

Recombinant expression and functional characterization of LPMOs and expansin-like proteins

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Lytic polysaccharides monooxygenases and expansins have the potential for increasing the efficiency of the lignocellulosic biomass conversion. However, a small number of these proteins have been characterized. In this work, new LPMOs from fungi and bacteria, and expansin-like proteins from fungi were selected using an evolutionary approach and were expressed in *Pichia pastoris* system. Model proteins were used for comparison in activity assays. Functional analysis was performed for some LPMOs with cellulosic substrate using mass spectrometry analysis. The results allowed the visualization of several ions, however, it is necessary to carry out MS/MS of m/z values to confirm oxidative cleavage.

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