F325 Terminal proteins and terminal region recognition factor of mitochondrial linear plasmids from *Pleurotus ostreatus*

Eun Kyoung Kim* and Jung-Hye Roe
Department of Microbiology, Seoul National University

Linear mitochondrial plasmid DNAs, mlp1 and 2 were detected from *Pleurotus ostreatus*. mlp1 and 2 were linear double-stranded DNAs and the terminal proteins were covalently linked to 5' ends of plasmids. Plasmid mlp1 also contained terminal inverted repeat (TIR) sequence that is 381 bp long at both DNA ends. The terminal proteins of 70 and 73 kDa were purified from mitochondrial plasmids by digestion with Exo III nuclease. To identify an activity that recognized the terminal region of mlp1, gel retardation assay was performed with mitochondrial extract. Deletion analysis experiments demonstrated that the activity recognized 1-248 bp, but did not recognize 1-123 bp within the TIR. The amino acid sequences of the mORF1 indicated that its product was a highly basic protein. When the gel retardation assays with *E. coli* extract expressing the mORF1 and purified mORF1 protein were performed, the same results were acquired. This suggests that the product of mORF1 may recognize the terminal regions containing TIR of mlp1 as terminal region recognition factor.

F326 A Male-Specific DNA Sequence in a Dioecious Plant, *Schisandra nigra* Max.

Hyo Shim Han*, Hyo Yeon Lee[1], Young Jong Lee[2], Kab Yeon Lee[3], and Jae Sung Jung

Department of Biology and [1]Department of Development in Resources Plant, Sunchon National University, [2]Department of Clinical Pathology, Kwangju Health College, [3]Forestry Research Institute

Male-specific DNA sequence was analyzed in a dioecious plant, *Schisandra nigra* Max. DNA was isolated from leaves of male and female plants and subjected to random amplification of polymorphic DNA. One random primer, OPA-17, yield fragment of 800 bp which were detected in all male plants but not in any of female plants tested. This DNA fragment was cloned into the pGem-T easy vector and used as a probe in gel blot analysis of genomic DNA. DNAs isolated from male and female plants were separately digested with *EcoR*I, *BamH*I and *Hid*III. When the male and female DNAs were allowed to hybridize with this probe, some bands specific to male plants were detected. The nucleotide sequence of this 800 bp fragment was determined.