

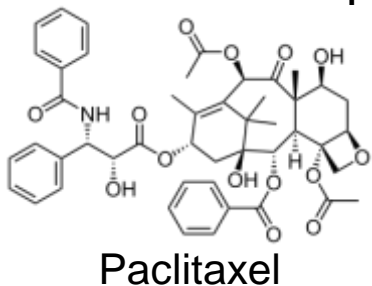


# INSTITUTE FOR CELLULAR ENGINEERING

## Metabolic Engineering of Key Paclitaxel Regulatory Genes in *Taxus* spp. Suspension Cultures

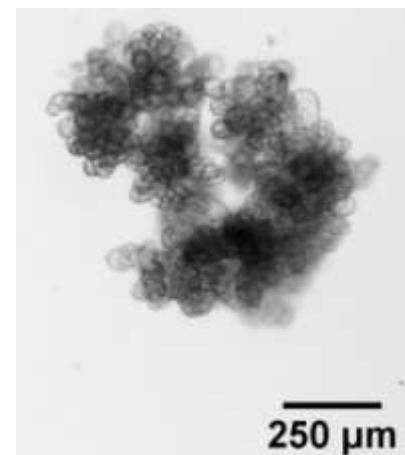
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Paclitaxel is an anti-cancer agent being produced industrially through *Taxus* spp. suspension cultures; however, suspension cultures produce low yields of paclitaxel and can be highly variable across cell lines and over long growth periods in a single cell line.

The generation of superior paclitaxel-accumulating *Taxus* cell lines may be achieved through the stable over-expression of pathway genes believed to be bottlenecks in paclitaxel synthesis, and a putative transcriptional regulator of biosynthesis. The effect of up-regulation of the bottleneck genes and the role of putative pathway genes on paclitaxel production in suspension cultures is being investigated using *Agrobacterium*-mediated transformation techniques.



Aggregated *Taxus* Cells