



MMI 291 Seminar Series

Current Theme: Interdisciplinary Research

Fall Quarter 2022 – CRN 41473

Friday Seminar – 12:10-1 p.m.



“Genome-wide CRISPR screens identify immunomodulatory effectors in *Toxoplasma gondii*”

Research / Bio

Dr. Yifan Wang is an Assistant Project Scientist in the lab of Dr. Jeroen Saeij at UC Davis. He received his D.V.M. degree from Jilin Agricultural University, Changchun, China, in 2010. He then obtained a Ph.D. degree at Huazhong Agricultural University, Wuhan, China, in 2015. His thesis research mainly focused on the invasion mechanism of *Toxoplasma gondii*, an intracellular parasite that can infect almost all warm-blooded animals and invade all the nucleated cells.

In November 2015, Dr. Wang started his postdoctoral training at the Saeij lab, where he applied functional genomic approaches (e.g., mutagenesis screen and genome-wide CRISPR/Cas9 screen) to study *Toxoplasma* secreted effectors that modulate immune signals in macrophages and affect pathogenicity.

In August 2021, Dr. Wang received the NIH-K99/R00 “Pathway to Independence Award” from the National Institute of Allergy and Infectious Diseases (NIAID). Dr. Wang will be starting as an Assistant Professor in the Department of Microbiology and Immunology at the University of Michigan Medical School in January 2023.

His long-term research interests are understanding the immune response that determines host resistance to *Toxoplasma* infection and demonstrating the molecular basis of *Toxoplasma* effector-mediated host immune modulation.

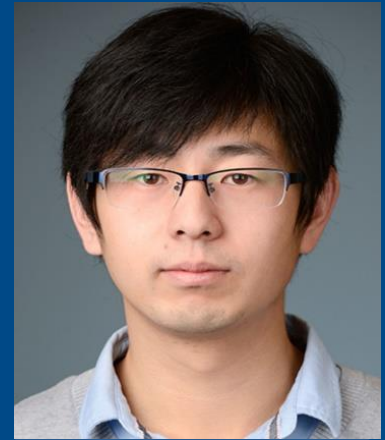
Publications

Wang Y*, Sangaré LO*, Paredes-Santos TC, Hassan MA, Krishnamurthy S, Furuta AM, Markus BM, Lourido S, Saeij JPJ. Genome-wide screens identify *Toxoplasma gondii* determinants of parasite fitness in IFN γ -activated murine macrophages. *Nature Communications*. 11(1):5258, 2020. PMID:33067458. (*Contributed equally)

Wang Y*, Sangaré LO*, Paredes-Santos TC, Saeij JPJ. *Toxoplasma* Mechanisms for Delivery of Proteins and Uptake of Nutrients Across the Host-Pathogen Interface. *Annual Review of Microbiology*. 74:567-586, 2020. PMID: 32680452. (*Contributed equally)

Wang Y*, Cirelli KM*, Barros PDC, Sangaré LO, Butty V, Hassan MA, Pesavento P, Mete A, Saeij JPJ. Three *Toxoplasma gondii* Dense Granule Proteins Are Required for Induction of Lewis Rat Macrophage Pyroptosis. *mBio*. 10(1), 2019. PMID: 30622189. (*Contributed equally)

November 4



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November 4, 2022
12:10 – 1 p.m.
ZOOM Meeting

Medical Microbiology
& Immunology
School of Medicine

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We hope to see you there!