## MS10-2 Molecular-targeted therapy against cancer using next-generation therapeutic antibody

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Recombinant antibodies are typical molecular-targeted therapeutic agents, and represent a major new class of drugs. Actually, the worldwide revenue of therapeutic antibodies has reached $20 billion in 2007. However, several issues have been also emerging in antibody therapy, such as high cost referred to as “economical toxicity” and insufficient drug action. Human serum IgG strongly inhibits therapeutic antibody effector function of antibody-dependent cellular cytotoxicity (ADCC), although ADCC has been identified as one of the critical mechanisms underlying the clinical efficacy of therapeutic antibodies, especially anticancer antibodies. Furthermore, Currently-licensed antibody therapy composed of a mixture of fucosylated and non-fucosylated IgG forms, unfortunately, fail to achieve optimize ADCC. Fully non-fucosylated therapeutic antibodies expect to be a promising approach as a nest-generation of therapeutic antibodies to overcome the above issues. Clinical trials using the non-fucosylated antibodies with enhanced ADCC are underway, and have shown their remarkable physiological activities in humans *in vivo*. In this talk, the mechanisms responsible for the high efficacy mediated by fully non-fucosylated therapeutic antibodies will be discussed.