

- E220** Identification of Elicitor Related with the Peroxidase in Cultured Rose(*Rosa sp.*) Cells from Yeast Cell Wall Components.
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Isolation and identification of elicitor was carried out from yeast (*Saccharomyces cerevisiae*) cell wall fractions. From the autoclaved yeast, cell wall components were fractionated by the ethanol precipitation and applied on CM-sepharose followed by DEAE-sephadex chromatography. Glucan/protein ratio in each fraction was determined as 0.003 in cationic fraction, 0.18 in anionic fraction and 42.7 in final void eluent. While cationic fraction had no activity as elicitor, treatment of void fraction(10 μ g glucan/ml media) increased the extracellular peroxidase activity up to 140 % in 5 day cultured rose cells. Anionic fraction (10 μ g protein/ml media) also raised the enzyme activity up to 65 % compared with control. Elicitor activity of anionic fractions, however, was decreased by the dialysis(1000 dalton cut off) with the decrease of glucan protein ratio. These results showed that yeast elicitor which stimulated the peroxidase activity in cultured rose cells suggested to be oligosaccharides with molecular weight less than 1000 dalton.

- E221** Is the activity of ascorbate peroxidase induced directly by ethylene in cultured soybean (*Glycine max*) cells?

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Burst of ethylene production in cultured soybean cells occurred again at the prestationary phase when the typical senescence symptoms of cultured cells, browning, was initiated. The transient increase in ascorbate peroxidase (AsPOX) activity known to reduce active oxygen-induced damages was observed following an increase in lipoxygenase (LOX) activity at the stationary phase after the burst of ethylene. Now, we address the mechanism of the induction of AsPOX activity. AsPOX cDNA isolated by RT-PCR technique and polyclonal antibody against AsPOX are used in our study. First of all, we test whether the induction of AsPOX could be resulted directly from ethylene or indirectly from the product of ethylene-promoted LOX activity such as hydrogen peroxide.