

## Prof. Dr. Zhenzhong Yu

**Personal:** Born in Qingdao, China  
Professor of Microbiology  
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**Research:** Microbiology, Fungi, Fungal Genetics and Cell Biology

Light, as one of the most important environmental cues, regulates also the physiological and morphological processes of fungi. For instance, light regulates asexual and sexual development, secondary metabolism, phototropism, circadian clock, nutrition uptake and pathogenicity of fungi. Many fungi have been equipped with red-light receptor phytochrome, blue-light receptor White Collar-1, VVD and cryptochrome, and green-light receptor opsin during evolution. We are currently using *Trichodema guizhouense* and *Aspergillus nidulans* as model organisms to investigate how fungi sense light and how light signal is transmitted in fungal cells.

### Education Background and Work Experience

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2019.05-	Nanjing Agricultural University	Professor
2016.10-2019.05	Karlsruhe Institute of Technology (KIT), Institute for Applied Bioscience	Postdoc
2016.10	Karlsruhe Institute of Technology (KIT) Institute for Applied Bioscience	Ph.D.
2012.09	East China University of Science and Technology	Master
2009.07	Yantai University	Bachelor

### Selected Publications (# co-first author, \* corresponding author)

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(1) Zhenzhong Yu, Reinhard Fischer\*, Light sensing and responses in fungi, **Nature Reviews Microbiology**, 2019, 17:25-36

(2) Zhenzhong Yu, Olivier Armant, Reinhard Fischer\*, Fungi use the SakA (HogA) pathway for phytochrome-dependent light signaling, **Nature Microbiology**, 2016,

1(5):16019

Cover (Volume 1 Issue 5 May 2016),

<http://www.nature.com/nmicrobiol/volumes/1/issues/5>

Highlight in *Nature reviews microbiology*: *Aspergillus* sees the light,

[http://www.nature.com/nrmicro/journal/v14/n4/full/nrmicro.2016.36.html?WT.freed\\_name=subjects\\_fungi](http://www.nature.com/nrmicro/journal/v14/n4/full/nrmicro.2016.36.html?WT.freed_name=subjects_fungi).

News and views in *Nature microbiology*: Fungal physiology: Red light plugs into MAPK pathway, <http://www.nature.com/articles/nmicrobiol201652>.

F1000Prime Recommendation

(3) Christian Streng, Jana Hartmann, Kai Leister, Norbert Krauß, Tilman Lamparter, Nicole Frankenberg-Dinkel, Franco Weth, Martin Bastmeyer, Zhenzhong Yu\*, Reinhard Fischer\*, Fungal phytochrome chromophore biosynthesis at mitochondria, **The EMBO Journal**, 2021, e108083

(4) Zhenzhong Yu\*, Jia Gao, Olumuyiwa Igbalajobi, Marek Skoneczny, Marzena Sieńko, Agnieszka M. Maciejewska, Jerzy Brzywczy, Reinhard Fischer\*, The sulfur metabolism regulator MetR is a global regulator controlling phytochrome-dependent light responses in *Aspergillus nidulans*, **Science Bulletin**, 2021, 66(6): 592-602

(5) Olumuyiwa Igbalajobi, Zhenzhong Yu\*, Reinhard Fischer\*, Red- and blue-light sensing in the plant pathogen *Alternaria alternata* depends on phytochrome and the white-collar protein LreA, **mBio**, 2019, 10: e00371-19

(6) Zhenzhong Yu#, Ain Ali#, Olumuyiwa Ayokunle Igbalajobi, Christian Streng, Kai Leister, Norbert Krauss, Tilman Lamparter\*, Reinhard Fischer\*, Two hybrid histidine kinases, TcsB and the phytochrome FphA, are involved in temperature sensing in *Aspergillus nidulans*, **Molecular Microbiology**, 2019, 112(6): 1814-1830

(7) Julian Roehrig#, Zhenzhong Yu#, Keon-Sang Chae, Jong-Hwa Kim, Kap-Hoon Han, Reinhard Fischer\*, The *Aspergillus nidulans* Velvet-interacting protein, VipA, is involved in light-stimulated heme biosynthesis, **Molecular Microbiology**, 2017, 105(6):825-838

(8) Zhenzhong Yu\*\*, Christian Streng#, Ramon F. Seibeld, Olumuyiwa A. Igbalajobi, Reinhard Fischer\*, Genome-wide analyses of light-regulated genes in *Aspergillus nidulans* reveal a complex interplay between different photoreceptors and novel photoreceptor functions, **PLoS Genetics**, 2021, 17(10): e1009845, in press

(9) Yifan Li, Tingting Sun, Degang Guo, Jia Gao, Jian Zhang, Feng Cai, Reinhard Fischer, Qirong Shen\* and Zhenzhong Yu\*, Comprehensive analysis of the regulatory network of blue-light-regulated conidiation and hydrophobin production in *Trichoderma guizhouense*, **Environmental Microbiology**, 2021, <https://doi.org/10.1111/1462-2920.15748>.

(10) Zhenzhong Yu\*, Jennifer Hübner, Satur Herrero, Victor Gourain, Reinhard Fischer\*, On the role of the global regulator RlcA in red-light sensing in *Aspergillus nidulans*, **Fungal Biology**, 2020, 124(5):447-457