



Charles University in Prague
Faculty of Science
DEPARTMENT OF EXPERIMENTAL PLANT BIOLOGY



and



INSTITUTE OF EXPERIMENTAL BOTANY AS CR

ORGANIZE SEMINAR

Crop Biotechnology: Science and Sustainability



Prof. Peter J. Davies

*(Jefferson Science Fellow, United States Department of State;
Professor of Plant Physiology, Cornell University)*

Humans have been genetically modifying plants for crop use for thousands of years. The difference is that modern genetic engineers can move genes, which regulate plant characteristics, much more precisely. This ability depends upon that of a bacterium, *Agrobacterium*, to insert genes that have been placed into the bacterial DNA, into plant DNA, and also the development of a method for blasting genes into plant cells. Whole plants can then be produced from single plant cells. Currently-available biotech crops include those that have resistance to insects through Bt, a protein that inhibits insect feeding, or tolerance to a benign, universal herbicide, which enables very efficient weed control. This has resulted in increases in yield, so that more can be grown on less land, at the same time as a decline in the use of pesticides. Additional environmental advantages include less soil erosion and less fuel use. Further developments include disease resistant and drought tolerant crops, as well as crops with improved nutritional characteristics. The cultivation of biotech crops is increasing yearly, and represents an important contribution to food security in a populated world.

Tuesday 10th April, 16:45

**IN THE SEMINAR ROOM OF THE DEPARTMENT OF EXPERIMENTAL PLANT
BIOLOGY, VINIČNÁ 5, Prague, CZ, 2nd FLOOR IN THE END OF THE HALL.**

