

# Publications

Katsipoulaki M, Stappers MHT, Malavia-Jones D, Brunke S, Hube B, Gow NAR (2024) *Candida albicans* and *Candida glabrata*: global priority pathogens. *Microbiol Mol Biol Rev* 88(2), e0002123. (Review)

Alings F, Scharmann K, Eggers C, Böttcher B, Sokołowski M, Shvetsova E, Sharma P, Roth J, Rashiti L, Glatt S, Brunke S, Leidel SA (2023) Ncs2\* mediates *in vivo* virulence of pathogenic yeast through sulphur modification of cytoplasmic transfer RNA. *Nucleic Acids Res* 51(15), 8133-8149.

Siscar-Lewin S, Hube B, Brunke S (2022) Emergence and evolution of virulence in human pathogenic fungi. *Trends Microbiol* 30(7), 693-704. (Review)

Alonso-Monge R, Gresnigt MS, Román E, Hube B, Pla J (2021) *Candida albicans* colonization of the gastrointestinal tract: A double-edged sword. *PLOS Pathog* 17(7), e1009710.

Graf K, Hube B, Brunke S (2021) Experimental evolution of *Candida* by serial passaging in host cells. *Methods Mol Biol* 2260, 145-154.

Schaefer S, Pham TTP, Brunke S, Hube B, Jung K, Lenardon MD, Boyer C (2021) Rational design of an antifungal polyacrylamide library with reduced host-cell toxicity. *ACS Appl Mater Interfaces* 13(23), 27430-27444.

Siscar-Lewin S, Gabaldón T, Aldejohann AM, Kurzai O, Hube B, Brunke S (2021) Transient mitochondria dysfunction confers fungal cross-resistance against phagocytic killing and fluconazole. *mBio* 12(3), e0112821.

Sprenger M, Brunke S, Hube B, Kasper L (2021) A TRP1-marker-based system for gene complementation, overexpression, reporter gene expression, and gene modification in *Candida glabrata*. *FEMS Yeast Res* 20(8), foaa066.

Van Ende M, Timmermans B, Vanreppelen G, Siscar-Lewin S, Fischer D, Wijnants S, Romero CL, Yazdani S, Rogiers O, Demuyser L, Van Zeebroeck G, Cen Y, Kuchler K, Brunke S, Van Dijck P (2021) The involvement of the *Candida glabrata* trehalase enzymes in stress resistance and gut colonization. *Virulence* 12(1), 329-345.

Vij R, Hube B, Brunke S (2021) Uncharted territories in the discovery of antifungal and antivirulence natural products from bacteria. *Comput Struct Biotechnol J* 19, 1244-1252. (Review)

Commichau FM, Anstatt J, Krappmann S, Stegmann E, Banhart S, Papenfort K, Brunke S, Hube B, Bramkamp M, Herbert M, Sander J, Mueller JW, Wagner M, Daus ML (2020) Wettrüsten zwischen Pilz und Wirt. *BIOSpektrum* 26(3), 280-286. (Review)

Ho J, Wickramasinghe DN, Nikou SA, Hube B, Richardson JP, Naglik JR (2020) Candidalysin is a potent trigger of alarmin and antimicrobial peptide release in epithelial cells. *Cells* 9(3), 699.

König A, Müller R, Mogavero S, Hube B (2020) Fungal factors involved in host immune evasion, modulation and exploitation during infection. *Cell Microbiol* 23(1), e13272. (Review)

Ruben S, Garbe E, Mogavero S, Albrecht-Eckardt D, Hellwig D, Häder A, Krüger T, Gerth K, Jacobsen ID, Elshafee O, Brunke S, Hünninger K, Kniemeyer O, Brakhage AA, Morschhäuser J, Hube B, Vylkova S, Kurzai O, Martin R (2020) *Ahr1* and *Tup1* contribute to the transcriptional control of virulence-associated genes in *Candida albicans*. *mBio* 11(2), e00206-20.

Seelbinder B, Chen J, Brunke S, Vazquez-Urbe R, Santhanam R, Meyer AC, de Oliveira Lino FS, Chan KF, Loos D, Imamovic L, Tsang CC, Lam RP, Sridhar S, Kang K, Hube B, Woo PCY, Sommer MOA, Panagiotou G (2020) Antibiotics create a shift from mutualism to competition in human gut communities with a longer-lasting impact on fungi than bacteria. *Microbiome* 8(1), 133.

Arastehfar A, Boekhout T, Butler G, De Cesare GB, Dolk E, Gabaldón T, Hafez A, Hube B, Hagen F, Hovhannisyan H, Iracane E, Kostrzewa M, Lackner M, Lass-Flörl C, Llorens C, Mixão V, Munro C, Oliveira-Pacheco J, Pekmezovic M, Pérez-Hansen A, Sanchez AR, Sauer FM, Sparbier K, Stavrou AA, Vanechoutte M, Vatanshenassan M (2019) Recent trends in molecular diagnostics of yeast infections: from PCR to NGS. *FEMS Microbiol Rev* 43(5), 517-547. (Review)

Bacher P, Hohnstein T, Beerbaum E, Röcker M, Blango MG, Kaufmann S, Röhm J, Eschenhagen P, Grehn C, Seidel K, Rickerts V, Lozza L, Stervbo U, Nienen M, Babel N, Milleck J, Assenmacher M, Cornely OA, Ziegler M, Wisplinghoff H, Heine G, Worm M, Siegmund B, Maul J, Creutz P, Tabeling C, Ruwwe-Glösenkamp C, Sander LE, Knosalla C, Brunke S, Hube B, Kniemeyer O, Brakhage AA, Schwarz C, Scheffold A (2019) Human anti-fungal Th17 immunity and pathology rely on cross-reactivity against *Candida albicans*. *Cell* 176(6), 1340-1355.

Chu H, Duan Y, Lang S, Jiang L, Wang Y, Llorente C, Liu J, Mogavero S, Bosques-Padilla F, Abalde JG, Vargas V, Tu XM, Yang L, Hou X, Hube B, Stärkel P, Schnabl B (2019) The *Candida albicans* exotoxin Candidalysin promotes alcohol-associated liver disease. *J Hepatol* 72(3), 391-400.

Correia I, Prieto D, Román E, Wilson D, Hube B, Alonso-Monge R, Pla J (2019) Cooperative role of MAPK pathways in the interaction of *Candida albicans* with the host Epithelium. *Microorganisms* 8(1), 48.

Fischer D, Gessner G, Fill TP, Barnett R, Tron K, Dornblut K, Kloss F, Stallforth P, Hube B, Heinemann SH, Hertweck C, Scherlach K, Brunke S (2019) Disruption of membrane integrity by the bacteria-derived antifungal jagaricin. *Antimicrob Agents Chemother* 63(9), e00707-19.

Gimeno-Valiente F, Riffo-Campos ÁL, Vallet-Sánchez A, Siscar-Lewin S, Gambardella V, Tarazona N, Cervantes A, Franco L, Castillo J, López-Rodas G (2019) ZNF518B gene up-regulation promotes dissemination of tumour cells and is governed by epigenetic mechanisms in colorectal cancer. *Sci Rep* 9(1), 9339.

Ho J, Yang X, Nikou SA, Kichik N, Donkin A, Ponde NO, Richardson JP, Gratacap RL, Archambault LS, Zwirner CP, Murciano C, Henley-Smith R, Thavaraj S, Tynan CJ, Gaffen SL, Hube B, Wheeler RT, Moyes DL, Naglik JR (2019) Candidalysin activates innate epithelial immune responses via epidermal growth factor receptor. *Nat Commun* 10(1), 2297.

Ikonomova SP, Moghaddam-Taaheri P, Wang Y, Doolin MT, Stroka KM, Hube B, Karlsson AJ (2019) Effects of histatin 5 modifications on antifungal activity and kinetics of proteolysis. *Protein Sci* 29(2), 480-493.

Ishchuk OP, Ahmad KM, Koruza K, Bojanovič K, Sprenger M, Kasper L, Brunke S, Hube B, Säll T, Hellmark T, Gullstrand B, Brion C, Freel K, Schacherer J, Regenber B, Knecht W, Piškur J

(2019) RNAi as a tool to study virulence in the pathogenic yeast *Candida glabrata*. *Front Microbiol* 10, 1679.

Naglik JR, Gaffen SL, Hube B (2019) Candidalysin: Discovery and function in *Candida albicans* infections. *Curr Opin Microbiol* 52, 100-109. (Review)

Pekmezovic M, Mogavero S, Naglik JR, Hube B (2019) Host-pathogen interactions during female genital tract infections. *Trends Microbiol* 27(12), 982-996. (Review)

Siscar-Lewin S, Hube B, Brunke S (2019) Antivirulence and avirulence genes in human pathogenic fungi. *Virulence* 10(1), 935-947. (Review)

Swidergall M, Khalaji M, Solis N, Moyes D, Drummond R, Hube B, Lionakis M, Murdoch C, Filler S, Naglik J (2019) Candidalysin is required for neutrophil recruitment and virulence during systemic *Candida albicans* infection. *J Infect Dis* 220(9), 1477-1488.

