

**ISOLATION OF TWO XYLOGLUCAN ENDOTRANSGLYCOSYLASE
GENES THAT ARE EXPRESSED DURING CUCUMBER SOMATIC
EMBRYOGENESIS**

ROBERT MALINOWSKI, ANITA WIŚNIEWSKA, MARCIN FILIPECKI
and STEFAN MALEPSZY

Department of Plant Genetics, Breeding and Biotechnology, Warsaw, Poland,
Agricultural University, Nowoursynowska 166, 02-787 Warsaw, Poland,
E-mail: Syrop@netscape.net

Among the numerous genes differentially expressed after the induction of somatic embryogenesis, two genes encoding xyloglucan endotransglycosylase enzymes (XET) were found. XET enzymes take part in cell wall remodelling during cell growth and differentiation. Full-length cDNA (c1a11 and c17) and genomic (g1a11 and g17) sequences were cloned. Both clones have the greatest similarity to the same proteins from the database – syringolide-induced protein from soybean (86% 1a11, 80% 17) and xyloglucan endotransglycosylase 1 protein from beech (83% 1a11, 77% 17). There is an 80% similarity between the proteins encoded by the *1a11* and *17* clones. Several sequence motifs in the promoter region of the analysed genes were found – SEF3, SEF4 (responsible for embryosppecific expression), NTBBF1AR ROLB (for auxin inducible expression) and GCCbox (for ethylene inducible expression). Further experiments with the two recognised genes will establish the involvement of XET enzymes in somatic embryogenesis.