

Personal information:

Name：**Li Wan** Current employer：**Shanghai Institute of Plant Physiology and Ecology**

Job title: **Research professor** Email：**lwan@sippe.ac.cn**

2020/04- Shanghai Institute of Plant Physiology and Ecology Principal investigator

2015/03-2020/01 University of North Carolina at Chapel Hill Postdoc (plant pathology)

2010/08-2014/11 University of Queensland PhD (biochemistry)

Research experiences：

(\* Equal contribution; # Corresponding author)

**Wan L**\*, Essuman K\*, Anderson RG, Sasaki Y, Monteiro F, Chung EH, Nishimura EO, Antonio AD, Milbrandt J#, Dangl JL#, Nishimura MT#. (2019). TIR Domains of Plant Immune Receptors are NAD+ Cleaving Enzymes that Promote Cell Death. **Science** 365: 799–803.

**Wan L**\* #, Koeck M\*, Williams SJ, Ashton AR, Lawrence GJ, Sakakibara H, Kojima M, Böttcher C, Ericsson DJ, Hardham AR, Jones DA, Ellis JG, Kobe B#, Dodds PN#. (2019). "Structural and functional insights into the modulation of the activity of a flax cytokinin oxidase by flax rust effector AvrL567-A." **Molecular Plant Pathology** 20(2): 211-222.

Williams SJ\*#, Sohn, KH\*#, **Wan L**\*, Bernoux M\*, Sarris PF, Segonzac C, Ve T, Ma Y, Saucet SB, Ericsson DJ, Casey LW, Lonhienne T, Winzor DJ, Zhang X, Coerdt A, Parker JE, Dodds PN, Kobe B#, Jones JD#. (2014). Structural basis for assembly and function of a heterodimeric plant immune receptor. **Science** 344, 299-303

El Kasmi F\*, Chung EH\*, Anderson RG, Li J, **Wan L**, Eitas TK, Gao Z#, Dangl JL#. (2017). Signaling from the plasma-membrane localized plant immune receptor RPM1 requires self-association of the full-length protein. **PNAS** 114(35): E7385-E7394.

Washington EJ, Mukhtar MS, Finkel OM, **Wan L**, Banfield MJ, Kieber JJ, Dangl JL#. (2016). Pseudomonas syringae type III effector HopAF1 suppresses plant immunity by targeting methionine recycling to block ethylene induction. **PNAS** 113(25): E3577-3586.

Representative publications:

Plants have evolved both cell surface and intracellular immune receptors to detect pathogen molecules and activate defense mechanisms. Plant intracellular immune receptors known as nucleotide-binding leucine-rich repeat (NLR) proteins recognize effectors secreted by pathogens into plant cells and initiate effector-triggered immunity (ETI). ETI involves strong defense gene induction and localized cell death at the site of infection to restrict pathogen spread. ETI confers effective but highly specific, not broad-spectrum resistance again pathogens. In nature, microbes can only successfully infect a small fraction of plant species, while remain non-pathogenic to most plant species. The broad-spectrum resistance plants confer against their non-host pathogens is termed Non-Host Resistance (NHR). The research group will use a combination of tools including plant genetics and molecular biology, and biochemistry and structure biology to investigate the molecular mechanisms of how plant NLRs function and how plant NHR occur.

Current research interests: