F837

Identification of rRNA Gene Loci in *Gentiana scabra* var. *buergeri* using FISH Technique

이미경 · K. Fukui* · 방재욱
충남대학교 자연과학대학 생물학과, Hokuriku NAES, Japan*

용담(*Gentiana scabra* var. *buergeri*)은 용담과(Gentianaceae)에 속하는 다년생 식물로서 뿌리를 소화제와 건위제 등의 약재로 이용하는 약용식물이다. 본 연구에서는 용담의 염색체 mapping의 일환으로 45S와 5S rRNA gene(rDNA)을 이용하여 *in situ* hybridization 기술을 적용하여 염색체에서의 위치와 변이를 확인하여 보고자 하였다. 45S rRNA gene을 Biotin으로 표지하여 FISH(Fluorescence *in situ* hybridization)한 결과 1쌍의 loci가 관찰되었으며, 5S rRNA gene을 digoxigenin-11*d*UTP로 표지하여 FISH한 결과 1쌍의 loci가 관찰되었다. 45S와 5S rDNA를 이용한 multi-color FISH에서는 서로 다른 위치의 염색체에서 각각 1쌍의 signal을 관찰할 수 있었다.

F838

Inhibitory Effect of Brassinosteroids on the Expression of *PVR5* Encoding a Proline-rich 14kDa Protein in the Roots of Bean (*Phaseolus vulgaris* L.) Seedlings

Eun Young Choi*, Jai Young Song, and Sang-Gu Kim
Department of Biology, Seoul National University, Seoul 151-742, Korea

We have previously reported the isolation of root-specific cDNA clone *PVR5*, encoding proline-rich 14 kDa protein. In this report, we examined the effects of brassinosteroids on the expression of this gene in the root of bean (*Phaseolus vulgaris* L.) seedlings. Submicromolar concentration of brassinosteroids inhibited primary root elongation and evoked root curvature while stimulated hypocotyl elongation. These effects of brassinosteroids on the growth of bean seedlings were increased at high brassinosteroid concentration. The treatment of 1 μM brassinosteroid for 48 hours caused a 27.8% inhibition of primary root elongation, and 58.7% decrease of root fresh weight. According to northern blot analysis, 1 μM brassinosteroid treatment inhibited the accumulation of *PVR5* mRNA, *PVR5* mRNA accumulation was reduced apparently after 8 hours treatment, and was not detected after 24 hours treatment.