

# Yuhui Wang

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## Areas of Research

Cucumber genetics and genomics, disease resistance, and cucumber molecular breeding.

## Contact Information

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## Research Interests

**Specialty:** Statistic, Bioinformatics, Experimental design, etc.

### 1. Cucumber simple inheritance and quantitative genetic traits

The wild cucumbers harbor abundant exotic traits that worth to explore their genetic inheritance and use for cucumber breeding to improve cucumber quality.

### 2. Cucumber disease resistance

Cucumber downy mildew and powdery mildew are two major diseases that cause severe yield loss annually. Focus on reveal the genetic architecture of disease resistance in wild cucumber and investigate the mechanism of causal genes.

### 3. Cucumber genomic and domestication

India is the origin center of cucumber, which growth a number of exotic cucumbers. I work on the cucumber genomic and explore the domestication of modern cucumber.

### 4. Cucumber Breeding

Cooperate the traditional breeding method with molecular technology including marker assisted selection (MAS) and genetic engineering method in cucumber disease resistance breeding. Aim to develop elite cucumber lines.

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## Education Background

**Bachelor:** China Agricultural University

**Master:** China Agricultural University

**Doctor:** University of Wisconsin-Madison

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## Work experience

Assistant Scientist, University of Wisconsin-Madison, 2017-2020

Associate Professor, Nanjing Agricultural University, 2020-

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## Selected Publication

1. **Wang YH**, Jiang B, Dymerski R, Xu X, Weng Y (2020) Quantitative Trait Loci for Horticulturally Important Traits Defining the Sikkim Cucumber, *Cucumis sativus* var. *sikkimensis*. *Theoretical and Applied Genetics (in press)*.
  2. **Wang YH**, Bo K, Gu X, Pan P, Li Y, Chen J, Wen C, Ren ZH, Ren HZ, Chen X, Grumet R, Weng Y (2020). Molecularly Tagged Genes and Quantitative Trait Loci in Cucumber - And recommendation of controlled vocabulary for QTL mapping. *Horticulture Research* 7 (3)
  3. **Wang YH**, Tan J, Wu Z, Wen C, VandenLangenberg K, Wehner TC, Thornton A, Zheng X, Owens K, Hoefst E, Kraan PAG, Suelmann J, Pan J, Weng Y (2019) STAYGREEN, STAY HEALTHY: a loss-of-susceptibility mutation in the *STAYGREEN* gene provides durable, broad-spectrum disease resistances for over 50 years of US cucumber production. *New Phytologist* 221:415–430.
  4. **Wang YH**, VandenLangenberg K, Wen CL, Wehner TC, Weng Y (2018) QTL mapping of downy and powdery mildew resistances in PI 197088 cucumber with genotyping-by-sequencing in RIL population. *Theoretical and Applied Genetics* (131): 597.
  5. **Wang YH**, VandenLangenberg K, Wehner TC, Kraan PAG, Suelmann J, Zheng XY, Owens K, Weng Y (2016) QTL mapping for downy mildew resistance in cucumber inbred line WI7120 (PI 330628). *Theoretical and Applied Genetics* (129): 1493.
  6. **Wang YH**, VandenLangenberg K, Wehner TC, Weng Y. 2014. QTLs for Downy mildew resistance and their association with LRR-RLK resistance gene analogs in cucumber. *Proc Cucurbitaceae 2014*, pp 17-20.
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Reference

<http://chenlab.njau.edu.cn/>