Dr. Olaf Kniemeyer

Molecular and Applied Microbiology · Deputy head of Department +49 3641 532-1071
olaf.kniemeyer@leibniz-hki.de

Topics

A. fumigatus pathobiology and novel therapeutic strategies

Publications

Bruch A*, Lazarova V*, Krueger T, Schaeuble S, Kelani AA, Lehenberger P, Kniemeyer O, Panagiotou G, Blango MG (2024) Mod5 mediates a molecular trade-off between optimal gene expression and antifungal resistance. *bioRxiv* [Preprint]

Details

Müller R, König A, Groth S, Zarnowski R, Visser C, Handrianz T, Maufrais C, Krüger T, Himmel M, Lee S, Priest EL, Yildirim D, Richardson JP, Blango MG, Bougnoux ME, Kniemeyer O, d'Enfert C, Brakhage AA, Andes DR, Trümper V, Nehls C, Kasper L, Mogavero S, Gutsmann T, Naglik JR, Allert S, Hube B (2024) Secretion of the fungal toxin candidalysin is dependent on conserved precursor peptide sequences. *Nat Microbiol* 9(3), 669-683.

Details

Bigalke A, Krüger T, Jia LJ, Kniemeyer O, Brakhage AA (2023) Pathoproteomik des humanpathogenen Pilzes *Aspergillus fumigatus*. *BIOspektrum* (3), 269-272.

Details

Jia LJ, Rafiq M, Radosa L, Hortschansky P, Cunha C, Cseresnyés Z, Krüger T, Schmidt F, Heinekamp T, Straßburger M, Loeffler B, Doenst T, Lacerda JF, Campos A, Figge MT, Carvalho A, Kniemeyer O, Brakhage AA[#] (2023) *Aspergillus fumigatus* hijacks human p11 to redirect fungal-containing phagosomes to non-degradative pathway. *Cell Host Microbe* 31(3), 373-388.e10.

Details

Kelani AA, Bruch A, Rivieccio F, Visser C, Krüger T, Weaver D, Pan X, Schaeuble S, Panagiotou G, Kniemeyer O, Bromley MJ, Bowyer P, Barber AE, Brakhage AA, Blango MG (2023) Disruption of the *A. fumigatus* RNA interference machinery alters the conidial transcriptome. *RNA* 29(7), 1033-1050.

Details

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.

Details

Martini GR, Tikhonova E, Rosati E, DeCelie MB, Sievers LK, Tran F, Lessing M, Bergfeld A, Hinz S, Nikolaus S, Kümpers J, Matysiak A, Hofmann P, Saggau C, Schneiders S, Kamps AK, Jacobs G, Lieb W, Maul J, Siegmund B, Seegers B, Hinrichsen H, Oberg HH, Wesch D, Bereswill S, Heimesaat MM, Rupp J, Kniemeyer O, Brakhage AA, Brunke S, Hube B, Aden K, Franke A, Iliev ID, Scheffold A, Schreiber S, Bacher P (2023) Selection of cross-reactive T cells by commensal and food-derived yeasts drives cytotoxic TH1 cell responses in Crohn's disease. *Nat Med* 29(10), 2602-2614.

Details

Ramírez-Zavala B, Betsova D, Schwanfelder S, Krüger I, Mottola A, Krüger T, Kniemeyer O, Brakhage AA, Morschhäuser J (2023) Multiple phosphorylation sites regulate the activity of the repressor Mig1 in *Candida albicans*. *mSphere* 8(6), e0054623.

Details

Sala A, Ardizzoni A, Spaggiari L, Vaidya N, van der Schaaf J, Rizzato C, Cermelli C, Mogavero S, Krüger T, Himmel M, Kniemeyer O, Brakhage AA, King BL, Lupetti A, Comar M, de Seta F, Tavanti A, Blasi E, Wheeler RT, Pericolini E (2023) A new phenotype in *Candida*-epithelial cell interaction distinguishes colonization-versus culvovaginal candidiasis-associated strains. *mBio* 14(2), e0010723.

