S11-2 Antibody therapeutics from mice with humanized immunoglobulin loci

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Monoclonal Antibodies (MAbs) have become an important class of therapeutic compounds in a variety of disease areas ranging from cancer and autoimmune indications to infectious diseases. However, a major hurdle in clinical development of antibody therapeutics has been the inherent immunogenicity of the most readily available MAbs, those derived from rodents. A variety of technologies have been successfully employed to engineer MAbs with reduced immunogenicity. Particularly, much effort has been made by a number of groups to create mice with humanized immunoglobulin (*Ig*) loci for obtaining therapeutic human mAbs. Recently developed, trans-chromosomic (TC) technology employs chromosome-based vectors for transferring very large foreign DNA into animals, and this technology successfully applied to generate mice expressing diverse repertoire of fully human antibodies (1, 2). I will present various versions of TC mice with humanized Ig loci and the current status of clinical development of mouse-derived fully human MAb therapeutics.

1. Tomizuka *et al. Nat. Genet.*, 16: 133-143, 1997
2. Tomizuka *et al. Proc. Natl. Acad. Sci. USA*, 97: 722-727, 2000