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Study of telomerase activity in sunflower infected by sclerotinia fungus

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Root and crown rot caused by necrotrophic fungal pathogen *Sclerotinia sclerotiorum* (Lib.) de Bary is one of the most important diseases, infects over 400 plant species, include sunflower. Telomerase activity is highly regulated, abundant in animal rapidly dividing cells and reproductive organs. It has been demonstrated that this enzyme may be related to in aging process and cancer. However, evidence for a correlation between telomerase activity and diseases across plant groups is weak. In this study for the first time the relationship between sclerotinia rot and telomerase activity was investigated. We hypothesized that the rate of TERT expression could confer tolerance against this fungal pathogen. To test this hypothesis, susceptible (SDR19) and resistant (LC1064-C) genotypes of sunflower infected with the A37 fungal isolate. Experimental samples were taken from the leaves of *Helianthus annus* and evaluated by real time PCR. The results indicated the reduction of TERT expression in both susceptible and resistant strains under fungal disease stress. These results also showed the higher expression in resistant line than the sensitive one. This difference may be correlated with the expression of resistance genes in the resistant line, which need more investigation.

Speaker Biography

Maryam Parvini has completed her PhD at the age of 31 years from Islamic azad University, science and research branch, Tehran, Iran. After 3 years research in Royan institute (for my Ph.D thesis), whose ranking is the first for stem cells and Developmental biology researches in Iran, She achieved a thorough understanding of every aspect of these areas, especially neural patterning and achieving the different neural progenies from human embryonic stem cells. Her most recent position as scientific staff in Islamic Azad University,Urmia, Iran, has provided me with 1 year supervisory experience as leader of M.Sc students. She is also keen to express my deep interest to Plant science, especially for molecular aspects. It was extreem and enough cause to bigen my cooperation with Prof. Dr Reza Darvishzadeh, who is plant biotechnologist. Since this field obviously take a great leap forward, she need to go on with learning and experiencing as to assist me in this feild more and more. She is a reviewer of some Iranian journals.

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