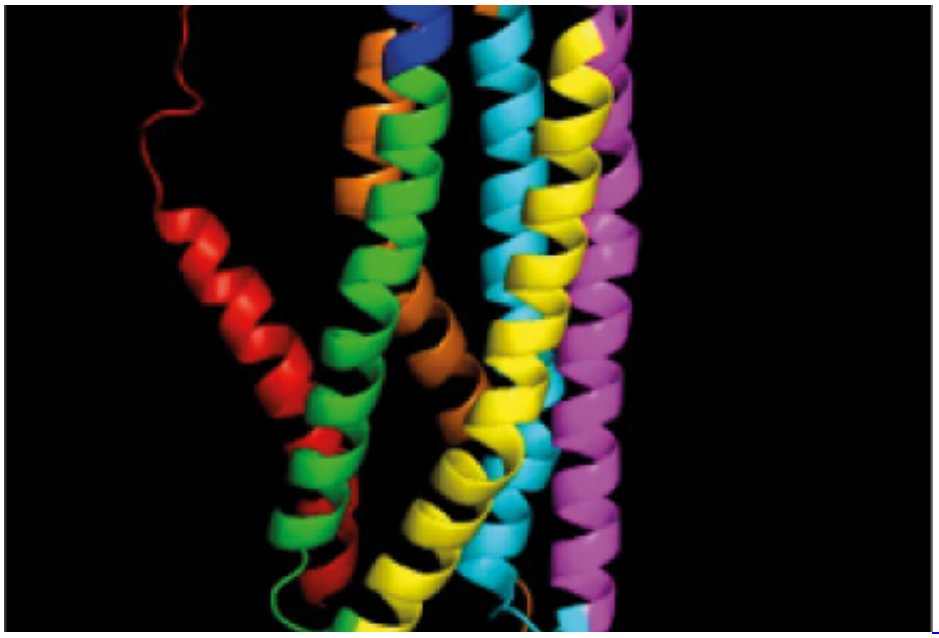
Details

Schruefer S, Pschibul A, Wong SSW, Sae-Ong T, Wolf T, Schäuble S, Panagiotou G, Brakhage AA, Aimanianda V, Kniemeyer O, Ebel F (2023) Distinct transcriptional responses to fludioxonil in *Aspergillus fumigatus* and its ΔtcsC and Δskn7 mutants reveal a crucial role for Skn7 in the cell wall reorganizations triggered by this antifungal. *BMC Genomics* 24(1), 684.

