinte plants infested with fall armyworm: support for a defensive function of herbivore-induced plant volatiles. ***Frontiers in Ecology and Evolution***-Chemical Ecology 6: 55

179. Ye, M., N. Veyrat, H. Xu, T.C.J. Turlings and M. Erb (2018). An herbivore-induced plant volatile reduces parasitoid attraction by changing the smell of caterpillars. ***Science Advances*** 4: eaar4767

178. Jaffuel, G., R. Blanco-Pérez, A.-S. Hug, X. Chiriboga, R.G. Meuli, F. Mascher, T.C.J. Turlings and R. Campos-Herrera (2018). The evaluation of entomopathogenic nematode soil food web assemblages across Switzerland reveals major differences among agricultural, grassland and forest ecosystems. ***Agriculture, Ecosystems & Environment*** 262: 48-57.

177. Girod, P., L. Rossignaud, T. Haye, T.C.J. Turlings and M. Kenis (2018). Development of Asian parasitoids in larvae of *D. suzukii* feeding on blueberry and artificial diet. ***Journal of Applied Entomology*** 142: 483-494

176. Turlings, T.C.J. and M. Erb (2018). Tritrophic interactions mediated by herbivore-induced plant volatiles: mechanisms, ecological relevance, and application potential. ***Annual Review of Entomology*** 63: 433-452

175. Xu H. and T.C.J. Turlings (2018). Plant volatiles as mate-finding cues for insects. ***Trends in Plant Science*** 23: 100–111

174. Jaffuel, G., L. Chappuis, D. Guillarme, T.C.J. Turlings, and G. Glauser (2018). Improved separation by at-column dilution in preparative hydrophilic interaction chromatography. ***Journal of Chromatography A*** 1532: 136-143

173. Sobhy, I.S., T.J.A. Bruce, and T.C.J. Turlings (2018). Priming of cowpea volatile emissions with defense inducers enhances the plant's attractiveness to parasitoids when attacked by caterpillars. ***Biocontrol Science & Technology*** 74: 966-977

172. Chiriboga M., X., H. Guo, R. Campos-Herrera, G. Röder, N. Imperiali, C. Keel, M. Maurhofer, T.C.J. Turlings (2018). Root-colonizing bacteria enhance the levels of (*E*)-β-caryophyllene produced by maize roots in response to rootworm feeding**.** ***Oecologia*** 187: 459-468

171. Desurmont, G.A., A. Guiguet and T.C.J. Turlings (2018). Invasive insect herbivores as disrupters of chemically-mediated tritrophic interactions: effects of herbivore density and parasitoid learning. ***Biological Invasions*** 20: 195-206

170. Carrasco, D., G. Desurmont, D. Laplanche, M. Proffit, R. Gols, P. Becher, M. Larsson, T.C.J. Turlings and P. Anderson (2018). With or without you: effects of the concurrent range expansion of an herbivore and its natural enemy on native species interactions. ***Global Change Biology*** 24: 631-643

169. Gaillard M.D.P., G. Glauser, C.A.M. Robert and T.C.J. Turlings (2018). Fine-tuning the 'plant domestication-reduced defense' hypothesis: specialist vs generalist herbivores. ***New Phytologist*** 217: 355-366

2017

168. Imperiali N., X. Chiriboga, K. Schlaeppi, M. Fesselet, D. Villacrés, G. Jaffuel, S. F. Bender, F. Dennert, R. Blanco-Pérez, M.G.A. van der Heijden, M. Maurhofer, F. Mascher, T.C.J. Turlings, C. Keel and R. Campos-Herrera (2017). Combined field inoculations of *Pseudomonas* bacteria, arbuscular mycorrhizal fungi and entomopathogenic nematodes and their effects on wheat performance. ***Frontiers in Plant Science*** 8: 1809

167. Canestrari, D., D. Bolopo, T.C.J. Turlings, G. Röder, J.M. Marcos and V. Baglione (2017). Formal comment to Soler et al.: Great spotted cuckoo nestlings have no antipredatory effect on magpie or carrion crow host nests in southern Spain. ***Plos ONE*** 12: e0184446.

166. Desurmont G. A., A. Köhler, D. Maag, D. Laplanche, H. Xu, J. Baumann, C. Demairé, D. Devenoges, M. Glavan, L. Mann and T.C.J. Turlings (2017). The spitting image of plant defenses: effects of plant secondary chemistry on the efficiency of caterpillar regurgitant as an anti-predator defense. ***Ecology and Evolution*** 7: 6304-6313

165. Jaffuel G., R. Blanco-Pérez, L. Büchi, P. Mäder, A. Fliessbach, R. Charles, T. Degen, T.C.J. Turlings and R. Campos-Herrera (2017). Effects of cover crops on the overwintering success of entomopathogenic nematodes and their antagonists. ***Applied Soil Ecology*** 114: 62-73

164. Brütsch, T., G. Jaffuel, A. Vallat, T.C.J. Turlings and M. Chapuisat (2017). Wood ants produce a potent antimicrobial agent by applying formic acid on tree-collected resin. ***Ecology and Evolution*** 7: 2249-2254

163. Chiriboga M., X., R. Campos-Herrera, G. Jaffuel, G. Röder and T.C.J. Turlings (2017). Diffusion of the maize root signal (*E*)-β-caryophyllene in soils of different textures and the effects on the migration of the entomopathogenic nematode *Heterorhabditis megidis*. ***Rhizosphere*** 3: 53–59

162. Xu, H., D. Gaylord. T. Degen, G. Zhou, D. Laplanche, L. Henryk and T.C.J. Turlings (2017). Combined use of herbivore-induced plant volatiles and sex pheromones for mate location in braconid parasitoids. ***Plant, Cell & Environment*** 3: 330-339

161. Röder, G., M. Mota and T. C. J. Turlings (2017). Host plant location by chemotaxis in an aquatic beetle. ***Aquatic Sciences*** 79: 309-318

2016

160. Maag, D., A. Köhler, C.A.M. Robert, M. Frey, J.-L. Wolfender, T.C.J. Turlings, G. Glauser and M. Erb. (2016). Highly localised and persistent induction of Bx1-dependent herbivore resistance factors in maize. ***The Plant Journal*** 88: 976–991

159. Jaffuel, G., P. Mäder, Ru. Blanco-Perez, X. Chiriboga, A. Fliessbach, T.J.C. Turlings and R. Campos-Herrera (2016). Prevalence and activity of entomopathogenic nematodes and their antagonists in soils that are subject to different agricultural practices. ***Agriculture, Ecosystems & Environment*** 230: 329–340

158. Rasmann, S. and T.C.J. Turlings (2016). Root signals that mediate mutualistic interactions in the rhizosphere. ***Current Opinion in Plant Biology*** 32: 62–68

157. Ardanuy, A., R. Albajes and T.C.J. Turlings (2016). Innate and learned prey-searching behavior in a generalist predator. ***Journal of Chemical Ecology*** 42(6): 497-507

