

Publications in refereed journals

2023

237. Zhou, A., J. Zhao, Jing, Y. Liu, Z. Zhang, M. Wang, T.C.J. Turlings, P.-J. Zhang (2023). Mealybug salivary microbes inhibit inducible plant defenses. *Pest Management Science* (in press)
236. Briones-May Y., T. Quijano-Medina, B. Pérez-Niño, B. Benrey, T.C.J. Turlings, C. Bustos-Segura, and L. Abdala-Roberts (2023). Soil salinization disrupts the effect of plant-plant signaling on extra-floral nectar induction in wild cotton. *Oecologia* (accepted).
235. Chappuis L., A. Egger, G. Roeder, G. Glauser, G. Jaffuel, B. Benrey, L. Abdala-Roberts, M.V. Clancy, T.C.J. Turlings, and C. Bustos-Segura (2023). Experimental growth conditions affect direct and indirect defences in two cotton species. *Journal of Chemical Ecology* (in press)
234. Liu, Q., T.C.J. Turlings and Y. Li (2023). Can herbivores sharing the same host plant be mutualists? *Trends in Ecology & Evolution* Forum paper Online: <https://doi.org/10.1016/j.tree.2023.01.018>
231. Zeng J., W. Ye, W. Hu, P. Kuai, W. Xiao, Y. Jian, T.C.J. Turlings, and Y. Lou. (2023). The N-terminal subunit of vitellogenin in planthopper eggs and saliva induces defenses in rice. *New Phytologist* Online: <https://doi.org/10.1111/nph.18791>
230. la Forgia, D., C. Martin, T.C.J. Turlings, F. Verheggen (2023). 2-Pentylfuran: an aggregation attractant for wireworms. *Arthropod-Plant Interactions* Online: <https://doi.org/10.1007/s11829-023-09958-9>
229. Mamin, M., A. Vallat, and T.C.J. Turlings (2023). Cotton plants as ideal models for teaching and research on inducible direct plant defenses. *Frontiers Ecology and Evolution* 11: 1119472. <https://doi.org/10.3389/fevo.2023.1119472>
228. Machado, R.A.R., A.H. Bhat, P. Fallet, T.C.J. Turlings, J. Kajuga, X. Yan, and S. Toepfer (2023). *Xenorhabdus bovienii* subsp. *africana* subsp. nov., isolated from *Steinernema africanum* entomopathogenic nematodes. *International Journal of Systematic and Evolutionary Microbiology* 54: e2022-1. <https://doi.org/10.2478/jofnem-2022-0049>.
227. Xu T., M. Xu, G. Glauser, T.C.J. Turlings and L. Chen (2023). Revisiting the trail pheromone components of the red imported fire ant, *Solenopsis invicta* Buren. *Insect Science* 30: 161-172 <https://doi.org/10.1111/1744-7917.13047>
226. Yao, C., L. Du, Q.g Liu, X. Hu, W. Ye, T.C.J. Turlings, and Y. Li (2023). Stemborer-induced rice plant volatiles boost direct and indirect resistance in neighboring plants. *New Phytologist* 237: 2375-2387 (<https://doi.org/10.1111/nph.18548>)
225. Clancy M.V., M. Mamin, G. Flückiger, T. Quijano-Medina, B. Pérez Niño, L. Abdala-Roberts, T.C.J. Turlings, and C. Bustos-Segura (2023). Terpene chemotypes in wild cotton (*Gossypium hirsutum*) from the Yucatan Peninsula. *Phytochemistry* 205: 113454

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224. Duhin, A., R.A.R. Machado, T.C.J. Turlings, and G. Röder (2022). Early land plants: Plentiful but neglected nutritional resources for herbivores? *Ecology and Evolution* 12: e9617 <https://doi.org/10.1002/ece3.9617>.
223. Machado, R.A.R., A.H. Bhat, J. Abolafia, E. Shokoohi, P. Fallet, T.C.J. Turlings, E. Tarasco, V. Půža, J. Kajuga, X. Yan, and S. Toepfer (2022). *Steinernema africanum* n. sp. (Rhabditida, Steinernematidae), a new entomopathogenic nematode species isolated from the Republic of Rwanda. *Journal of Nematology* 54: e2022-1, DOI: 10.2478/jofnem-2022-0049

