

Prof. Dr. Marc Thilo Figge

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Curriculum vitae

Main Research Areas

- Host-pathogen interaction of human pathogenic fungi
- Automated processing of microscopic images and spectroscopy data
- Spatiotemporal computer simulations of agent-based infection models

	Friedrich Schiller University Jena
since 2011	Head of Research Group Applied Systems
	Biology, Leibniz-HKI
2011-2021	Professor (W2) for Applied Systems Biology,
	Friedrich Schiller University Jena
2005-2010	Junior Fellow in Theoretical Immunology at the
	Frankfurt Institute for Advanced Studies (FIAS)
	of the Goethe University Frankfurt
2001-2005	Research assistant in Computer Physics at the
	University Groningen (NL)
2000	Dr. rer. nat. in Physics at the University
	Groningen (NL)
1995	Diploma in Physics at the University Dortmund

$\textbf{Awards} \cdot \textbf{Appointments} \cdot \textbf{Scientific Activities}$

Awards

2011 - 2017 Adjunct Fellow at Frankfurt Institute for Advanced Studies (FIAS)

Appointments and Scientific Activities

since 2023	Board Member and Coordinator of Task Area "Bioimage Informatics" in the DFG-funded
	national research data management initiative "NFDI4Bioimage"
since 2023	Board Member and PI in the DFG-Research
	Training School RTG 2723 – "Materials-
	Microbes-Microenvironments"
since 2023	Board Member of the Beutenberg Campus e.V.
	"Life Science meets Physics"
since 2023	Editor: PLOS Complex Systems
since 2023	Editor: Biological Imaging
since 2022	Coordinator of Basic Technology 3 in the BMBF-
	funded "Leibniz Center for Photonics in Infection
	Research"
since 2022	Coordinator of the BMBF-funded "Multi-Model-
	Simulator Project" in the funding line
	"Computational Life Sciences"
since 2021	Deputy Coordinator of the "Jena School for
	Microbial Communication"
since 2019	Coordinator of Research Area C - Data Synopsis
	in the Excellence Cluster "Balance of the
	Microverse"
since 2019	Member of the Management Board of the
	Microverse Imaging Center in the Excellence
	5 5

	Cluster "Balance of the Microverse"
since 2019	Speaker and PI of Leibniz ScienceCampus "InfectoOptics"
since 2019	Editor: Scientific Reports
since 2017	Ombudsperson at the Leibniz Institute for
	Natural Product Research and Infection Biology
since 2017	PI and member of the DFG-Collaborative
	Research Center 1278 PolyTarget
since 2017	Editor: Cytometry A
since 2015	Member: Jena Center for Soft Matter
since 2015	Member: Michael Stifel Center for Data-Driven
	and Simulation Science
since 2014	PI and member of the DFG-Collaborative
	Research Center 124 FungiNet
since 2012	Organizer: Biennial international symposium on
	"Image-based Systems Biology" (IbSB)
since 2011	Organizer: Biennial international symposium on
	"Systems Biology of Microbial Infection" (SBMI)
since 2011	Faculty member and PI in the "International
	Leibniz Research School for Microbial and
	Biomolecular Interactions"
since 2011	Faculty member and PI in the "Jena School for
	Microbial Communication"

Publications

Alonso-Roman R, Mosig AS, Figge MT, Papenfort K, Eggeling C, Schacher FH, Hube B, Gresnigt MS (2024) Organ-on-chip models for infectious disease research. *Nat Microbiol* 9(4), 891-904.

Details



Jojić K^{*}, Gherlone F^{*}, Cseresnyés Z, Bissell AU, Hoefgen S, Hoffmann S, Huang Y, Janevska S, Figge MT, Valiante V (2024) The spatial organization of sphingofungin biosynthesis in *Aspergillus fumigatus* and its cross-interaction with sphingolipid metabolism. *mBio* 15(3), e0019524.

Details



Kaden T^{*}, Alonso-Roman R^{*}, Akbarimoghaddam P^{*}, Mosig AS, Graf K, Raasch M, Hoffmann B, Figge MT[#], Hube B[#], Gresnigt MS[#] (2024) Modeling of intravenous caspofungin administration using an intestine-on-chip reveals altered *Candida albicans* microcolonies and pathogenicity. *Biomaterials* 307, 122525.

Details



Ruhland E, Siemers M^{*}, Gerst R^{*}, Späth F, Vogt LN, Figge MT, Papenfort K, Fröhlich KS[#] (2024) The global RNA-RNA interactome of *Klebsiella pneumoniae* unveils a small RNA regulator of cell division. *Proc Natl Acad Sci U S A* 121(9), e2317322121.

Details



Sarkar A, Praetorius JP, Figge MT[#] (2024) Deep learning-based characterization of neutrophil activation phenotypes in *ex vivo* human *Candida* blood infections. *Comput Struct Biotechnol J* 23, 1260-1273.

Details



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.

Details



Battista M, Hoffmann B, Bachelot Y, Zimmermann L, Teuber L, Jost A, Linde S, Westermann M, Müller MM, Slevogt H, Hammerschmidt S, Figge MT, Vilhena C**, Zipfel PF** (2023) The role of pneumococcal extracellular vesicles on the pathophysiology of the kidney disease hemolytic uremic syndrome. *mSphere* 8(4), e0014223.

Details



Behrendt F, Pretzel D, Cseresnyés Z, Kleinsteuber M, Wloka T, Radosa L, Figge MT, Gottschaldt M, Brakhage AA, Schubert US[#] (2023) Hydrophilic cryogels as potential 3D cell culture materials: Synthesis and characterization of 2-(methacrylamido) glucopyranose-based polymer scaffolds. *J Polym Sci* 61(23), 3039-3054.