156. Desurmont, G.A., H. Xu and T.C.J. Turlings (2016). Powdery mildew suppresses herbivore-induced plant volatiles and interferes with parasitoid attraction in *Brassica rapa*. ***Plant, Cell & Environment*** 39: 1920-1927

155. Desurmont, G.A., M.A. Zemanova and T.C.J. Turlings (2016). The gastropod menace: Slugs on Brassica plants affect caterpillar survival through consumption and interference with parasitoid attraction. ***Journal of Chemical Ecology*** 3: 183-192

154. Liu, X.-F., H.-H. Chen, J.-K. Li, R. Zhang, T.C.J. Turlings and L. Chen (2016). Volatiles released by Chinese liquorice roots mediate host location behavior by neonate *Porphyrophora sophorae* (Hemiptera: Margarodidae). ***Pest Management Science*** 72(10): 1959-1964

153. Veyrat, N., C.A.M. Robert, H. Xu, M. Frey, J. Ton, T.C.J. Turlings and M. Erb (2016). Herbivore intoxication as a potential primary function of an inducible volatile plant signal. ***Journal of Ecology*** 104 (2): 591-600

152. de Lange, E. S., K. Farnier, B. Gaudillat and T.C.J. Turlings (2016). Comparing the attraction of two parasitoids to herbivore-induced volatiles of maize and its wild ancestors, the teosintes. ***Chemoecology*** 26 (1): 33-44

2015

151. Erb, M., G. Marti, C. Robert, J. Lu, G.R. Doyen, N. Villard, Y. Barrière, B. W. French, J.-L. Wolfender and T.C.J. Turlings (2015). A physiological and behavioral mechanism for leaf-herbivore induced systemic root resistance. ***Plant Physiology*** 69(4): 2884-2894

150. Benrey, B., T. Degen and T.C.J Turlings (2015). Special Issue: 15th International Symposium on Insect-Plant Relationships Preface. ***Entomologia Experimentalis et Applicata*** 157(1): 1-1

149. Campos-Herrera, R., V. Půža, G. Jaffuel, R. Blanco-Pérez, R. Čepulytė-Rakauskienė and T.C.J. Turlings (2015). Unraveling the intraguild competition between *Oscheius* spp. and entomopathogenic nematodes: implications for their natural distribution in Swiss tillage soils. ***Journal of Invertebrate Pathology*** 132: 216–227

148. Maag, D., M. Erb, J. S. Bernal, J.-L. Wolfender, T.C.J. Turlings and G. Glauser (2015). Maize domestication and anti-herbivore defences: leaf-specific dynamics during early ontogeny of maize and its wild ancestors. ***Plos One*** 10 (8) DOI: 10.1371/journal.pone.0135722

147. Pineda, A., R. Soler, M. J. Pozo, S. Rasmann and T.C.J. Turlings (2015). Above-belowground interactions involving plants, microbes and insects. ***Frontiers in Plant Science*** http://dx.doi.org/10.3389/fpls.2015.00318

146. Klauser D., G. Desurmont, G. Glauser, A. Vallat, P. Flury, T. Boller, T.C.J. Turlings and S. Bartels (2015). The Arabidopsis AtPep-PEPR danger detection system is induced by *Spodoptera littoralis* oral secretions to mediate defense responses against herbivores. ***Journal of Experimental Botany*** 66: 5327-36

145. Jaffuel G., I. Hiltpold and T.C.J. Turlings (2015). Highly potent extracts from pea (*Pisum sativum*) and maize (*Zea mays*) roots can be used to induce quiescence in entomopathogenic nematodes. ***Journal of Chemical Ecology*** 41 : 793-800

144. Amorós-Jiménez, R., C.A.M. Robert, M.Á. Marcos-García, A. Fereres and T.C.J. Turlings (2015). A differential role of volatiles from conspecific and heterospecific competitors in the selection of oviposition sites by the aphidophagous hoverfly *Sphaerophoria rueppellii*. ***Journal of Chemical Ecology*** 41(5):493-500

143. Desurmont G.A., D. Laplanche, F.P. Schiestl and Turlings T.C.J. (2015). Floral volatiles interfere with plant attraction of parasitoids: ontogeny-dependent infochemical dynamics in *Brassica rapa*. ***BMC Ecology*** 15:17 DOI 10.1186/s12898-015-0047-7

142. Campos-Herrera R., G. Jaffuel, X. Chiriboga, R. Blanco-Pérez, M. Fesselet, V. Půža, F. Mascher and T. C. J. Turlings (2015). Traditional and molecular detection methods reveal intense interguild competition and other multitrophic interactions associated with native entomopathogenic nematodes in Swiss tillage soils. ***Plant & Soil*** 389: 237-255

141. Erb M., N. Veyrat, C.A.M. Robert, H. Xu, M. Frey, J. Ton and T.C.J. Turlings (2015). Indole is an essential herbivore-induced volatile priming signal in maize. ***Nature Communications*** 6: 6273

140. Kim J.W., G. Jaffuel, and T.C.J. Turlings (2015). Enhanced alginate capsule properties as a formulation of entomopathogenic nematodes. ***Biocontrol*** 60: 527-535

139. Hiltpold I., G. Jaffuel, T.C.J. Turlings (2015). The dual effects of root cap exudates on nematodes: from quiescence in plant-parasitic nematodes to frenzy in entomopathogenic nematode. ***Journal of Experimental Botany*** 66: 603-11

138. Sobhy I.S., M. Erb and T.C.J. Turlings (2015). Plant strengtheners enhance parasitoid attraction to herbivore-damaged cotton via qualitative and quantitative changes in induced volatiles. ***Pest Management Science*** 71 : 686-693

137. Köhler A., D. Maag, N. Veyrat, G. Glauser, J.-L. Wolfender, T. C. J. Turlings, M. Erb (2015). Within-plant distribution of 1,4-benzoxazin-3-ones contributes to herbivore niche differentiation in maize. ***Plant, Cell and Environment*** 38:1081-93

136. Chabaane Y., D. Laplanche, T. C. J. Turlings and G. A. Desurmont (2015). Impact of exotic insect herbivores on native tritrophic interactions: a case study of the African cotton leafworm, *Spodoptera littoralis*. ***Journal of Ecology*** 103: 109-117

2014

135. de Lange E., D. Balmer, B. Mauch-Mani, T.C.J. Turlings (2014). Insect and pathogen resistance in cultivated maize and its wild ancestor, teosinte. ***New Phytologist*** 204: 329-341 (Review)

134. Xu H., N. Veyrat, T. Degen, T.C.J. Turlings (2014). Exceptional use of sex pheromones in parasitoids of the genus *Cotesia*: males are strongly attracted to virgin females, but are no longer attracted to or even repelled by mated females. ***Insects*** 5: 499-512

133. Röder, G. D, D. Canestrari, D. Bolopo, J.M. Marcos, N. Villard, V. Baglione, and T.C.J. Turlings (2014). Chicks of the great spotted cuckoo may turn brood parasitism into mutualism by producing a foul-smelling secretion that repels predators. ***Journal of Chemical Ecology*** 40: 320-324

