Qiurong Fan

Graduate Research Assistant
Department of Plant Pathology, University of Florida

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Education

Master's Degree:

01/2017 ~ current ❖ Plant Pathology, University of Florida

Bachelor's Degree:

08/2015 ~ 04/2016 ❖ Microbiology and Cell Sciences, University of Florida (Non-degree exchange student, sponsored by China Scholarship Council)

09/2012 ~ 06/2015 ❖ Biological Sciences, Fujian Agriculture and Forestry University, China

Research Experience

01/2017 ~ Current **Research Assistant** Dept. of Plant Pathology, University of Florida.

- ❖ Managing bacterial spot disease of pepper caused by *Xanthomonas euvesicatoria* using copper-based nanoparticles. Evaluated the antibacterial effect of nanocomposites against *X. euvesicatoria* in greenhouse and in field. **Skills**: greenhouse, field preparation, planting, spraying, inoculation, disease rating, harvest, and data analysis.
- ❖ Finding Host Associated Factors for *Xanthomonas* strain that causes bacterial spot disease on Rose. **Skills**: comparative genomics, bacterial gene mutation.
- ❖ 06/2017 – 07/2017 Student trainee in Plant Disease Diagnostic Clinic, Quincy, FL. **Skills**: disease diagnosis, PCR, DNA/RNA exraction.

05/2016 ~ 12/2016 **Research Intern** Dept. of Plant Pathology, University of Florida, North Florida Research and Education Center.

- ❖ Managing bacterial spot disease of pepper caused by *Xanthomonas euvesicatoria* using copper-based nanoparticles in vitro and in greenhouse. **Skills**: greenhouse planting, spraying, inoculation, disease rating, and data analysis.
- ❖ Collaborated on study of the bacterial wilt resistance in transgenic tomato plants containing *EFR* gene, a pattern recognition receptor gene from *Arabidopsis thaliana* in the field infected with *Ralstonia solanacearum.* Evaluated the effect of stacking *EFR* and *BS2* gene against *R. solanacearum* and tomato genotypes screening for resistance to bacterial wilt in field. **Skills**: greenhouse, field preparation, planting, inoculation, disease rating, harvest, and data analysis.

09/2015 ~ 04/2016 **Student Trainee** Dept. of Plant Pathology, Univeristy of Florida.

- ❖ Contribute to the study on the mobility of the pathgenicity islands, putative integrase and attachment sites in the emergence of new plant pathgenic *Streptomyces* specie. **Skills**: PCR, bacterial gene cloning and mutation, gene transformation and conjugation.
- ❖ Using whole-genome sequencing data to re-evaluate the taxonomy of phytopathogenic genera *Dickeya* and *Pectobacterium.* **Skills**: managing Bio-Linux system, python programming and overall handling of the whole genome sequencing data.

Publication and Presentation

Peer Reviewed Publications

- Kunwar, S., Iriarte, F., **Fan, Q.**, da Silva, E.E., Ritchie, M.L., Nguyen, N.S., Freeman, J.H., Stall, R.E., Jones, J.B., Minsavage, G.V., … & Paret M.L. (2018). Transgenic expression of *EFR* and *Bs2* genes for field management of bacterial wilt and bacterial spot of tomato. *Phytopathology*,108(12), 1402-1411.
- Zhang, J., Hu, J., Shen, H., Zhang, Y., Sun, D., Pu, X., Yang, Q., **Fan, Q.** and Lin, B. (2018). Genomic analysis of the *Phalaenopsis* pathogen *Dickeya* sp. PA1, representing the emerging species *Dickeya fangzhongdai*. *BMC genomics*, 19(1), p.782
- Zhang, Y., **Fan, Q.**, & Loria, R. (2016). A re-evaluation of the taxonomy of phytopathogenic genera *Dickeya* and *Pectobacterium* using whole-genome sequencing data. *Systematic and applied microbiology*, *39*(4), 252-259. (Equal contribution first author).
- Zhang, Y., Bignell, D. R., Zuo, R., **Fan, Q.**, Huguet-Tapia, J. C., Ding, Y., and Loria, R. (2016). Promiscuous Pathogenicity Islands and Phylogeny of Pathogenic *Streptomyces* spp. *Molecular Plant-Microbe Interactions*, 29(8), 640-650.

Abstracts and Presentations

- **Q. Fan**. 2019. My M.S. journey struggle with managing bacterial spot disease of pepper using nanoparticles and finding host associated factors for Xanthomonas from rose. University of Florida Plant Pathology Department Seminar. Gainesville, Florida, U.S.A. (Oral presentation)
- **Q. Fan**, Y. Liao, S. Kunwar, M. Young, S. Santra, J. B. Jones, and M. L. Paret. 2019. Managing Bacterial Spot of Pepper Caused by *Xanthomonas euvesicatoria* Using Novel Copper-Composites. 2019 APS Southern Division Meeting. Gainesville, Florida, U.S.A. (Oral presentation)
- **Q. Fan**, S. Kunwar, M. Young, S. Santra, J. B. Jones, and M. L. Paret. 2018. Novel Copper-Composites for Management of Bacterial Spot of Pepper Caused by *Xanthomonas euvesicatoria*. 11th International Congress of Plant Pathology (ICPP), Boston, Massachusetts, U.S.A. (Poster Presentation)
- **Q. Fan**, S. Kunwar, M. Young, S. Santra, J. B. Jones, and M. L. Paret. 2017. Copper-based Nanomaterials for Management of Bacterial Spot on Pepper Caused by *Xanthomonas euvesicatoria*. Materials Innovation for Sustainalble Agriculture Center (MISA) Symposium, Orlando, Florida, U.S.A. (Poster presentation)
- S. Kunwar, E. da Silva, F. B. Iriarte, L. Ritchie, D. Clark, J. H. Freeman, R. E. Stall, J. B. Jones, G. V. Minsavage Jr., C. Zipfel, D. M. Horvath, M. Paret, **Q. Fan.** 2017. Managing bacterial wilt disease of tomato in open field conditions by improving host resistance through transgenic approach. APS Annual Meeting, San Antonio, Texas, U.S.A. (Presenting author)

Extension and Outreach Activities

- 05/2018 & 06/2018 Plant Pathology Teacher's Workshop, "Plants Get Sick Too", Plant Pathology, Graduate Student Organization, University of Florida, Gainesville, FL. Workshop.
- 03/2018 63rd Annual State Science and Engineering Fair of Florida. RP Funding Center, Lakeland, FL. Judge.
- 03/2018 Fruits and Vegetable Meeting, Okaloosa County, FL. "Common Vegetable Disease in Florida Panhandle". Oral presentation.
- 03/2018 Science and Agriculture Career Classes, North Florida Research and Education Center, University of Florida, Quincy, FL. Oral presentation.
- 05/2017 Plant Pathology Teacher's Workshop, "Plants Get Sick Too", Plant Pathology, Graduate Student Organization, University of Florida, Gainesville, FL. Workshop.
- 10/2016 KMS Elementary School Science Exploration Club 1st meeting. Kate M. Smith Elementary School, Chipley, FL. Teaching.
- 10/2016 Art, Garden and Farm Family Festival, North Florida Research and Education Center, University of Florida, Quincy, FL. Workshop.
- 09/2016 Fifth Annual Tallahassee Science Festival, Tallahassee, FL. Workshop.
- 6/2016 Second Annual Plant Pathology Workshop, North Florida Research and Education Center, University of Florida, Quincy, FL. Workshop.