

Publications

Krespach MKC, Stroe MC, Netzker T, Rosin M, Zehner LM, Komor AJ, Beilmann JM, Krüger T, Scherlach K, Kniemeyer O, Schroeckh V, Hertweck C, Brakhage AA (2023)

Streptomyces polyketides mediate bacteria-fungi interactions across soil environments. *Nat Microbiol* 8(7), 1348-1361.

Brangsch H, Höller M, Krauß T, Waqas M, Schroeckh V, Brakhage AA, Bunk B, Spröer C, Overmann J, Kothe E (2022) Extremophile metal resistance: Plasmid-encoded functions in *Streptomyces mirabilis*. *Appl Environ Microbiol* 88(11), e0008522.

Valente S, Piombo E, Schroeckh V, Meloni GR, Heinekamp T, Brakhage AA, Spadaro D (2021) CRISPR-Cas9-based discovery of the verrucosidin biosynthesis gene cluster in *Penicillium polonicum*. *Front Microbiol* 12, 660871.

Flak M, Krespach MKC, Pschibul A, Schroeckh V, Brakhage AA (2020) New avenues towards drug discovery in fungi. In: *The Mycota 2*, pp. 267-295. Springer, Cham. ISBN: 978-3-030-49923. (Review)

Krespach MKC, García-Altres M, Flak M, Schoeler H, Scherlach K, Netzker T, Schmalzl A, Mattern DJ, Schroeckh V, Komor AJ, Mittag M, Hertweck C, Brakhage AA (2020) Lichen-like association of *Chlamydomonas reinhardtii* and *Aspergillus nidulans* protects algal cells from bacteria. *ISME J* 14(11), 2794-2805.

Stefani N, Schroeckh V, Neugebauer U, Bohnert J, Brakhage AA (2020) Genome sequence of *Escherichia coli* K1683, Isolated from a urosepsis patient. *Microbiol Resour Announc* 9(9), e01297-19.

Stroe MC, Netzker T, Schroeckh V, Hanf B, Brakhage AA (2019) Microbial co-cultures as source of novel drugs for infections. In: Elsevier Science (ed.) *Comprehensive Natural Products III: Chemistry and Biology 3*, pp. Chapter 30015. Elsevier. (Review)

Fischer J, Müller SY, Netzker T, Jäger N, Gacek-Matthews A, Scherlach K, Stroe MC, García-Altres M, Pezzini F, Schoeler H, Reichelt M, Gershenzon, Krespach MK, Shelest E, Schroeckh V, Valiante V, Heinzl T, Hertweck C, Strauss J, Brakhage AA (2018) Chromatin mapping identifies BasR, a key regulator of bacteria-triggered production of fungal secondary metabolites. *eLife* 7, e40969.

Netzker T, Flak M, Krespach MK, Stroe MC, Weber J, Schroeckh V, Brakhage AA (2018) Microbial interactions trigger the production of antibiotics. *Curr Opin Microbiol* 45, 117-123. (Review)

Fischer J, Schroeckh V, Brakhage AA (2016) Awakening of fungal secondary metabolite gene clusters. In: Schmol M., Dattenböck C. (eds.) *Gene Expression Systems in Fungi: Advancements and Applications (Part II)*, pp. 253-273. Springer, Cham. ISBN: 978-3-319-27949. (Review)

Macheleidt J, Mattern DJ, Fischer J, Netzker T, Weber J, Schroeckh V, Valiante V, Brakhage AA (2016) Regulation and Role of Fungal Secondary Metabolites. *Annu Rev Genet* 50, 371-392. (Review)

Netzker T, Schroeckh V, Gregory MA, Flak M, Krespach MK, Leadlay PF, Brakhage AA (2016)

An Efficient Method To Generate Gene Deletion Mutants of the Rapamycin-Producing Bacterium *Streptomyces iranensis* HM 35. *Appl Environ Microbiol* 82(12), 3481-3492.

Tauber JP, Schroeckh V, Shelest E, Brakhage AA, Hoffmeister D (2016) Bacteria induce pigment formation in the basidiomycete *Serpula lacrymans*. *Environ Microbiol* 18, 5218-5227.