132. Loreto F., M. Dicke, J.-P. Schnitzler, T.C.J. Turlings (2014). Plant volatiles and the environment: a preface. ***Plant, Cell and Environment*** 37:1905-1908

131. Desurmont G.A., J. Harvey, N.M. van Dam, S. Cristescu, F.P. Schiestl, S. Cozzolino, P. Anderson, M.C. Larsson, P. Kindlmann, H. Danner, and T.C.J. Turlings (2014). Alien interference: Disruption of infochemical networks by invasive insect herbivores. ***Plant, Cell and Environment*** 37: 1854-1865

130. Robert C.A.M., R.A. Ferrieri, S. Schirmer, B.A. Babst, M.J. Schueller, R.A.R. Machado, C.C.M. Arce, B.E. Hibbard, J. Gershenzon, T.C.J. Turlings and M. Erb (2014). Induced carbon reallocation and compensatory growth as root herbivore tolerance mechanisms. ***Plant, Cell and Environment*** 11: 2613-2622

129. Maag D., C. Dalvit, D. Thevenet, A. Köhler, F.C. Wouters, D.G. Vassão, J. Gershenzon, J.-L. Wolfender, T.C.J. Turlings, M. Erb, and G. Glauser (2014). 3-*β*-D-glucopyranosyl-6-methoxy-2-benzoxazolinone (MBOA-*N*-Glc) is an insect detoxification product of maize 1,4-benzoxazin-3-ones. ***Phytochemistry*** 102 : 97–105

128. Turlings T.C.J. (2014). From applied entomology to evolutionary ecology and back (Essay for the 40th anniversary issue). ***Journal of Chemical Ecology*** 40: 224

127. Canestrari D., D. Bolopo, T.C.J. Turlings, G. Röder, J.M. Marcos and V. Baglione (2014). From parasitism to mutualism: unexpected interactions between a cuckoo and its host. ***Science*** 343: 1350-1352

126. Sobhy, I.S., M. Erb, Y. Lou and T. C. J. Turlings (2014). The prospect of applying chemical elicitors and plant strengtheners to enhance the biological control of crop pests. ***Philosophical Transactions B*** 369: 1471-2970 (review)

125. D'Alessandro, M., M. Erb, J. Ton, A. Brandenburg, D. Karlen, J. Zopfi T.C.J. Turlings (2014). Volatiles produced by soil-borne endophytic bacteria increase plant pathogen resistance and affect tritrophic interactions. ***Plant, Cell and Environment*** 37: 813-826

2013

124. Zhang, P.-J., C.-X. Xu, Y.-B. Lu, J.-M. Zhang, Y.-Q. Liu, A. David, W. Boland and T.C.J. Turlings (2013). Phloem-

feeding whiteflies can fool their host plants, but not their parasitoids. ***Functional Ecology*** 27, 1304–1312

123. von Mérey, G.E., N. Veyrat, M. D'Alessandro and T.C.J. Turlings (2013). Herbivore-induced maize leaf volatiles affect attraction and feeding behaviour of *Spodoptera littoralis* caterpillars. ***Frontiers in plant-microbe interactions*** 4: 209

122. Robert C.A.M., M. Erb, I. Hiltpold, B. Hibbard, M. Gaillard, J. Bilat, J. Degenhardt, X. Cambet-Petit-Jean, T.C.J. Turlings and C. Zwahlen (2013). Genetically engineered maize plants reveal distinct costs and benefits of constitutive volatile emissions in the field. ***Plant Biotechnology Journal*** 11(5): 628-39

121. Huffaker, A., G. Pearce, N. Veyrat, M. Erb, T. C. J. Turlings, M. M. Vaughan, P.E.A. Teal, H.T. Alborn, E.A. Schmelz (2013). Plant elicitor peptides are conserved signals regulating direct and indirect anti-herbivore defense. ***Proc. Natl. Acad. Science USA*** 110(14): 5707-5712

120. Glauser G., N. Veyrat, B. Rochat, J. L. Wolfender, T. C. J. Turlings (2013). Ultra-high pressure liquid chromatography-mass spectrometry for plant metabolomics: a systematic comparison of high-resolution quadrupole-time-of-flight and single stage Orbitrap mass spectrometers. ***Journal of Chromatography A*** 1292: 151-159

119. Robert C.A.M., D.L. Frank, K.A. Leach, T.C.J. Turlings, B.E. Hibbard and M. Erb (2013). Direct and indirect plant defenses are not suppressed by endosymbionts of a specialist root herbivore. ***Journal of Chemical Ecology*** 39(4): 507-515

118. Christensen S.A., A. Nemchenko, E. Borrego, I. Murray, I.S. Sobhy, L. Bosak, S. DeBlasio, M. Erb, C.A.M. Robert, K.A. Vaughn, C. Herrfurth, J. Tumlinson, I. Feussner, D. Jackson, T.C.J. Turlings, J. Engelberth, C. Nansen, R. Meeley and M.V. Kolomiets (2013). The maize lipoxygenase, ZmLOX10, mediates green leaf volatile, jasmonate and herbivore-induced plant volatile production for defense against insect attack. ***The Plant Journal*** 74, 59–73

117. Marti G., M. Erb, J. Boccard, G. Glauser, G. R. Doyen, N. Villard, T.C.J. Turlings, S. Rudaz and J.-L. Wolfender (2013). Metabolomics reveals herbivore-induced metabolites of resistance and susceptibility in maize leaves and roots. ***Plant, Cell and Environment*** 36(3): 621-39

2012

116. Robert C.A.M., M. Erb, B.E. Hibbard, B.W. French, C. Zwahlen, and T.C.J. Turlings (2012). A specialist root herbivore reduces plant resistance and uses an induced plant volatile to aggregate in a density dependent manner. ***Functional Ecology*** 26, 1429–1440

115. Xiao, Y., Q. Wang, M. Erb, T.C.J. Turlings, L. Ge, J. Hu, J. Li, X. Han, T. Zhang, J. Lu, G. Zhang and Y. Lou (2012). Specific herbivore-induced volatiles defend plants and determine insect community composition in the field. ***Ecology Letters*** 15: 1130-1139

114. Hiltpold, I., B.E. Hibbard, B.W. French and T.C.J. Turlings (2012). Capsules containing entomopathogenic nematodes as a Trojan horse approach to control the western corn rootworm. ***Plant and Soil*** 385: 11-25

113. Turlings, T.C.J., I. Hiltpold and S. Rasmann (2012). The importance of root-produced volatiles as foraging cues for entomopathogenic nematodes. **Marschner Review** for the "Rhizosphere 3" Special Issue. ***Plant and Soil*** 358: 51–60

112. Glauser, G., F. Schweizer, T.C.J. Turlings and P. Reymond (2012). Rapid profiling of intact glucosinolates in Arabidopsis leaves by UHPLC-QTOFMS using a charged surface hybrid column. ***Phytochemical Analysis*** 23: 520-528