Details



Behrendt F^{*}, Cseresnyés Z^{*}, Gerst R, Gottschaldt M, Figge MT[#], Schubert US[#] (2023) Evaluation of reproducible cryogel preparation based on automated image analysis using deep learning. *J Biomed Mater Res A* 111(11), 1734-1749.

Details



MT, Morrison H, Riecken LB, Press AT# (2023) Contribution of radixin and ezrin to the maintenance of hepatocytes' excretory function in health and disease. Heliyon 9(11), e21009.

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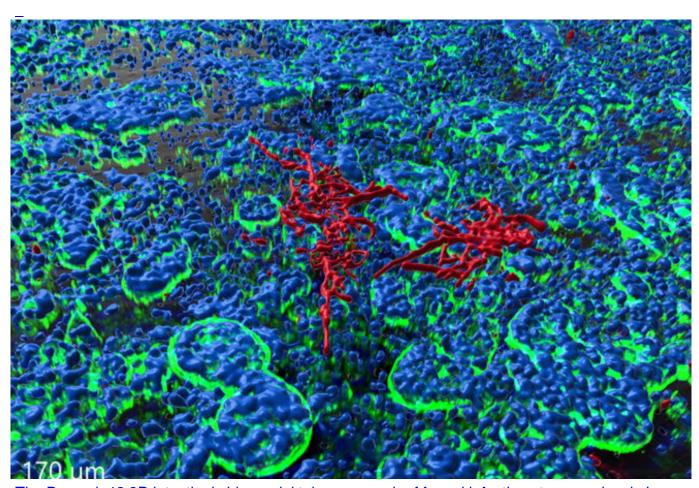
Publication list as PDF

Teachings

Lecture Systems Biology of Immunology Prof. Dr. Marc Thilo Figge Details

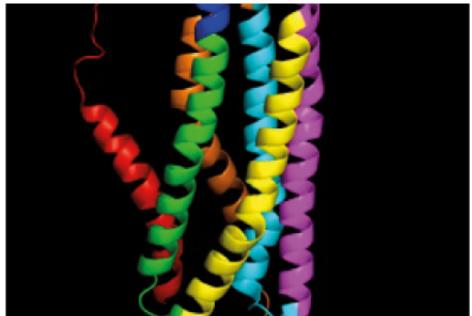
Lecture Image-based Systems Biology Prof. Dr. Marc Thilo Figge Details

News



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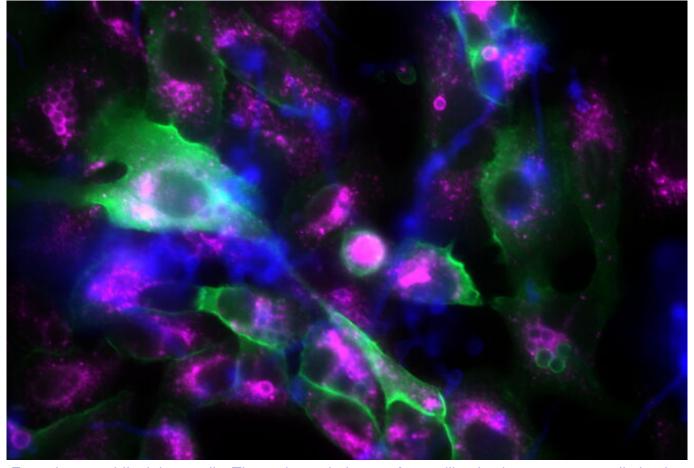
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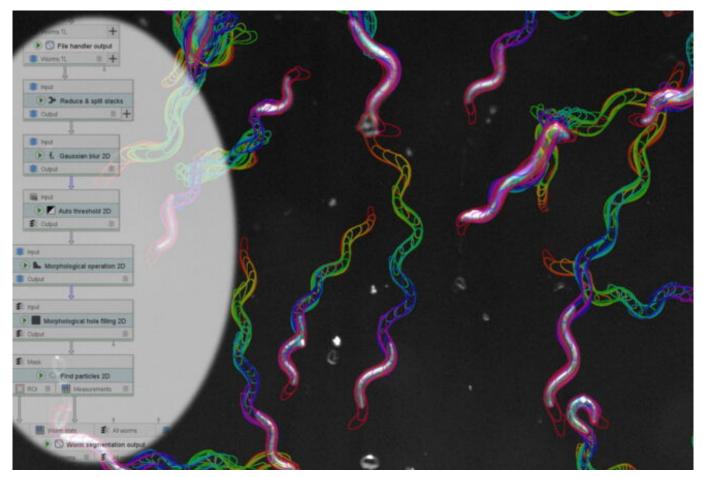
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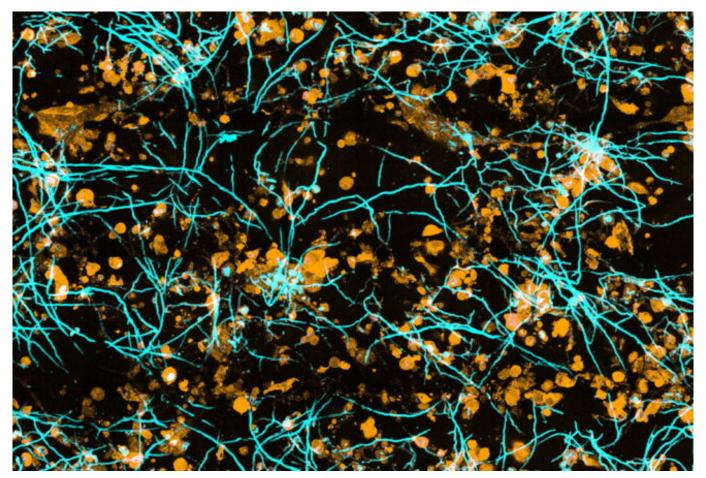
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