PLANT NEUROBIOLOGY AND PLANT SIGNALING MECHANISM

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From some recent study related to the perception of and response to the environmental stimuli by plants, we may go to believe that plants have some kind of rudimentary nervous system and action-potentials (carried on by rhythmic opening and closing of K^+ ion channels on the living phloem membrane) similar to animals for signal perception, transmission and transduction. So, now is the era when plant neurobiology is emerging. This conveys that plants perform rapid long-distance internal communication via action potentials and plant bioelectricity and they contain critical nervous molecules like glutamate receptors and synaptotagmins for signal transmission and transduction. They possess hormones and some other plant growth regulators as chemical messengers. Present article tries to explore the interrelationship among plant neurobiology, plant bioelectricity and plant signaling mechanism.