111. Hiltpold, I., and T.C.J. Turlings (2012). Manipulation of chemically mediated interactions in agricultural soils to enhance the control of crop pests and to improve crop yield. ***Journal of Chemical Ecology*** 38:641-50

110. Robert, C.A.M., M. Erb, M. Duployer, C. Zwahlen, G.R. Doyen and T.C.J. Turlings (2012). Herbivore-induced plant volatiles mediate host selection by a root herbivore. ***New Phytologist*** 194: 1061-1069

109. Sobhy, I.S., M. Erb, A. A. Sarhan, M. M. El-Husseini, N.S. Mandour and T. C. J. Turlings (2012). Less is more: treatment with BTH and laminarin reduces herbivore-induced volatile emissions in maize but increases parasitoid attraction. ***Journal of Chemical Ecology*** 38: 348-360

108. Xin, Z., Z. Yu, B. Wang, J. Qi, M. Erb, T.C.J. Turlings, S. Liu, and Y. Lou (2012). The broadleaf herbicide 2,4-dichlorophenoxyacetic acid turns rice into a living trap for a major insect pest and a parasitic wasp. ***New Phytologist*** 194: 498-510.

107. Degen, T., N. Bakalovic, D. Bergvinson, and T.C.J. Turlings (2012). Differential performance and parasitism of caterpillars on maize inbred lines with distinctly different herbivore-induced volatile emissions. ***PLoS One*** 7(10): e47589

106. Heng-Yu L., R. Théron, G. Röder, T. Turlings, Yun Luo, R.F.M. Lange, C. Ballif, and L.-E. Perret-Aebi (2012). Insights into the encapsulation process of photovoltaic modules: GCMS analysis on the curing step of poly(ethylene-co-vinyl acetate) (EVA) encapsulant. ***Polymers & Polymer Composites*** 20, 665-672

105. Robert, C.A.M., N. Veyrat, G. Glauser, G. Marti, G.R. Doyen, N. Villard, M.D.P. Gaillard, T.G. Köllner, D. Giron, M. Body, B.A. Babst, R. A. Ferrieri, T.C.J. Turlings and M. Erb (2012). A specialist root herbivore exploits defensive metabolites to locate nutritious tissues. ***Ecology Letters*** 15: 55–64

104. von Mérey G. E., N. Veyrat , E. de Lange, T. Degen, G. Mahuku, R. López Valdez , T.C.J. Turlings, and M. D'Alessandro (2012). Minor effects of two elicitors of insect and pathogen resistance on the volatile emission and the biological control of *Spodoptera frugiperda* in maize fields. ***Biological Control*** 60: 7-15

2011

103. Erb, M., D. Balmer, E. de Lange, G. von Merey, C. Planchamp, C. Robert, G. Roeder, I. Sobhy, C. Zwahlen, B. Mauch-Mani and T.C.J. Turlings (2011). Synergies and trade-offs between insect and pathogen resistance in maize leaves and roots. ***Plant Cell and Environment*** 34: 1088-1103

102. Erb M., C. T. G. Köllner, J. Degenhardt, C. Zwahlen, B. Hibbard and T.C.J. Turlings (2011). The role of abscisic acid and water stress in root herbivore-induced leaf resistance. ***New Phytologist*** 189: 308–320

101. Erb M., C. Robert, B. Hibbard and T.C.J. Turlings (2011). Sequence of arrival determines plant-mediated interactions between herbivores. ***Journal of Ecology*** 99:7-15

100. Erb M., C.A.M. Robert and T.C.J. Turlings (2011). Induction of root-resistance by leaf-herbivory follows a vertical gradient. ***Journal of Plant Interactions*** 6: 133-136

99. Fontana, A., M. Held, C. Assefa Fantaye, T.C.J. Turlings, J. Degenhardt and J. Gershenzon (2011). Attractiveness of constitutive and herbivore-induced sesquiterpene blends of maize to the parasitic wasp *Cotesia marginiventris* (Cresson). ***Journal of Chemical Ecology*** 37: 582-591

98. Glauser G., Marti G., Villard N., Doyen G.A., Wolfender J.-L., Turlings T.C.J. and Erb M. (2011). Induction and detoxification of maize 1,4-benzoxazin-3-ones by insect herbivores. ***The Plant Journal*** 68: 901-11

97. Hiltpold I., M. Erb and T.C.J. Turlings (2011). Systemic root signaling in a belowground, volatile mediated tritropic interaction. ***Plant Cell and Environment*** 8: 1267-1275

96. Kessler, S., S. Schaerer, N. Delabays, T.C.J. Turlings, V. Trivellone and P. Kehrli (2011). Host plant preferences of *Hyalesthes obsoletus*, the vector of the grapevine yellows disease 'bois noir', in Switzerland. ***Entomologia Experimentalis et Applicata*** 139 (1): 60-67

95. Peñaflor, M.F.G.V., M. Erb, C.A.M. Robert, L.A. Miranda, A.G. Werneburg, F.C.A. Dossi, T.C.J. Turlings, and J.M.S. Bento (2011). Oviposition by a moth suppresses constitutive and herbivore-induced plant volatiles in maize. ***Planta*** 234: 207-215

94. Péré, C., S. Augustin, R. Tomov, T. C. J. Turlings and M. Kenis (2011). Does the invasive horse-chestnut leaf mining moth, *Cameraria ohridella*, affect the native beech leaf mining weevil, *Orchestes fagi*, through apparent competition? ***Biodiversity and Conservation*** 20: 3003–3016

93. von Mérey G., N. Veyrat, G. Mahuku, R. Lopez Valdez, T.C.J. Turlings and M. D'Alessandro (2011). Dispensing synthetic green leaf volatiles in maize fields increases the release of sesquiterpenes by the plants, but has little effect on the attraction of pest and beneficial insects. ***Phytochemistry*** 14-15: 1838-1847

2010

92. Hiltpold I., Baroni M., Toepfer S., Kuhlmann U. and Turlings T. C. J. (2010). Selective breeding of entomopathogenic nematodes for enhanced attraction to a root signal did not reduce their establishment or persistence after field release. ***Plant Signaling and Behavior*** 5: 1450-1452

91. Erb, M., N. Foresti and T. C.J. Turlings (2010). A tritrophic signal that attracts parasitoids withstands disruption by non-host herbivores. ***BMC Plant Biology*** 10:247

90. Jourdie V., E. Virla, H. Murillo, J. M. S. Bento, T. C. J. Turlings and N. Alvarez (2010). Phylogeography of *Chelonus insularis* (Hymenoptera: Braconidae) and *Campoletis sonorensis* (Hymenoptera: Ichneumonidae), two primary neotropical parasitoids of the fall armyworm (Lepidoptera: Noctuidae). ***Annals of the Entomological Society of America*** 103: 742-749