Netzker T, Fischer J, Weber J, Mattern DJ, König CC, Valiante V, Schroeckh V, Brakhage AA (2015) Microbial communication leading to the activation of silent fungal secondary metabolite gene clusters. *Front Microbiol* 6, 299. (Review)

Bohnert M, Nützmann HW, Schroeckh V, Horn F, Dahse HM, Brakhage AA, Hoffmeister D (2014) Cytotoxic and antifungal activities of melleolide antibiotics follow dissimilar structure-activity relationships. *Phytochemistry* 105, 101-108.

Horn F, Schroeckh V, Netzker T, Guthke R, Brakhage AA, Linde J (2014) Draft genome sequence of *Streptomyces iranensis*. *Genome Announc* 2(4), e00616-14.

Schroeckh V, Nützmann HW, Brakhage AA (2014) Fungal-actinomycete interactions – wakening of silent fungal secondary metabolism gene clusters via interorganismic interactions. In: Osbourn A, Goss RJ, Carter GT (eds.) *Natural Products: Discourse, Diversity, and Design* pp. 147-158. Wiley-Blackwell. ISBN: 978-1-118-29806.

König CC, Scherlach K, Schroeckh V, Horn F, Nietzsche S, Brakhage AA, Hertweck C (2013) Bacterium induces cryptic meroterpenoid pathway in the pathogenic fungus *Aspergillus fumigatus*. *Chembiochem* 14(8), 938-942.

Nützmann HW, Schroeckh V, Brakhage AA (2012) Regulatory cross talk and microbial induction of fungal secondary metabolite gene clusters. *Methods Enzymol* 517, 325-341.

Sarkar A, Funk AN, Scherlach K, Horn F, Schroeckh V, Chankhamjon P, Westermann M, Roth M, Brakhage AA, Hertweck C, Horn U (2012) Differential expression of silent polyketide biosynthesis gene clusters in chemostat cultures of *Aspergillus nidulans*. *J Biotechnol* 160(1-2), 64-71.

Brakhage AA, Schroeckh V (2011) Fungal secondary metabolites - strategies to activate silent gene clusters. *Fungal Genet Biol* 48(1), 15-22.

Burmester A, Shelest E, Glöckner G, Heddergott C, Schindler S, Staib P, Heidel A, Felder M, Petzold A, Szafranski K, Feuermann M, Pedruzzi I, Priebe S, Groth M, Winkler R, Li W, Kniemeyer O, Schroeckh V, Hertweck C, Hube B, White TC, Platzer M, Guthke R, Heitman J, Wöstemeyer J, Zipfel PF, Monod M, Brakhage AA (2011) Comparative and functional genomics provide insights into the pathogenicity of dermatophytic fungi. *Genome Biol* 12(1), R7.

Nützmann HW, Reyes-Dominguez Y, Scherlach K, Schroeckh V, Horn F, Gacek A, Schümann J, Hertweck C, Strauss J, Brakhage AA (2011) Bacteria-induced natural product formation in the fungus *Aspergillus nidulans* requires Saga/Ada-mediated histone acetylation. *Proc Natl Acad Sci U S A* 108(34), 14282-14287.

Scherlach K, Nützmann HW, Schroeckh V, Dahse HM, Brakhage AA, Hertweck C (2011) Cytotoxic pheofungins from an engineered fungus impaired in posttranslational protein modification. *Angew Chem Int Ed* 50(42), 9843-9847.

Scherlach K, Sarkar A, Schroeckh V, Dahse HM, Roth M, Brakhage AA, Horn U, Hertweck C

(2011) Two induced fungal polyketide pathways converge into antiproliferative spiroanthrones. *Chembiochem* 12(12), 1836-1839.

Bergmann S, Funk AN, Scherlach K, Schroeckh V, Shelest E, Horn U, Hertweck C, Brakhage AA (2010) Activation of a silent fungal polyketide biosynthesis pathway through regulatory cross talk with a cryptic nonribosomal peptide synthetase gene cluster. *Appl Environ Microbiol* 76(24), 8143-8149.

Schroeckh V, Scherlach K, Nützmann HW, Shelest E, Schmidt-Heck W, Schuemann J, Martin K, Hertweck C, Brakhage AA (2009) Intimate bacterial-fungal interaction triggers biosynthesis of archetypal polyketides in *Aspergillus nidulans*. *Proc Natl Acad Sci U S A* 106(34), 14558-14563.

Brakhage AA, Schuemann J, Bergmann S, Scherlach K, Schroeckh V, Hertweck C (2008) Activation of fungal silent gene clusters: a new avenue to drug discovery. *Prog Drug Res* 66, 1, 3-1,12.

*equal contribution #corresponding author