



SEB Main Meeting, Prague 2010

Plenary - Woolhouse Lecture

PL 2.1

09:30 Thursday 1st July 2010

Synthesis and action of the plant hormone ethylene

Don Grierson, (University of Nottingham)

During the last 100 years the status of ethylene has progressed from an environmental factor with dramatic effects on plant growth, to a ripening and stress hormone, and now an endogenous growth regulator with profound effects on many aspects of plant growth, development, and reproduction. The control of ethylene synthesis and signaling is complex, with at least 15 isoforms of the two key enzymes in the pathway expressed under different circumstances, and multiple receptors and downstream signaling components. Comparison of ethylene research in Arabidopsis and tomato indicates there may be real differences between species. Ethylene is now known to be involved in the transition to flowering, the actual development of flowers, as well as fruit ripening. The discovery of new regulatory factors may one day make it possible to generate flowers and fruits without going through the usual developmental constraints.