89. Costa A., I. Ricard, A.C. Davison and T.C.J. Turlings (2010). Effects of rewarding and unrewarding experiences on the response to host-induced plant odors in the generalist parasitoid *Cotesia marginiventris* (Hymenoptera: Braconidae). ***Journal of Insect Behaviour*** 23: 303-318

88. Held M., M. D'Alessandro , I. Hiltpold, and T. C. J. Turlings (2010). The role of volatile organic compounds in the indirect defense of plants against insect herbivores above- and belowground. ***Chemia*** 64: 32

87. Hiltpold I., M. Baroni, S. Toepfer, U. Kuhlmann and T. C. J. Turlings (2010). Selection of entomopathogenic nematodes for enhanced responsiveness to a volatile root signal can help to control a major root pest. ***Journal of Experimental Biology*** 213: 2417-2423

86. Jourdie V., N. Alvarez, J. Molina-Ochoa, T. Williams, D. Bergvinson, B. Benrey, T. C. J. Turlings, and P. Franck (2010). Population genetic structure of two primary parasitoids of *Spodoptera frugiperda* (Lepidoptera), *Chelonus insularis* and *Campoletis sonorensis* (Hymenoptera): to what extent is the host plant important? ***Molecular Ecology*** 19: 2168-2179

85. Péré, C., S. Augustin, R. Tomov, T. C. J. Turlings and M. Kenis (2010). The invasive alien leaf miner, *Cameraria ohridella* and the native maple, *Acer pseudoplatanus*: a fatal attraction? ***Agricul. and Forest Entomology*** 12: 151-159

84. Hiltpold, I., S. Toepfer, U. Kuhlmann, and T.C.J. Turlings (2010). How maize root volatiles affect the efficacy of entomopathogenic nematodes in controlling the western corn rootworm. ***Chemoecology*** 20: 155-162

83. Péré, C., S. Augustin, R. Tomov, L.-h. Peng, T. C. J. Turlings and M. Kenis (2010). Species richness and abundance of native leaf miners is affected by the presence of the invasive horse-chestnut leaf miner. ***Biological invasions*** 12:1011–1021

Earlier

82. D'Alessandro M., V. Brunner, G. von Mérey and T.C.J. Turlings (2009). Strong attraction of the parasitoid *Cotesia marginiventris* towards minor volatile compounds of maize. ***J. Chem. Ecol.*** 35: 999-1008

81. Erb, M., C. Lenk, J. Degenhardt and T. C.J. Turlings (2009). The underestimated role of roots in defense against leaf attackers. ***Trends in Plant Science*** 14: 653-659

80. Ton, J., S. van der Ent, M. van Hulten, M. Pozo, V. van Oosten, L.C. van Loon, B. Mauch-Mani, T.C.J. Turlings, and C.M.J. Pieterse (2009). Priming as a mechanism behind induced resistance against pathogens, insects and abiotic stress. In: *Induced resistance in plants against insects and diseases* ***IOBC/wprs Bull.*** 44: 3-13

79. Erb, M., R. Gordon-Weeks, V. Flors, G. Camañes, T. C.J. Turlings and J. Ton (2009). Belowground ABA boosts aboveground production of DIMBOA and primes induction of chlorogenic acid in maize. ***Plant Signaling and Behavior*** 4: 639 – 641

78. Degenhardt, J., I. Hiltpold, T.G. Köllner, M. Frey, A. Gierl, J. Gershenzon, B.E. Hibbard, M. R. Ellersieck, T. C. J. Turlings (2009). Restoring a maize root signal that attracts insect-killing nematodes to control a major pest. ***Proc. Natl. Acad. Science USA*** 106: 13213–13218

77. Erb, M., D. Karlen, E. de Lange, C. Planchamp', M. D'Alessandro, V. Flors, T. C. J. Turlings and J. Ton (2009). Signal signature of aboveground-induced resistance upon belowground herbivory in maize ***The Plant Journal*** 59: 292-302

76. Jourdie V., N. Alvarez, T. C. J. Turlings and P. Franck (2009). Isolation and characterization of polymorphic microsatellite loci in two primary parasitoids of the noctuid *Spodoptera frugiperda*: *Chelonus insularis* and *Campoletis sonorensis* (Hymenoptera). ***Molecular Ecol. Resources*** 9: 171–173

75. Kurtz B., I. Hiltpold, T.C.J. Turlings, U. Kuhlmann and S. Toepfer (2009). Comparative susceptibility of larval instars and pupae of the western corn rootworm to infection by their entomopathogenic nematodes. ***BioControl*** 54: 255-262

74. Rostás M. and T.C.J. Turlings (2008). Induction of systemic acquired resistance in *Zea mays* also enhances the plant's attractiveness to parasitoids. ***Biological Control*** 46: 178–186

73. Jourdie V., N. Alvarez and T. C. J. Turlings (2008). Identification of seven species of hymenopteran parasitoids of *Spodoptera frugiperda* (J.E. Smith) (Lepidoptera: Noctuidae), using PCR amplification and restriction enzyme digestion. ***Agricul. and Forest Entomology*** 10: 129-136

72. Faria C. A., F. Wäckers, and T. C.J. Turlings (2008). The nutritional value of aphid honeydew for non-aphid parasitoids. ***Basic and Applied Ecology*** 9: 286-297

71. Hiltpold I. and T. C. J. Turlings. (2008). Belowground chemical signaling in maize: when simplicity rhymes with efficiency. ***Journal of Chemical Ecology*** 34: 628-635

70. Köllner T. G., M. Held, C. Lenk, I. Hiltpolt, T. C. J. Turlings, J. Gershenzon and Jörg Degenhardt (2008). A maize (*E*)-β-caryophyllene synthase implicated in indirect defense responses against herbivores is not expressed in most American maize varieties. ***Plant Cell*** 20: 482-494

69. Erb, M., J. Ton, J. Degenhardt and T. C. J. Turlings (2008). Interactions between arthropod-induced above- and belowground defenses in plants. ***Plant Physiology*** 146: 867–874

68. Rasmann, S. and T.C.J. Turlings (2008). First insights into specificity of belowground tritrophic interactions. ***Oikos*** 117: 362-369

67. Rasmann, S. and T.C.J. Turlings (2007). Simultaneous feeding by aboveground and belowground herbivores attenuates plant-mediated attraction of their respective natural enemies. ***Ecology Letters*** 10: 926-736

66. Faria C. A., F. Wackers, J. Pritchard, and T. C.J. Turlings (2007). Increased susceptibility of Bt maize to aphids helps to enhance the performance of parasitoids of lepidopteran pests. ***PLoS ONE*** 2(7): e600.doi:10.1371/journal.pone.0000600

65. Ton, J., M. D' Alessandro, V. Jourdie, G. Jakab, D. Karlen, M. Held, B. Mauch-Mani, and T.C.J. Turlings (2007). Priming by airborne signals boosts direct and indirect resistance in maize. ***The Plant Journal*** 49: 16-26.

