

# 生物工学研究センターセミナー

日時: 平成 25 年 9 月 6 日 (金) 13 時 30 分~14 時 30 分

来聴歓迎 (参加自由)

場所: 生物工学研究センター K-1 1 5 共同会議室

演題: 「Cell wall characteristics of Ma bamboo during different growing stages」

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要旨: Ma bamboo (*Dendrocalamus latiflorus* Munro) is the most distributed bamboo species in Taiwan. It is distributed from plains to hills lower than 1400 meters. It grows extremely fast and can reach about 25 meters within one growing season, and the newly-grown biomass is the most significant among other local bamboo species. The cell walls of ma bamboo are rich in polysaccharides and these sugars accumulate rapidly during growing stages. These make ma bamboo a potential raw material for many bioenergy purposes. However, little is known about the cell wall chemical composition variations and distributions in ma bamboo during its growth. In this study, we use chemical analyses along with lignin staining and immunolocalization to characterize the distributions of each cell wall components from a ma bamboo shoot at different growing stages. The results show that lignin, crystalline cellulose and xylan are preferentially accumulated at later stage of developments. Lignin heterogeneity varies among different growing stages, and their lignins contain significant amounts of acylated *p*-coumaric acid and ferulic acid. Depositions of xyloglucan in differentiating cell walls are associated with that of pectin and xylan, they might be masked with each other. Galactan and mannan are minor constituents of bamboo shoots, and galactan is potentially masked by other polysaccharides in specific growing stage.

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