Details

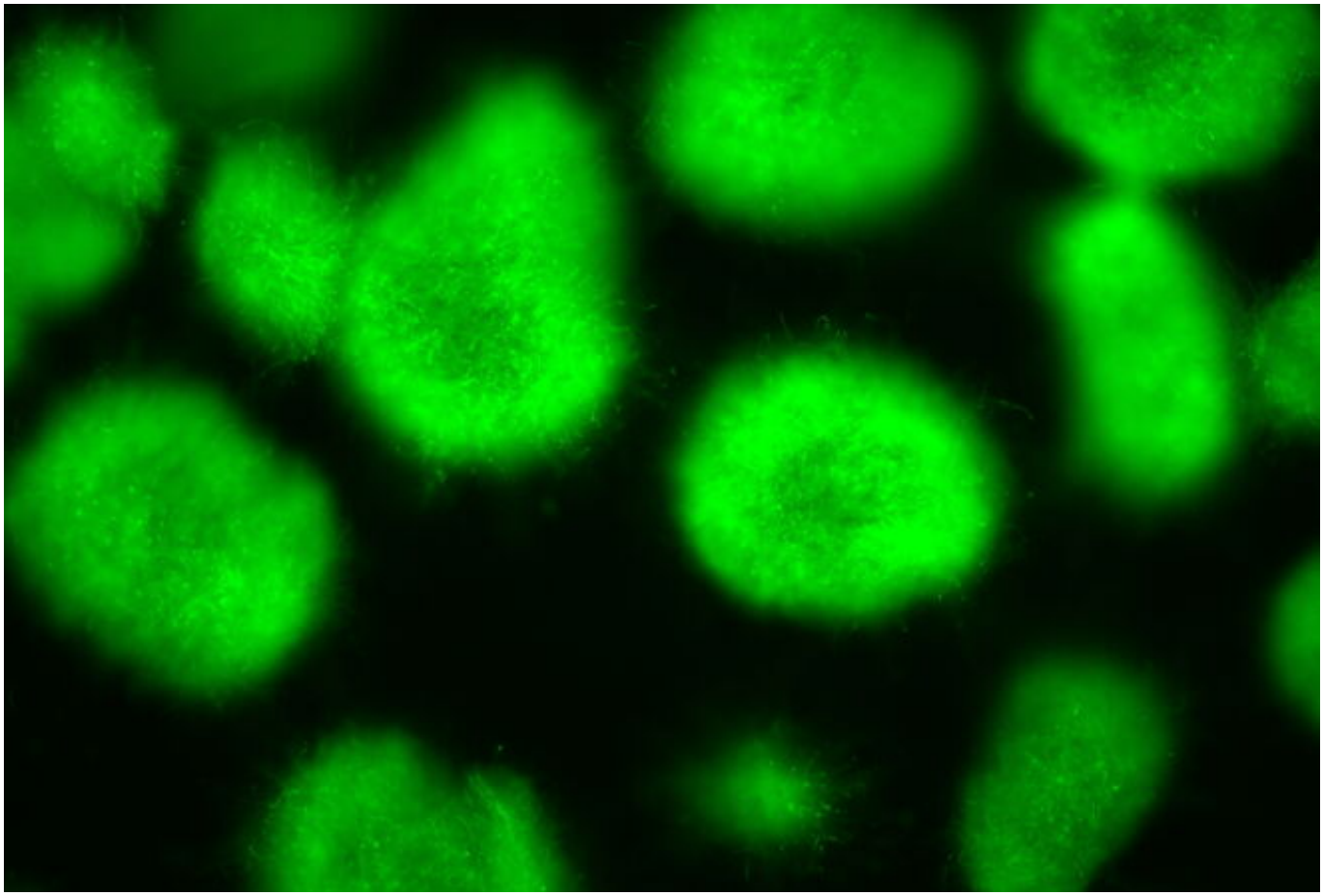
Publication list as PDF

News

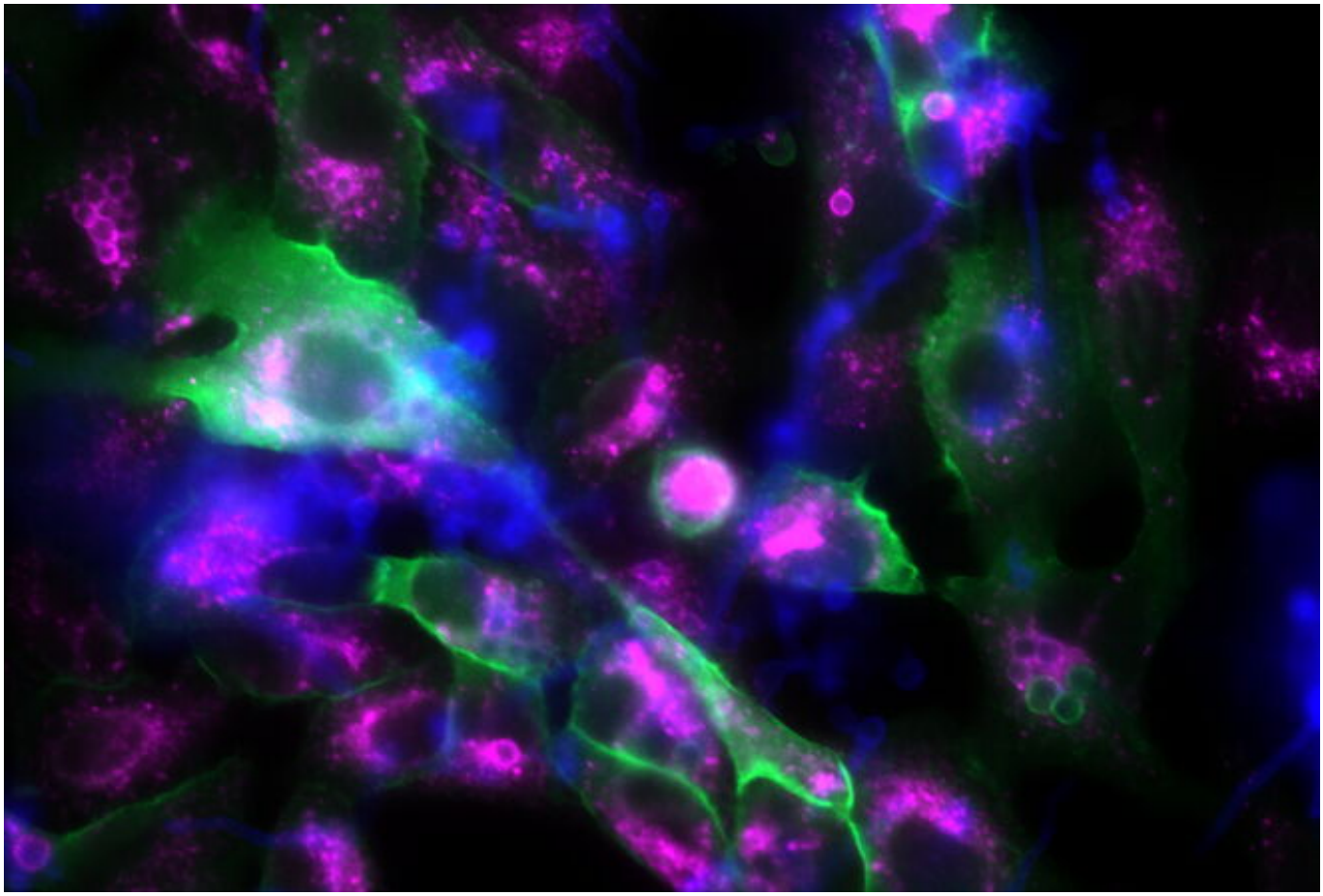


The laborious path of a fungal toxin The toxin Candidalysin of the yeast Candida albicans is incorporated into an unusual protein structure during an infection, the composition of which h... 03/12/2024 Read more