222. Fallet P., D. Bazagwira, J.M. Guenat, C. Bustos-Segura, P. Karangwa, I.P. Mukundwa, J. Kajuga, T. Degen, S. Toepfer, T.C.J. Turlings (2022). Laboratory and field trials reveal the potential of a gel formulation of entomopathogenic nematodes for the biological control of fall armyworm caterpillars (*Spodoptera frugiperda*). **Biological Control** 176 : <https://doi.org/10.1016/j.biocontrol.2022.105086>
221. Turlings T.C.J and T. Degen (2022) The role of herbivore-induced plant volatiles in trophic interactions: The Swiss Connection. **Chimia** 76, 900, <https://doi.org/10.2533/chimia.2022.900>
220. Bruno P., C.C.M. Arce, R.A.R. Machado, G. Besomi, A. Spescha, G. Glauser, C. Jaccard, B. Benrey and T.C.J. Turlings (2022). Sequestration of cucurbitacins from cucumber plants by *Diabrotica balteata* larvae provides little protection against biological control agents. **Journal of Pest Science** <https://doi.org/10.1007/s10340-022-01568-3>
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218. Ye, W., Bustos-Segura, C., Degen, T., Erb, M., Turlings, T.C.J. (2022). Belowground and aboveground herbivory differentially affect the transcriptome in roots and shoots of maize. **Plant Direct** 6(7),e426
<https://doi.org/10.1002/pld3.426>
217. Fallet P., D. Bazagwira, J. Guenat, C. Bustos-Segura, P. Karangwa, I.P. Mukundwa, J. Kajuga, T. Degen, S. Toepfer, T.C.J. Turlings (2022). Laboratory and field trials reveal the potential of a gel formulation of entomopathogenic nematodes as biocontrol against the fall armyworm (*Spodoptera frugiperda*). **bioRxiv Ecology** <https://t.co/5VdUbOP2As>
216. Fallet, P., L. De Gianni, R.A.R. Machado, P. Bruno, J. Bernal, P. Karangwa, J. Kajuga, B. Waweru, D. Bazagwira, T. Degen, S. Toepfer, and T.C.J. Turlings (2022). Comparative screening of Mexican, Rwandan and commercial entomopathogenic nematodes to be used against invasive fall armyworm, *Spodoptera frugiperda*. **Insects** 13: 205
215. Jaccard C., Marguier N. T., C.C.M. Arce, P. Bruno, G. Glauser, T.C.J. Turlings, B. Benrey (2022). The effect of squash domestication on a belowground tritrophic interaction. **Plant-Environment Interactions** 3: 28-39.
<https://doi.org/10.1002/pei3.10071>
214. Jaffuel G., S. Krishnamani, R.A.R. Machado, R. Campos-Herrera and T.C.J Turlings (2022). Potent ant repellents emitted from nematode-infected insect cadavers. **Journal of Chemical Ecology** 48: 71-78
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<https://doi.org/10.21307/jofnem-2021-089>
211. Mann L., D. Laplanche, T.C.J. Turlings and G.A. Desurmont (2021). A comparative study of plant volatiles induced by insect and gastropod herbivory. **Scientific Reports** 11: 23698 <https://doi.org/10.1038/s41598-021-02801-2>
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<https://doi.org/10.1016/j.cub.2021.08.032>

209. Arce, C.M., G. Besomi, G. Glauser and T.C.J. Turlings (2021). Caterpillar-induced volatile emissions in cotton: The relative importance of damage and insect-derived factors. *Frontiers in Plant Science* 12: 709858 <https://doi.org/10.3389/fpls.2021.709858>
208. González-Mas, N., F. Gutiérrez-Sánchez, A. Sánchez-Ortiz, L. Grandi, T. C. J. Turlings, J. M. Muñoz-Redondo, J. M. Moreno-Rojas and E. Quesada-Moraga (2021). Endophytic colonization by the entomopathogenic fungus *Beauveria Bassiana* affects plant volatile emissions in the presence or absence of chewing and sap-sucking insects. *Frontiers in Plant Science* 12: 660460 <https://doi.org/10.3389/fpls.2021.660460>
207. Ling, X., S. Gu, C. Tian, H. Guo, T. Degen, T.C.J Turlings, F. Ge, and Y. Sun (2021). Differential levels of fatty acid-amino acid conjugates in the oral secretions of lepidopteran larvae account for the different profiles of volatiles produced by maize. *Pest Management Science* 77: 3970–3979. <https://doi.org/10.1002/ps.6417>
206. Lin T., K. Vrieling, D. Laplanche, P.G.L. Klinkhamer, Y. Lou, L. Bekooy, T.Degen, C. Bustos-Segura, T.C.J. Turlings and G. Desurmont (2021). Evolutionary changes in an invasive plant support the defensive role of plant volatiles. *Current Biology* 15: 3450-3456.e5 <https://doi.org/10.1016/j.cub.2021.05.055>
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204. Toepfer S., P. Fallet, J. Kajuga, D. Bazagwira, I.P. Mukundwa, M. Szalai and T.C.J. Turlings (2021). Streamlining leaf damage rating scales for the fall armyworm on maize. *Journal of Pest Science* 94: 1075–1089 <https://doi.org/10.1007/s10340-021-01359-2>
203. Moreira, X., R. Granjel, M. de la Fuente, P. Fernández-Conradi, V. Pasch, P. Soengas, T.C.J. Turlings, C. Vázquez-González, L. Abdala-Roberts and S. Rasmann (2021). Apparent inhibition of induced plant volatiles by a fungal pathogen prevents airborne communication between potato plants. *Plant, Cell & Environment* 44: 1192-1201. <https://doi.org/10.1111/pce.13961>
202. Kim J.W., I. Hiltbold, B.E. Hibbard and T.C.J. Turlings (2021). Calcium-alginate beads as a formulation for the application of entomopathogenic nematodes to control the Western corn rootworm. *Journal of Pest Science* 94: 1197–1208 <https://doi.org/10.1007/s10340-021-01349-4>

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200. Fattore S., Z. Xiao, A.L. Godschalx, G. Röder, T.C. J. Turlings, R.-C. Le Bayon, and S. Rasmann (2020). Bioturbation by endogeic earthworms facilitates entomopathogenic nematode movement toward herbivore-damaged maize roots. *Scientific Reports* 10:21316
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197. Hu, X., Y. Lia, Q. Liu, Y. Jiao, Y Peng, Y. Li and T.C.J. Turlings (2020). Caterpillar-induced rice volatiles provide enemy-free space for the offspring of the brown planthopper. *eLife* 2020;9:e55421

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194. 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* 10:8257
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192. De Lange, E., D. Laplante, 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* 46:344–360
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186. Jaffuel G., N. Imperiali, 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
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175. Xu H. and T.C.J. Turlings (2018). Plant volatiles as mate-finding cues for insects. ***Trends in Plant Science*** 23: 100-111
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