

# Yongbin Zhuang

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## EDUCATION

- 2009.01 – 2014.07 Ph.D. in Biological Science  
Department of Biology and Microbiology  
South Dakota State University, USA  
Major GPA: 3.289/4.0
- 2004.09 – 2008.06 B.S. in Biology  
Department of Biology  
The Ocean University of China, P.R. China  
Major GPA: 3.1/4.0, Rank: 8/47

## EMPLOYMENT

- **Full Time**  
2015.05-Current Bioinformatics Post-doc research associate  
Center for Genes, Environment and Health  
National Jewish Health, Denver, CO, USA
- 2014.08-2015.05 Post-doc research associate  
Department of Biology and Microbiology  
South Dakota State University, Brookings, SD, USA

## Research Interests

- Functional Genomics.
- Next generation sequencing sample preparation and data analysis.
- Bioinformatics, package development.
- Discovery of small non-coding RNA and their regulation roles.
- RNAi in plants and fungi.

## Skills

- Perl based software development.
- Next generation sequencing data analysis (RNA-seq, single cell sequencing).
- Statistical data analysis with R.
- Gene cloning and vector construction.
- Gene functional validation through Virus induced Gene silencing & RNAi.
- Protein expression and purification, antibody designs.
- PCR/RT-qPCR.

## Patent Filled

- United States Patent Application No. 62/104,342.  
Title: *Fusarium* Head Blight Resistance Genes and Uses Thereof.

## Journal Papers

- **Zhuang Y, Galla A, Yang Y. Identification of functional genic components of major FHB-resistance QTLs in wheat cultivar Sumai 3.** Molecular Plant Microbe Interact. 2013 Apr; 26(4):442-50. doi: 10.1094/MPMI-10-12-0235-R.

### Manuscripts under review

- **Zhuang Y**, Galla A, Qiu Y and Yang Y. Functional validation of *WFhb1-1*'s role in wheat's resistance to *Fusarium* head blight. (2014) Manuscript was submitted to Molecular Plant Pathology.
- **Galla A, Zhuang Y**, Subha Dahal, Yinjie Qiu, Anjun Ma, Shaukat Ali and Yang Y. Silencing RNA fg-siR34 may play a key role in regulating deoxynivalenol biosynthesis and other virulence factors during *Fusarium* head blight pathogenesis in wheat. Manuscript was submitted to MPMI (co-first author).

### Manuscripts formatted

- **Zhuang Y**, Galla A and Yang Y. Identification of microRNA like small RNAs in wheat pathogen: *Fusarium graminearum* by deep sequencing.
- **Zhuang Y**, Galla A, Yang Y. Small non-coding RNAs play key roles in wheat – *Fusarium graminearum* interaction.
- Moustafa Eldakak , **Zhuang Y**, Ansuman Roy, Karl Glover, Shaukat Ali, Yang Y and Jai S. Rohila. Proteomic Dissection of Near Isogenic Lines for the Discovery of Scab Responsive Genes in Wheat (co-first author).

### Conference Papers:

- **Zhuang Y**, Aravind Gala, Yin Galla A jie Qiu and Yang Y. (2015) Functional validation of *WFhb1-1*'s role in wheat's resistance to *Fusarium* head blight. Celebration of Faculty Excellence/Faculty Showcase, South Dakota State University.
- Yinjie Qiu, **Zhuang Y**, Aravid Galla, Aunjun Ma, Subha Dahal, Donald Auger, Yang Y. (2015) A perennial hybrid between *Zea diploperennis* and *Zea mays*. Celebration of Faculty Excellence/Faculty Showcase, South Dakota State University
- **Zhuang Y**, Aravind Gala, Qiu Y and Yang Y. (2014) Identifying microRNAs responsive to *Fusarium graminearum* infection in wheat spike. Edgar S. McFadden symposium.
- Aravind Gala, **Zhuang Y**, Yinjie Qiu, Shaukat Ali and Yang Y. (2014) Silencing RNA fg-siR34 plays a key role in pathogenicity of *Fusarium graminearum*. Edgar S. McFadden symposium.
- Yingjie Qiu, **Zhuang Y**, Aravind Gala and Yang Y. (2014) Developing Winter-hardy Rapeseeds for Northern Plain Region. Edgar S. McFadden symposium.
- Moustafa Eldakak, Ansuman Roy, **Zhuang Y**, Karl Glover, Shaukat Ali, Yang Y and Jai S. Rohila. (2012) Proteomic Dissection of Near Isogenic Lines for the Discovery of Scab Responsive Genes in Wheat. FHB forum.
- **Zhuang Y**, Aravind Gala and Yang Y. (2012) Identification of Candidate Genes of Major FHB Resistant QTL in Proteomic Dissection of Near Isogenic Lines for the Discovery of Scab Responsive Genes in Wheat Wheat Cultivar Sumai 3. FHB forum.
- **Zhuang Y**, Aravind Galla and Yang Y. (2011) Identifying and Characterizing Candidate Genes Associated with FHB Resistant QTL *Qfhb1*. FHB forum.