

Publications

Fricke J, Schalk F, Kreuzenbeck NB, Seibel E, Hoffmann J, Dittmann G, Conlon BH, Guo H, Wilhelm de Beer Z, Vassão DG, Gleixner G, Poulsen M, Beemelmans C (2023) Adaptations of *Pseudoxylaria* towards a comb-associated lifestyle in fungus-farming termite colonies. *ISME J* 17(5), 733-747.

Kreuzenbeck NB, Dhiman S, Roman D, Burkhardt I, Conlon BH, Fricke J, Guo H, Blume J, Görls H, Poulsen M, Dickschat JS, Köllner TG, Arndt HD, Beemelmans C (2023) Isolation, (bio)synthetic studies and evaluation of antimicrobial properties of drimenol-type sesquiterpenes of *Termitomyces* fungi. *Commun Chem* 6(1), 79.

Bissell AU, Rautschek J, Hoefgen S, Raguž L, Mattern DJ, Saeed N, Janevska S, Jojić K, Huang Y, Kufs JE, Herboeck B, Guo H, Hillmann F, Beemelmans C, Valiante V (2022) Biosynthesis of the sphingolipid inhibitors sphingofungins in filamentous fungi requires aminomalonnate as a metabolic precursor. *ACS Chem Biol* 17(2), 386-394.

Guo H, Daniel JM, Seibel E, Burkhardt I, Conlon BH, Görls H, Vassão DG, Dickschat JS, Poulsen M, Beemelmans C (2022) Insights into the metabolomic capacity of podaxis and isolation of podaxisterols A-D, ergosterol derivatives carrying nitrosyl cyanide-derived modifications. *J Nat Prod* 85(9), 2159-2167.

Guo H, Rischer M, Beemelmans C (2022) Signalling molecules inducing metamorphosis in marine organisms. *Nat Prod Rep* 39(9), 1833-1855. (Review)

Lee SR, Schalk F, Schwitalla JW, Guo H, Yu JS, Song M, Jung WH, de Beer ZW, Beemelmans C, Kim KH (2022) GNPS^{**}-guided discovery of madurastatins A1, A2, E1, F, and G1, siderophores from the termite-associated *Actinomadura* sp. RB99. (GNPS=global natural product social molecular networking platform.) *Chemistry* 28(36), e202200612.

Moghaddam Amri J, Guo H, Willing K, Wichard T, Beemelmans C (2022) Identification of the new prenyltransferase Ubi-297 from marine bacteria and elucidation of its substrate specificity. *Beilstein J Org Chem* 18, 722-731.

Guo H, Rischer M, Westermann M, Beemelmans C (2021) Two distinct bacterial biofilm components trigger metamorphosis in the colonial hydrozoan *Hydractinia echinata*. *mBio* 12(3), e0040121.

Lee SR, Guo H, Yu JS, Park M, Dahse HM, Jung WH, Beemelmans C, Kim KH (2021) Revised structural assignment of azalomycins based on genomic and chemical analysis. *Org Chem Front* 8, 4791-4798.

Schmidt S, Kildgaard S, Guo H, Beemelmans C, Poulsen M (2021) The chemical ecology of the fungus-farming termite symbiosis. *Nat Prod Rep* 39(2), 231-248. (Review)

Um S, Guo H, Thiengmag S, Benndorf R, Murphy R, Rischer M, Braga D, Poulsen M, de Beer ZW, Lackner G, Beemelmans C (2021) Comparative genomic and metabolic analysis of *Streptomyces* sp. RB110 morphotypes illuminates genomic rearrangements and formation of a new 46-membered antimicrobial macrolide. *ACS Chem Biol* 16(8), 1482-1492.

Guo H, Schwitalla JW, Benndorf R, Baunach M, Steinbeck C, Görls H, de Beer ZW, Regestein L,

- Beemelmans C (2020) Gene cluster activation in a bacterial symbiont leads to halogenated angucyclic maduralactomycins and spirocyclic actinospirols. *Org Lett* 22(7), 2634-2638.
- Peña-Ortiz L, Graça AP, Guo H, Braga D, Köllner TG, Regestein L, Beemelmans C, Lackner G (2020) Structure elucidation of the redox cofactor mycofactocin reveals oligo-glycosylation by MftF. *Chem Sci* 11, 5182-5190.
- Schalk F, Um S, Guo H, Kreuzenbeck NB, Görls H, de Beer ZW, Beemelmans C (2020) Targeted discovery of tetrapeptides and cyclic polyketide-peptide hybrids from a fungal antagonist of farming termites. *ChemBioChem* 21(20), 2991-2996.
- Braga D, Last D, Hasan M, Guo H, Lechnitz D, Uzum Z, Richter I, Schalk F, Beemelmans C, Hertweck C, Lackner G (2019) Metabolic pathway rerouting in *Paraburkholderia rhizoxinica* evolved long-overlooked derivatives of coenzyme F420. *ACS Chem Biol* 14(9), 2088-2094.
- Guo H, Roman D, Beemelmans C (2019) Tropolone natural products. *Nat Prod Rep* 36(8), 1137-1155. (Review)
- Benndorf R, Guo H, Sommerwerk E, Weigel C, Garcia-Altare M, Martin K, Hu H, Kuefner M, de Beer ZW, Poulsen M, Beemelmans C (2018) Natural products from Actinobacteria associated with fungus-growing termites. *Antibiotics* 7(3), 83.
- Guo H, Benndorf R, König S, Lechnitz D, Weigel C, Peschel G, Berthel P, Kaiser M, Steinbeck C, Werz O, Poulsen M, Beemelmans C (2018) Expanding the rubterolone family: Intrinsic reactivity and directed diversification of PKS-derived pyrans. *Chem Eur J* 24(44), 11319-11324.
- Guo H, Schmidt A, Stephan P, Raguž L, Braga D, Kaiser M, Dahse HM, Weigel C, Lackner G, Beemelmans C (2018) Precursor-directed diversification of cyclic tetrapeptidic pseudoxyllallemycins. *ChemBioChem* 19(21), 2307-2311.
- Rischer M, Raguz L, Guo H, Keiff F, Diekert G, Goris T, Beemelmans C (2018) Biosynthesis, synthesis and activities of barnesin A, a NRPS-PKS hybrid produced by an anaerobic Epsilonproteobacterium. *ACS Chem Biol* 13(8), 1990-1995.
- Guo H, Benndorf R, Lechnitz D, Klassen JL, Vollmers J, Görls H, Steinacker M, Weigel C, Dahse HM, Kaster AK, de Beer ZW, Poulsen M, Beemelmans C (2017) Isolation, biosynthesis and chemical modifications of rubterolones A–F, rare tropolone alkaloids from *Actinomadura* sp. 5-2. *Chem Eur J* 23(39), 9338-9345.
- Guo H, Rischer M, Sperfeld M, Weigel C, Menzel KD, Clardy J, Beemelmans C (2017) Natural products and morphogenic activity of γ -Proteobacteria associated with the marine hydroid polyp *Hydractinia echinata*. *Bioorg Med Chem* 25(22), 6088-6097.
- Beemelmans C, Guo H, Rischer M, Poulsen M (2016) Natural products from microbes associated with insects. *Beilstein J Org Chem* 12, 314-327.
- Guo H, Kreuzenbeck NB, Otani S, Garcia-Altare M, Dahse HM, Weigel C, Aanen DK, Hertweck C, Poulsen M, Beemelmans C (2016) Pseudoxyllallemycins A-F, cyclic tetrapeptides with rare allenyl modifications isolated from *Pseudoxyllaria* sp. X802: A competitor of fungus-growing termite cultivars. *Org Lett* 18, 3338-3341.
- Rischer M, Klassen J, Wolf T, Guo H, Shelest E, Clardy J, Beemelmans C (2016) Draft Genome

Sequence of *Shewanella* sp. P1-14-1, a Bacterial Inducer of Settlement and Morphogenesis in Larvae of the Marine Hydroid *Hydractinia Echinata* *Genome Announc* 4(1), e00003-16.

Klassen JL, Rischer M, Wolf T, Guo H, Shelest E, Clardy J, Beemelmans C (2015) Genome Sequences of Three *Pseudoalteromonas* Strains P1-8, P1-11 and P1-30 Isolated from the Marine Hydroid *Hydractinia echinata* *Genome Announc.* 3(6), e01380-15.

Klassen JL, Wolf T, Rischer M, Guo H, Shelest E, Clardy J, Beemelmans C (2015) Draft Genome Sequences of Six *Pseudoalteromonas* sp. Strains P1-7a, P1-9, P1-13-1a, P1-16-1b, P1-25 and P1-26, which Induce Larval Settlement and Metamorphosis in *Hydractinia echinata* *Genome Announc.* 3(6), e01477-15.

Shao Y, Arias-Cordero E, Guo H, Bartram S, Boland W (2014) In vivo Pyro-SIP assessing active gut microbiota of the cotton leafworm, *Spodoptera littoralis*. *PLOS One* 9(1), e85948.

Guo H, Wielsch N, Hafke JB, Svatoš A, Mithöfer A, Boland W (2013) A porin-like protein from oral secretions of *Spodoptera littoralis* larvae induces defense-related early events in plant leaves. *Insect Biochem Mol Biol* 43(9), 849-858.

Chen Y, Guo H, Du Z, Liu XZ, Che Y, Ye X (2009) Ecology-based screen identifies new metabolites from a *Cordyceps*-colonizing fungus as cancer cell proliferation inhibitors and apoptosis inducers. *Cell Prolif* 42(6), 838-847.

Guo H, Sun B, Gao H, Chen X, Liu S, Yao X, Liu X, Che Y (2009) Diketopiperazines from the *Cordyceps*-colonizing fungus *Epicoccum nigrum*. *J Nat Prod* 72(12), 2115-2119.

Guo H, Sun B, Gao H, Niu S, Liu X, Yao X, Che Y (2009) Trichocladinols A-C, Cytotoxic Metabolites from a *Cordyceps*-Colonizing Ascomycete *Trichocladium opacum* *Eur J Org Chem* 32, 5525-5530.

Guo H, Hu H, Liu S, Liu X, Zhou Y, Che Y (2007) Bioactive p-terphenyl derivatives from a *Cordyceps*-colonizing isolate of *Gliocladium* sp. *J Nat Prod* 70(9), 1519-1521.

Hu H, Guo H, Li E, Liu X, Zhou Y, Che Y (2006) Decaspirones F-I, bioactive secondary metabolites from the saprophytic fungus *Helicoma viridis*. *J Nat Prod* 69(12), 1672-1675.

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