64. D'Alessandro, M., M. Held, Y. Triponez, and T.C.J. Turlings (2006). The role of indole and other shikimic acid derived volatile organic compounds in the attraction of two parasitic wasps. ***J. Chem. Ecol.*** 32: 2733-2748

63. Lou Y., X. Hua, T. C. J. Turlings, and J. Cheng (2006). Differences in induced volatile emissions among rice varieties result in differential attraction and parasitism of *Nilaparvata lugens* eggs by the parasitoid *Anagrus nilaparvatae* in the field. ***J. Chem. Ecol.*** 32: 2375-2387

62. Rostás, M., J. Ton, B. Mauch-Mani, and T. C. J. Turlings (2006). Fungal infection reduces herbivore-induced plant volatiles of maize but does not affect naïve parasitoids. ***J. Chem. Ecol.*** 32: 1897-1909

61. Tamò C., L., Roelfstra G., Suzanne, and T. C. J. Turlings (2006). Odour-mediated long-range avoidance of interspecific competition by a solitary endoparasitoid may optimize its foraging success. ***J. Animal Ecology*** 75: 1091–1099

60. Turlings, T.C.J. and J. Ton (2006). Exploiting scents of distress: the prospect of manipulating herbivore-induced plant odours to repel pest insects and attract their enemies. Invited review for ***Current Opinion in Plant Biology*** 9: 421–427

59. Tamò, C., I. Ricard, M. Held, A. C. Davison and T. C. J. Turlings (2006). A comparison of naïve and conditioned responses of three generalist endoparasitoids of lepidopteran larvae to host-induced plant odours. ***Animal Biology*** 56: 205-220

58. Schnee C., T. G. Köllner, M. Held, T. C. J. Turlings, J. Gershenzon and J. Degenhardt (2006). The products of a single maize sesquiterpene synthase form a volatile defense signal that attracts natural enemies of maize herbivores. ***Proc. Natl. Acad. Science USA*** 103: 1129-1134

57. D'Alessandro M. & T. C. J. Turlings (2006). Advances and challenges in the identification of volatiles that mediate interactions among plants and arthropods. ***The Analyst*** 131: 24 - 32

56. D'Alessandro M. & T. C. J. Turlings (2005). *In Situ* modification of herbivore-induced plant odours: A novel approach to study the attractiveness of volatile organic compounds to parasitic wasps. ***Chemical Senses*** 30: 739 - 753

55. Turlings, T. C. J., P. M. Jeanbourquin, M. Held & T. Degen (2005). Evaluating the induced-odour emission of a Bt maize and its attractiveness to parasitic wasps. ***Transgenic Research*** 14: 807-816

54. Lou Y., Du M., Turlings T., Shan W. and Cheng J. (2005). Exogenous application of jasmonic acid induces volatile emissions in rice and enhances parasitism of *Nilaparvata lugens* eggs by the parasitoid *Anagrus nilaparvatae* ***J. Chem. Ecol.*** 31: 1985 - 2002

53. Hoballah, M. E. & T. C. J. Turlings (2005). The role of fresh versus old leaf damage in the attraction of parasitic wasps to herbivore-induced maize volatiles. ***J. Chem. Ecol.*** 31: 2003-2018

52. Hoballah M. E., J. Stuurman, T.C.J. Turlings, P. Guerin, S. Connétable and C. Kuhlemeier (2005). The composition and timing of flower odour emission by wild *Petunia axillaris* (Solanaceae) are in tune with the antennal perception and nocturnal activity of the pollinator *Manduca sexta* (Lepidoptera: Sphingidae). ***Planta*** 222: 141-150

51. Gouinguené S., J. A. Pickett, L. J. Wadhams, M. A. Birkett & T. C. J. Turlings (2005). Antennal electrophysiological responses of three parasitic wasps to the caterpillar-induced volatiles from maize, cowpea and cotton. ***J. Chem. Ecol.*** 31:1023- 1038.

50. Rasmann, S., T. G. Köllner, J. Degenhardt, I. Hiltpold, S. Töpfer, U. Kuhlmann, J. Gershenzon, and T. C. J. Turlings (2005). Recruitment of entomophatogenic nematodes by insect-damaged maize roots. ***Nature*** 434: 732-737.

49. Kalberer, N. M., T. C. J. Turlings, & M. Rahier (2005). An alternative hibernation strategy involving sun-exposed "hotspots", dispersal by flight and host plant finding by olfaction in an alpine leaf beetle. ***Entomol. Exp. Appl.*** 114**:** 189–196.

48. Degen, T., C. Dillmann, F. Marion-Poll & T. C. J. Turlings (2004). Genetic variability in herbivore-induced volatile emission within a broad range of maize inbred lines. ***Plant Physiology*** 135: 1928-1938

47. Turlings, T.C.J., A. Davison & C. Tamò (2004). A six-arm olfactometer permitting simultaneous observation of insect attraction and odour trapping. ***Physiol. Entomol.*** 29 (1): 45-55

46. Hoballah, M. E., T. Degen, D. Bergvinson, A. Savidan & T. C. J. Turlings (2004). Occurrence and direct control potential of parasitoids and predators of the Fall armyworm (Lepidoptera: Noctuidae) on maize in the subtropical lowlands of Mexico. ***Agricul. and Forest Entomol.*** 6: 83-88.

45. Hoballah, M. E., T. G. Koellner, J. Degenhardt & T. C. J. Turlings (2004). Costs of induced volatile production in maize. ***Oikos*** 105: 168-180

44. Vogelgsang S., Abou-Mansour E., Guerin P., Hoballah M.E., Turlings T., Tabacchi R. (2003). The NCCR Plant Survival at the University of Neuchatel - The role of chemistry in an interdisciplinary Swiss research network. ***Chimia*** 57 (10): 630-633 2003

43. Kuske, S., F. Widmer, P. J. Edwards, T.C.J. Turlings, D. Babendreier & F. Bigler (2003). Dispersal and persistence of mass released *Trichogramma brassicae* in non-target habitats. ***Biological control*** 27: 181-193.

42. Kuske S., D. Babendreier, P. J. Edwards, T.C.J. Turlings & F. Bigler, 2003. Parasitism of non-target Lepidoptera by mass released *Trichogramma brassicae* and its implication for the larval parasitoid *Lydella thompsoni* ***BioControl*** 49: 1-19.

41. Gouinguené S., H. Alborn & T. C. J. Turlings, 2003. Induction of volatile emissions in maize by different larval instars of *Spodoptera littoralis*. ***J. Chem. Ecol.*** 29: 145-162.

40. Gouinguené, S., & T. C. J. Turlings, 2002. The effects of abiotic factors on induced volatile emissions in corn plants. ***Plant Physiol.*** 129: 1296-1307.

39. Hoballah, M. & Turlings, T. (2002). Benefits and costs of induced volatile production in maize plants. ***Bulletin-OILB/SROP*** 25(6): 95-98.

