第 42 回岩手大学 COEフォーラム

岩手大学 21 世紀 COE プログラム「熱ー生命システム相関学拠点創成」では、関連分野において国内外で活発に研究をされている方をお招きしてフォーラム（セミナー）を開催しています。今回は、岡山大学資源生物科学研究所（且原真木研究室）に滞在中の Gap Chae Chung 教授（韓国・全南大学）をお招きし、植物の冷温障害（0ºC 以上での障害）と水分状態との関係、および、活性酸素の関与についてお話をしていただきます。

お忙しいとは思いますが、万障繰り合わせの上、ぜひご参加いただきますようお願い申し上げます。

第 42 回担当・農学部附属寒冷バイオシステム研究センター
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日時：2006 年 12 月 22 日（金）17:00～18:30
場所：岩手大学農学部 2 番教室

Prof. Gap Chae Chung

Agricultural Plant Stress Research Center,
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Effect of low root temperature on the water relations in cucumber and figleaf gourd seedlings: a possible role of H_2O_2

The sensitivity or tolerance of the plant to low root temperature may be indicated as an ability to absorb water at low temperature because plants lose water quickly as soon as low root temperature is imposed. Cucumber as low root temperature-sensitive and figleaf gourd as -tolerant species have been used as representative plants for the study. Indeed, plant root system can adapt to the environments by acclimation in terms of aquaporin activity. Furthermore, it is proposed that aquaporin activity present in root may be quickly modulated by environmental signals to meet the demand required by leaves. In view of the effect of light intensity on the water relations, it is concluded that one should pay great attention on the interpretation of the results obtained with only excised root systems. As a possible mechanism, low temperature-sensitivity may be related to the reactive oxygen species produced and activation of detoxification system appears to be important mechanism for survival. The importance of the understanding of water relation in the plants when influenced by environmental stresses is discussed.