Gerwien F, Skrahina V, Kasper L, Hube B, Brunke S (2018) Metals in fungal virulence. *FEMS Microbiol Rev* 42(1), fux050. (Review)

Guerrero QW, Fan L, Brunke S, Milkowski A, Rosado-Mendez IM, Hall TJ (2018) Power spectrum consistency among systems and transducers. *Ultrasound Med Biol* 44(11), 2358-2370.

Wolf T, Kämmer P, Brunke S, Linde J (2018) Two's company: studying interspecies relationships with dual RNA-seq. *Curr Opin Microbiol* 42, 7-12. (Review)

Hsieh SH, Brunke S, Brock M (2017) Encapsulation of antifungals in micelles protects *Candida albicans* during gall-bladder infection. *Front Microbiol* 8, 117.

Böttcher B, Pöllath C, Staib P, Hube B, Brunke S (2016) *Candida* species rewired hyphae developmental programs for chlamydospore formation. *Front Microbiol* 7, 1697.

Naranjo-Ortiz MA, Brock M, Brunke S, Hube B, Marcet-Houben M, Gabaldón T (2016) Widespread inter- and intra-Ddomain horizontal gene transfer of d-amino acid metabolism enzymes in eukaryotes. *Front Microbiol* 7, 2001.

Böttcher B, Palige K, Jacobsen ID, Hube B, Brunke S (2015) Csr1/Zap1 maintains zinc homeostasis and influences virulence in *Candida dubliniensis* but is not coupled to morphogenesis. *Eukaryot Cell* 14(7), 661-670.

Brunke S, Quintin J, Kasper L, Jacobsen ID, Richter ME, Hiller E, Schwarzmüller T, d'Enfert C, Kuchler K, Rupp S, Hube B, Ferrandon D (2015) Of mice, flies - and men? Comparing fungal infection models for large-scale screening efforts. *Dis Model Mech* (8), 473-486.

Brunke S, Hube B (2014) Adaptive prediction as a strategy in microbial infections. *PLOS Pathog* 10(10), e1004356.

Brunke S, Seider K, Fischer D, Jacobsen ID, Kasper L, Jablonowski N, Wartenberg A, Bader O, Enache-Angoulvant A, Schaller M, d'Enfert C, Hube B (2014) One small step for a yeast - Microevolution within macrophages renders *Candida glabrata* hypervirulent due to a single point mutation. *PLOS Pathog* 10(10), e1004478.

Fischer D, Hube B, Brunke S (2014) Fine-scale chromosomal changes in fungal fitness. *J Curr*

*Fungal Infect Rep* Vol. 8(2), 171-178. (Review)

Schwartz VU, Winter S, Shelest E, Marcet-Houben M, Horn F, Wehner S, Linde J, Valiante V, Sammeth M, Riege K, Nowrousian M, Kaerger K, Jacobsen ID, Marz M, Brakhage AA, Gabaldón T, Böcker S, Voigt K (2014) Gene expansion shapes genome architecture in the human pathogen *Lichtheimia corymbifera*: an evolutionary genomics analysis in the ancient terrestrial Mucorales (Mucoromycotina). *PLoS Genetics* 10(8), e1004496.

Wartenberg A, Linde J, Martin R, Schreiner M, Horn F, Jacobsen ID, Jenull S, Wolf T, Kuchler K, Guthke R, Kurzai O, Forche A, d'Enfert C, Brunke S, Hube B (2014) Microevolution of *Candida albicans* in macrophages restores filamentation in a nonfilamentous mutant. *PLoS Genet* 10(12), e1004824.

Brunke S, Hube B (2013) Two unlike cousins: *Candida albicans* and *C. glabrata* infection strategies. *Cell Microbiol* 15(5), 701-708. (Review)

Lüttich A, Brunke S, Hube B, Jacobsen ID (2013) Serial passaging of *Candida albicans* in systemic murine infection suggests that the wild type strain SC5314 is well adapted to the murine kidney. *PLoS One* 8(5), e64482.

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