38. Fritzsche Hoballah. M. E., C. Tamò & T. C. J. Turlings, 2002. Differential attractiveness of induced odors emitted by eight maize varieties for the parasitoid *Cotesia marginiventris*: is quality or quantity important? ***J. Chem. Ecol.*** 28: 951-968.

37. Chattopadhayay, J., R. Sarkar, M.E. Fritzsche-Hoballah, T. C. J. Turlings & L.-F. Bersier, 2001. Parasitoids may determine plant fitness: a mathematical model based on experimental data. ***J. Theor. Biol.*** 212: 295-302.

36. Grison-Pigé, L., J.-M. Bessière, F. Jardon, T. C. J. Turlings, F. Kjellberg, J. Roy & M. Hossaert-McKey, 2001. Limited inter sex floral odour mimicry in *Ficus carica*. ***Functional Ecology*** 15: 1-8.

35. Bertschy, C., T.C.J. Turlings, A. Bellotti, & S. Dorn, 2001. The role of mealybug-induced cassava plant volatiles in the attraction of the encyrtid parasitoids *Aenasius vexans* and *Apoanagyrus diversicornis*. ***J. of Insect Beh.*** 14: 363-371.

34. Bernasconi Ockroy M. L., T. C. J. Turlings, P. J. Edwards, M. E. Fritzsche-Hoballah, L. Ambrosetti, P. Bassetti, & S. Dorn, 2001. Response of natural populations of predators and parasitoids to artificially induced volatile emissions in maize plants (*Zea mays* L.). ***Agric. & Forest Entomol.*** 3: 1-10.

33. Fritzsche-Hoballah, M. E., & T.C.J. Turlings, 2001. Experimental evidence that plants under caterpillar attack may benefit from attracting parasitoids. ***Evol. Ecol. Research*** 3: 1-13.

32. Kalberer, N. M., T. C. J. Turlings, & M. Rahier, 2001. Attraction of a leaf beetle (*Oreina cacaliae*) to damaged host plants. ***J. Chem. Ecol.*** 27: 647-661.

31. Gouiguené, S., T. Degen, & T.C.J. Turlings, 2001. Genotypic variation in induced odour emissions among maize cultivars and wild relatives. ***Chemoecology***. 11: 9-16.

30. Bertschy, C., T.C.J. Turlings, A. Bellotti & S. Dorn, 2000. Host stage preference and sex allocation in *Aenasius vexans*, an encyrtid parasitoid of the cassave mealybug. ***Entomol. Exp. Appl.*** 95: 289-291.

29. Turlings, T.C.J., H.T. Alborn, J.H. Loughrin, & J.H. Tumlinson, 2000. Volicitin, an elicitor of maize volatiles in the oral secretion of *Spodoptera exigua*: its isolation and bio-activity. ***J. Chem. Ecol.*** 26: 189-202.

28. Cagán, L., T.C.J. Turlings, P. Bokor, & S. Dorn, 1999. *Lydella thompsoni* Herting (Dipt., Tachinidae), a parasitoid of the European corn borer, *Ostrinia nubilalis* Hbn. (Lep., Pyralidae) in Slovakia, Czech Republic and south-western Poland. ***J. Appl. Entomol.*** 123: 577-583.

27. Turlings T.C.J., U. B. Lengwiler, M. L. Bernasconi, & D. Wechsler, 1998. Timing of induced volatile emissions in maize seedlings. ***Planta*** 207: 146-152.

26. Turlings, T. C. J. and B. Benrey, 1998. The effects of plant metabolites on the behavior and development of parasitic wasps. ***Écoscience*** 5: 321-333.

25. Bernasconi, M. L., T. C. J. Turlings, L. Ambrosetti, P. Bassetti, and S. Dorn, 1998. Herbivore-induced emissions of maize volatiles repel the Corn-Leaf Aphid, *Rhopalosiphum maidis*. ***Entomol. Exp. Appl.*** 87: 133-142.

24. Turlings T. C. J., M. Bernasconi, R. Bertossa, G. Caloz, F. Bigler, and S. Dorn, 1998. The induction of volatile emissions in maize by three herbivore species with different feeding habits: possible consequences for their natural enemies. ***Biol. Control*** 11:122-129.

23. Bertschy, C., T.C.J. Turlings, A. Bellotti, and S. Dorn, 1997. Chemically-mediated attraction of three parasitoid species to mealybug-infested cassava leaves. ***Fla. Entomol.*** 80: 383-395.

22. Alborn, H. T., T. C. J. Turlings, T. H. Jones, G. Stenhagen, J. H. Loughrin & J. H. Tumlinson, 1997. An elicitor of plant volatiles from beet armyworm oral secretion. ***Science*** 276: 945-949.

21. Boevé, J.-L., U. Lengwiler, L. Tollsten, S. Dorn, & T.C.J. Turlings, 1996. Volatiles emitted by apple fruitlets infested by larvae of the European apple sawfly. ***Phytochemistry*** 42: 373-381.

20. Turlings, T. C. J., J. H. Loughrin, U. Röse, P. J. McCall, W. J. Lewis, & J. H. Tumlinson, 1995. How caterpillar-damaged plants protect themselves by attracting parasitic wasps. ***Proc. Natl. Acad. Science USA*** 92: 4169-4174.

19. Stowe, M. K., T. C. J. Turlings, J. H. Loughrin, W. J. Lewis, & J. H. Tumlinson, 1995. The chemistry of eavesdropping, alarm, and deceit. ***Proc. Natl. Acad. Science USA*** 92: 23-28.

18. Loughrin, J. H., A. Manukian, R. R. Heath, T. C. J. Turlings, & J. H. Tumlinson, 1994. Diurnal cycle of emission of induced volatile terpenoids by herbivore-injured cotton. ***Proc. Natl. Acad. Science. USA*** 91: 11836-11840.

17. McCall, P. J., T. C. J. Turlings, & J. H. Tumlinson, 1994. Herbivore-induced volatile emissions in cotton (*Gossypium hirsutum* L.) seedlings. ***J. Chem. Ecol.*** 20: 3039-3050.

16. Turlings, T. C. J., 1994. The active role of plants in the foraging successes of entomophagous insects. ***Norweg. J. Agric. Sc.*** 16: 211-219.

15. McCall, P. J., T. C. J. Turlings, W. J. Lewis, & J. H. Tumlinson, 1993. The role of plant volatiles in host location by the specialist parasitoid *Microplitis croceipes* Cresson (Braconidae: Hymenoptera). ***J. Insect Behav.*** 6: 625-639.

14. Turlings, T. C. J., H. T. Alborn, P. J. McCall, & J. H. Tumlinson, 1993. An elicitor in caterpillar oral secretions that induces corn seedlings to emit volatiles attractive to parasitic wasps. ***J. Chem. Ecol.*** 19: 411-425.

13. Tumlinson, J. H., T. C. J. Turlings, & W. J. Lewis, 1993. Semiochemically mediated foraging behavior in beneficial parasitic insects. ***Archiv. Insect Biochem. Phys.*** 22: 385-391.