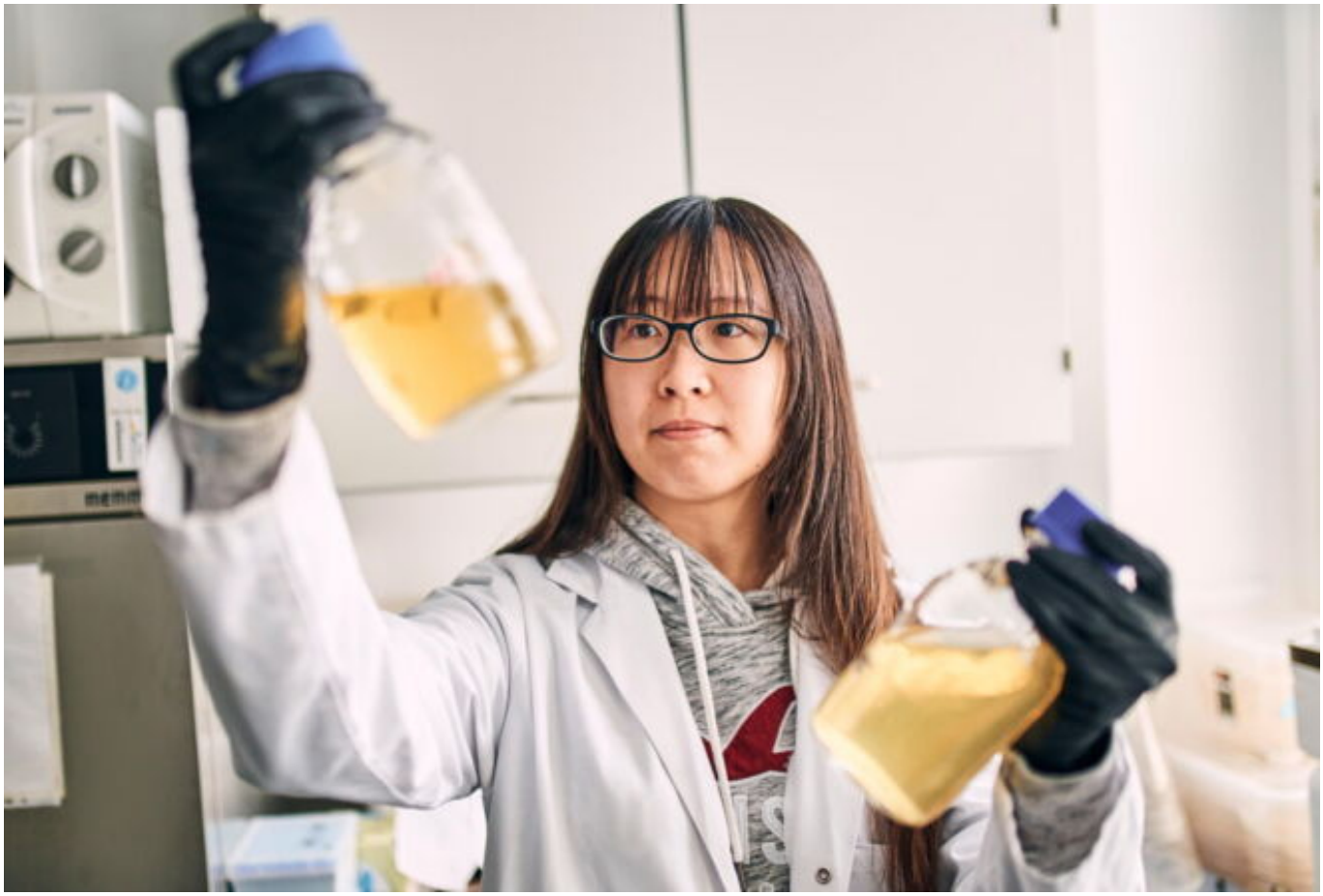
medac research award 2023 for cutting-edge research The Leibniz Institute for Natural Product Research and Infection Biology (Leibniz-HKI) has awarded the medac research award to the institute's bes... 03/07/2024 Read more



Bacterial signallers in the soil Bacteria of the genus Streptomyces produce chemical substances called arginoketides, to which many other microorganisms react: Bacteria form biofilms,... 06/27/2023 Read more



Fungal spores hijack lung cells The pathogenic fungus Aspergillus fumigatus escapes elimination from surface cells of the human lung by binding to a human protein. In doing so, it is…
03/09/2023 Read more



How does multicellularity develop? The unicellular marine organism Salpingoeca rosetta belongs to the group of choanoflagellates. When hunting for bacteria, these protozoa can detect th…
09/02/2022 Read more

Focus on life-threatening fungal infections Collaborative Research Center "FungiNet" granted DFG funding for a further four years. 05/25/2021 Read more