Protein turns plant into zombie

An international research team has discovered a mechanism whereby parasitic bacteria – known as phytoplasmas – can control the development of plants and slow down the ageing process.

The infected plants change into zombie plants that are no longer able to reproduce. The team, with the John Innes Centre in Norwich (UK) in the lead, identified a manipulation molecule developed by the phytoplasmas. In the plant, the protein causes important regulators to break down, resulting in abnormal growth and development. Phytoplasmas can cause devastating diseases in food crops, such as Candidatus Phytoplasma asteris in grains and vegetables. 'The identification of the manipulation molecule provides insights that can be used to develop crops with lasting resistance to phytoplasmas,' says the Wageningen professor involved, Richard Immink of the Laboratory of Molecular Biology. The research was funded by Human Frontiers and was part of a collaboration between The Sainsbury Laboratory (UK), WUR and Academia Sinica (Taiwan). The results were published in Cell. Info: richard.immink@wur.nl