# Computational Detection of Golgi Membrane Spanning Region in Glycosyltransferase

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An original computational detection system was developed to predict golgi membrane spanning region in glycosyltransferase. In order to discriminate glycosyltransferase from other proteins whose topology is similar to them, the character of golgi membrane spanning region was extracted by comparison with the type II protein localized in plasma membrane and the protein with signal-peptide. We succeeded to detect golgi membrane spanning region characterized in glycosyltransferase, by combining hydropathy alignment and PSSM of amino acid propensity with more than 95% of accuracy in self-consistency test. In the project aiming at discovering glycosyltransferase comprehensively from Genome ORF, this algorithm is playing an impotant role as detection system of glycosyltransferase transmembrane region.
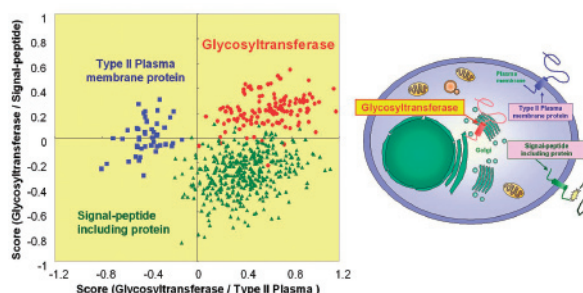


Score distribution of glycosyltransferases and the proteins whose topology is similar to them

# Overseas Reforestation by Means of Root Formation Promoters:Reforestation in Thailand

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In 2002, many countries suffered serious damage due to floods and droughts. We believe that these natural disasters are caused by global warming. The absorption by trees of carbon dioxide that has been discharged into the atmosphere — the major cause of global warming — is an extremely important method for reliably fixing carbon dioxide. The numbers and areas of the world's forests therefore should be increased by reforestation in order to counter global warming.

Tokai Global Greening Co. (TGG), an AIST venture company, has contracted with the Forest Industry Organization (FIO) of the Ministry of Agriculture and Cooperatives, Thailand to use root formation promoters (RFPs) for cooperative reforestation. The first reforestation project was begun in April 2003.

4-Chloroindole-3-acetic acid, 5,6-dichloroindole-3-acetic acid and their derivatives (RFPs), which our group and TGG have developed, were very effective for promoting root formation by teak cuttings when aqueous solutions of these promoters were sprayed on their leaves. These RFPs therefore are being used to mass-produce the teak saplings for reforestation (Photo).



Mass production of teak saplings by using RFPs