

Molecular biology and pathogenicity of phytoplasmas

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Phytoplasmas are plant pathogenic bacteria associated with devastating damage to over 700 plant species worldwide. It is agriculturally important to identify factors involved in their pathogenicity and to discover effective measures to control phytoplasma diseases. Although phytoplasmas remain the most poorly characterized plant pathogens, recent molecular studies have gradually revealed unique biological features of phytoplasmas. In this seminar, I will talk about the discovery of phytoplasmas, molecular classification of phytoplasmas, reductive evolution of the genomes, characteristic features of the plasmids, molecular mechanisms of insect transmissibility, and virulence factors involved in their unique symptoms.