12. Tumlinson, J. H., T. C. J. Turlings, & W. J. Lewis, 1992. The semiochemical complexes that mediate insect parasitoid foraging. ***Agric. Zool. Rev.*** 5: 221-252.

11. Petitt, F. L., T. C. J. Turlings, & S. P. Wolf, 1992. Adult experience modifies attraction of the leafminer parasitoid *Opius dissitus* Muesebeck to volatile semiochemicals. ***J. Insect Behav.*** 5: 623-634.

10. Turlings C. J., & J. H. Tumlinson, 1992. Systemic chemical signalling by herbivore-injured corn. ***Proc. Natl. Acad. Science USA*** 89: 8399-8402.

9. Turlings, T. C. J., J. H. Tumlinson, R. R. Heath, A. T. Proveaux, & R. E. Doolittle, 1991. Isolation and identification of allelochemicals that attract the larval parasitoid *Cotesia marginiventris* (Cresson) to the micro-habitat of one of its hosts. ***J. Chem. Ecol.*** 17: 2235-2251

8. Turlings, T. C. J., & J. H. Tumlinson, 1991. Do parasitoids use herbivore-induced plant chemical defenses to locate hosts? ***Fla. Entomol.*** 74: 42-50.

7. Turlings, T. C. J., J. H. Tumlinson, F.J. Eller, & W. J. Lewis, 1991. Larval-damaged plants: source of volatile synomones that guide the parasitoid *Cotesia marginiventris* to the micro-habitat of its hosts. ***Entomol. Exp. Appl.*** 58: 75-82.

6. Turlings, T. C. J., J. H. Tumlinson, & W. J. Lewis, 1990. Exploitation of herbivore-induced plant odors by host-seeking parasitic wasps. ***Science*** 250: 1251-1253.

5. Turlings, T. C. J., J. W. A. Scheepmaker, L. E. M. Vet, J. H. Tumlinson, & W. J. Lewis, 1990. How contact foraging experiences affect the preferences for host-related odors in the larval parasitoid *Cotesia marginiventris* (Cresson) (Hymenoptera: Braconidae). ***J. Chem. Ecol.*** 16: 1577-1589.

4. Turlings, T. C. J., J. H. Tumlinson, W. J. Lewis, & L. E. M. Vet, 1989. Beneficial arthropod behavior mediated by airborne semiochemicals. VII. Learning of host-related odors induced by a brief contact experience with host by-products in *Cotesia marginiventris* (Cresson), a generalist larval parasitoid. ***J. Insect Behav.*** 2(2): 217-225.

3. Sokolowski, M. B., & T. C. J. Turlings, 1986. *Drosophila* parasitoid-host interactions: vibrotaxis and ovipositor searching from the host's perspective. ***Can. J. Zool.*** 65(3): 461-464.

2. Bakker, K., J. J. M. van Alphen, F. D. H. van Batenburg, N. van der Hoeven, W. T. F. H. van Strien-van Liempt, & T. C. J. Turlings, 1985. The function of host discrimination and superparasitization in parasitoids. ***Oecologia*** 67: 572-576.

1. Turlings, T. C. J., F. D. H. van Batenburg, & W. T. F. H. van Strien-van Liempt, 1985. Why is there no interspecific host discrimination in the two coexisting larval parasitoids of *Drosophila* species; *Leptopilina heterotoma* (Thomson) and *Asobara tabida* (Nees)? ***Oecologia*** 67: 352-359.

BOOK (CHAPTERS)

8. Hiltpold, I. and Turlings T. C. J. (2013). Manipulation of below-ground scents for the benefit of agriculture. *In*: (K. V. Wurms, A. J. Popay, N. L. Bell and M. V. Jaspers eds.) **Utilising Plant Defence for Pest Control.** The New Zealand Plant Protection Society (Incorporated) (NZ), pp. 39-56

7. Johnson, SC, Hiltpold, I, Turlings, TCJ (editors) 2013. Behaviour and Physiology of Root Herbivores. ***Advances in Insect Physiology*** Volume 45, Elsevier, p.p 1-264.

6. Marti G, Erb M, Rudaz S, Turlings T, Wolfender J-L 2012. Search for Low-Molecular-Weight Biomarkers in Plant Tissues and Seeds Using Metabolomics: Tools, Strategies, and Applications. *In:* Agrawal, GK, Rakwal, R (eds.) *Seed Development: OMICS Technologies toward Improvement of Seed Quality and Crop Yield: OMICS in Seed Biology.* Dordrecht: Springer Netherlands.

5. Turlings T. C. J., and F.L. Wäckers (2004). Recruitment of predators and parasitoids by herbivore-damaged plants. *In* (R. T. Cardé & J. Millar eds.) **Advances in Insect Chemical Ecology.** Cambridge University Press, pp. 21-75.

4. Turlings T. C. J., S. Gouinguené, T. Degen and M. E. Fritzsche-Hoballah (2002). The chemical ecology of plant-caterpillar-parasitoid interactions. *In* (T. Tscharntke & B. Hawkins eds.) **Multitrophic Level Interactions**. Cambridge University Press, pp. 148-173.

3. Turlings, T.C.J. and B. Benrey (2001). Efectos de los metabolitos secundarios vegetales en el comportamiento y desarrollo de avispas parasitoides. *In*: (A.L. Anaya, F.J. Espinosa-García, and R.Cruz-Ortega, eds.) **Relaciones Químicas entre Organismos: aspectos básicos y perspectivas de su aplicación**. Instituto de Ecología, UNAM y Plaza y Valdés, S.A. de C.V. México, pp. 505-540.

2. Turlings, T.C.J. and M.E. Fritzsche (1999). Attraction of parasitic wasps by caterpillar-damaged plants. *In*: (Goode ed.) **Insect-Plant Interactions and Induced Plant Defence**. The Novartis Foundation Symposium No 223: 21-38.

1. Turlings, T. C. J., F. Wäckers, L. E. M. Vet, W. J. Lewis, & J. H. Tumlinson (1993). Learning of host-finding cues by hymenopterous parasitoids. In: ***Insect Learning: Ecological and Evolutionary Perspectives***. D. R. Papaj & A. Lewis (eds.). Chapman and Hall, New York, pp. 51-78.

PATENTS

3. Degenhardt, J., Köllner, T., Gershenzon, J., Cr0coll, C., Hiltpold, I. and Turlings T.C.J. (2009). EP # Patent 08 01 8970.7 Polynucleotides encoding caryphyllene synthase and uses thereof.

2. Tumlinson, J. H., Alborn, H. T., Loughrin, J. H., Turlings, T. C. J. and Jones, T.H. (2001). U.S. Patent # 6.227.792. Plant volatile elicitor from insects.

1. Tumlinson, J. H., Alborn, H. T., Loughrin, J. H., Turlings, T. C. J. and Jones, T.H. (2000). U.S. Patent # 6.054.483. Plant volatile elicitor from insects.