総 説

糖鎖科学による医薬品の差別化
今井(西谷)春江*, 國(蒲地)麗子*, 山根(大貫)尚子*, 佐藤 光男**

Development of Next-generation Biologics by Glycoengineering
Harue IMAI-NISHIYA*, Reiko KUNI-KAMOCHI*, Naoko YAMANE-OHNUKI* and Mitsuo SATOH**

Summary
The importance of glycoengineering on biologics development has been realized since the fact that recombinant protein produced by host cells such as E. coli, yeast, and even animal cells is not necessary as active as the natural origin. It is still a very important and challengeable issue for biopharmaceuticals to adequately control the post-translation modification of glycosylation. Currently, the company that has developed the technology for glycosylation of the biologics is expected to make a new big market of next-generation biologics and biogeneric as well in near future. In biopharmaceutical filed, new competitive trend based on glycoengineering has now started for providing a new benefit of human beings.

Key words
糖鎖制御技術 (glycoengineering), バイオ医薬品 (biologics), フコース修飾されていない抗体制薬 (non-fucosylated therapeutic antibody), ポテリジェント (Potelligent®), 次世代抗体医薬 (next-generation therapeutic antibody), 抗体依存性細胞傷害活性 (antibody-dependent cellular cytotoxicity; ADCC)