



**Prof. Miin-Huey Lee**

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Professor Miin-Huey Lee is a faculty member of Department of Plant Pathology, National Chung Hsing University, Taichung, Taiwan. She received her Ph.D. in Plant Pathology from University of California, Davis. Her research interests mainly focus on molecular fungus-plant interactions and plant disease control with plant-associated microbes. In molecular Plant-Pathogen interactions, she has worked on *Monilinia fructicola* to study the function and redox regulation of plant cell wall-degrading enzymes produced by *M. fructicola* during its infection on peach and rose. She published those works in journals, such as *Molecular Plant-Microbe Interactions*, *Molecular Plant Pathology*, and *Phytopathology*. Currently, her research focuses on pathosystems of *Colletotrichum scovillei*-chili pepper and *C. asianum*-mango. By comparing three *C. scovillei* strains that have different virulence on chili pepper, the infection process and potential virulence factors were characterized, and a special highly branched penetration structure formed in the cuticle layer of pepper fruit was identified. Further analysis by fungal genome sequencing, transcriptomic analyses of different infection stages, and the establishment of *Agrobacterium tumefaciens* mediated T-DNA insertional fungal mutagenesis library, candidate effector proteins and potential virulence factors were identified. Genes involved in the virulence variations of the three *C. scovillei* strains were analyzed with comparative genomics and demonstrated with genetic analysis. Part of the results related to *C. scovillei*-chili pepper pathosystem are published in *European Journal of Plant Pathology*, *Plant Pathology*, and *Frontiers in Microbiology*. In plant disease control, plant-associated microbes were developed for the use on controlling anthracnose disease caused by *C. asianum* on mango and on the control of brown root rot disease caused by *Phellinus noxius* on Ceylon myrtle. The major biocontrol agents developed for disease control on mango and Ceylon myrtle are *Bacillus* species and *Streptomyces* species. The potential biocontrol mechanisms were investigated and the disease control efficacy were demonstrated in greenhouse and in fields. Recently, her research team has developed several endophytic bacteria on the control of rice seedling diseases in nursery industry. The findings will be shared in this AMC Conference. The disease control related study is published in *Plant Disease* journal. Professor Miin-Huey Lee has been invited to present her researches in many international conferences, including International Symposium on Advanced Plant Biotechnology in Hanoi, Vietnam (2019), The 8th International Conference of Clinical Plant Science in Daegu, Korea (2017), Taiwan-Japan Mycological Research Conference in Taipei, Taiwan (2017), International Symposium on Agricultural Biotechnology in Kasetsart University, Thailand (2016), The 11th International symposium on Biocatalysis and Agricultural Biotechnology in Alberta, Canada (2015), The 10th International symposium on Biocatalysis and Agricultural Biotechnology in Kaohsiung, Taiwan (2014), *Monilinia* Workshop in Lleida, Spain (2012 and 2015). International Symposium for Agricultural Biotechnology in Hanoi, Vietnam (2014).