



PhD Sandra Timme

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Curriculum vitae

Main Research Areas

- **Topic of the PhD thesis:** "Agent-based modelling of the spatio-temporal interaction between immune cells and human-pathogenic fungi"
- agent-based modelling and simulation of host-pathogen interactions
- interaction of immune cells and *Candida albicans* in human blood
- migration dynamics of immune cells as a consequence of fungal infections

Professional Career

since 2018	Postdoctoral researcher in the group Applied Systems Biology at Hans Knöll Institute
2018	PhD in Bioinformatics at the Friedrich Schiller University Jena
2013	M.Sc. in Bioinformatics at the Friedrich Schiller University Jena
2011	B.Sc. in Bioinformatics at the Friedrich Schiller University Jena

Publications

Valentine M^{*}, Rudolph P^{*}, Dietschmann A, Tsavou A, Mogavero S, Lee S, Priest EL, Zhurgenbayeva G, Jablonowski N, Timme S, Eggeling C, Allert S, Dolk E, Naglik JR, Figge MT, Gresnigt MS^{*#}, Hube B^{*#} (2024) Nanobody-mediated neutralization of candidalysin prevents epithelial damage and inflammatory responses that drive vulvovaginal candidiasis pathogenesis. *mBio* 15(3), e0340923.

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Saffer C, Timme S, Rudolph P, Figge MT[#] (2023) Surrogate infection model predicts optimal alveolar macrophage number for clearance of *Aspergillus fumigatus* infections. *NPJ Syst Biol Appl* 9, 12.

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Engels G, Forster J, Streng A, Rücker V, Rudolph P, Pietsch F, Wallstabe J, Wallstabe L, Krauthausen M, Schmidt J, Ludwig T, Bauer C, Gierszewski D, Bendig J, Timme S, Jans T, Weißbrich B, Romanos M, Dölken L, Heuschmann P, Härtel C, Gágyor I, Figge MT, Liese J, Kurzai O (2022) Acceptance of different self-sampling methods for semiweekly SARS-CoV-2 testing in asymptomatic children and childcare workers at German Day Care Centers: A nonrandomized controlled trial. *JAMA Netw Open* 5(9), e2231798.

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Forster J, Streng A, Rudolph P, Rücker V, Wallstabe J, Timme S, Pietsch F, Hartmann K, Krauthausen M, Schmidt J, Ludwig T, Gierszewski D, Jans T, Engels G, Weißbrich B, Romanos M, Dölken L, Heuschmann P, Härtel C, Gágyor I, Figge MT, Kurzai O, Liese J (2022) Feasibility of SARS-CoV-2 surveillance testing among children and childcare workers at German Day Care Centers: A nonrandomized controlled trial. *JAMA Netw Open* 5(1), e2142057.

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Lehnert T^{*}, Leonhardt I^{*}, Timme S, Thomas-Rüddel D, Bloos F, Sponholz C, Kurzai O, Figge MT[#], Hünninger K[#] (2021) *Ex vivo* immune profiling in patient blood enables quantification of innate immune effector functions. *Sci Rep* 11(1), 12039.

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Blickensdorf M, Timme S, Figge MT (2020) Hybrid agent-based modeling of *Aspergillus fumigatus* infection to quantitatively investigate the role of Pores of Kohn in human alveoli. *Front Microbiol* 11, 1951.

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Blickensdorf M, Timme S, Figge MT (2019) Comparative assessment of aspergillosis by virtual infection modeling in murine and human lung. *Front Immunol* 10, 142.

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Prauße MTE, Lehnert T, Timme S, Hünninger K, Leonhardt I, Kurzai O, Figge MT (2018) Predictive virtual infection modeling of fungal immune evasion in human whole blood. *Front Immunol* 9, 560.

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Timme S, Lehnert T, Prauße MTE, Hünninger K, Leonhardt I, Kurzai O, Figge MT (2018) Quantitative simulations predict treatment strategies against fungal infections in virtual neutropenic patients. *Front Immunol* 9, 667.

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Pollmächer J, Timme S, Schuster S, Brakhage AA, Zipfel PF, Figge MT (2016) Deciphering the counterplay of *Aspergillus fumigatus* infection and host inflammation by evolutionary games on graphs. *Sci Rep* 6, 27807.

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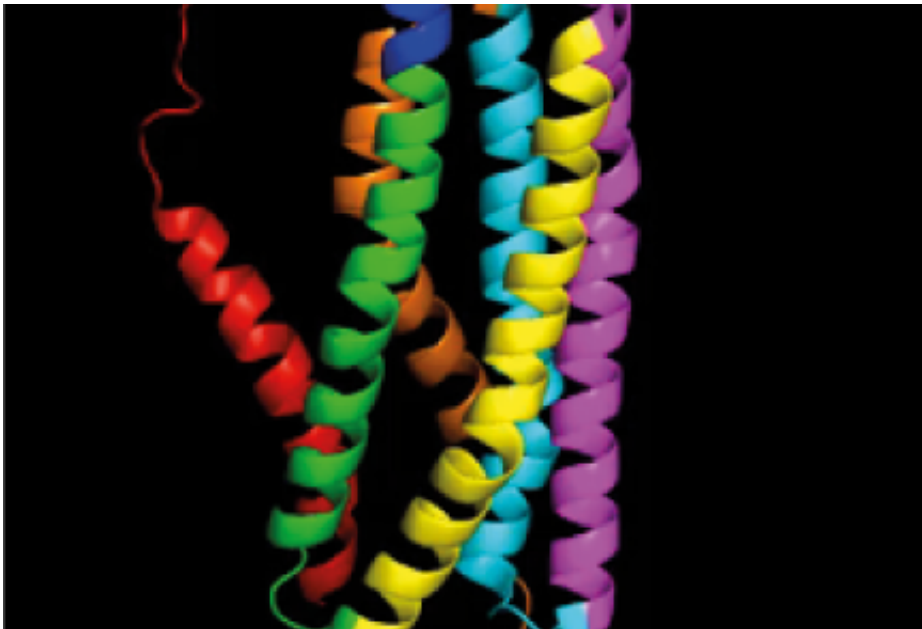
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