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***Penicillium*: The Next Emerging Champion for Cellulase Production**

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Abstract:

Bio-ethanol from lignocellulosic biomass via enzymatic route has received wide acceptance as liquid fuel for transport sector. It has been regarded as alternative sustainable source of energy, however; economic feasibility still remains a question. Cellulase is still considered to add to the major cost components in the bio-ethanol production process. *Trichoderma reesei*, which is considered as the most potent cellulase producer is known to be deficient in β -glucosidase, hence, *Penicillium* cellulases being rich in β -glucosidase have got recognition. Thus *Penicillium* cellulases give higher efficiencies during saccharification of biomass resulting in lower cellulase requirement; decreasing the cost of cellulases in the process. This review gives an account of cellulases produced from *Penicillium* and its superiority over existing cellulase champions. It also discusses the possible targets to improve cellulase secretion from *Penicillium* at genetic level. This article justifies that *Penicillium* could be the next champions for cellulase production for biofuel applications.

Key Words: *Penicillium*, *Trichoderma*, Cellulase, Bioethanol, Biomass

1. Introduction:

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