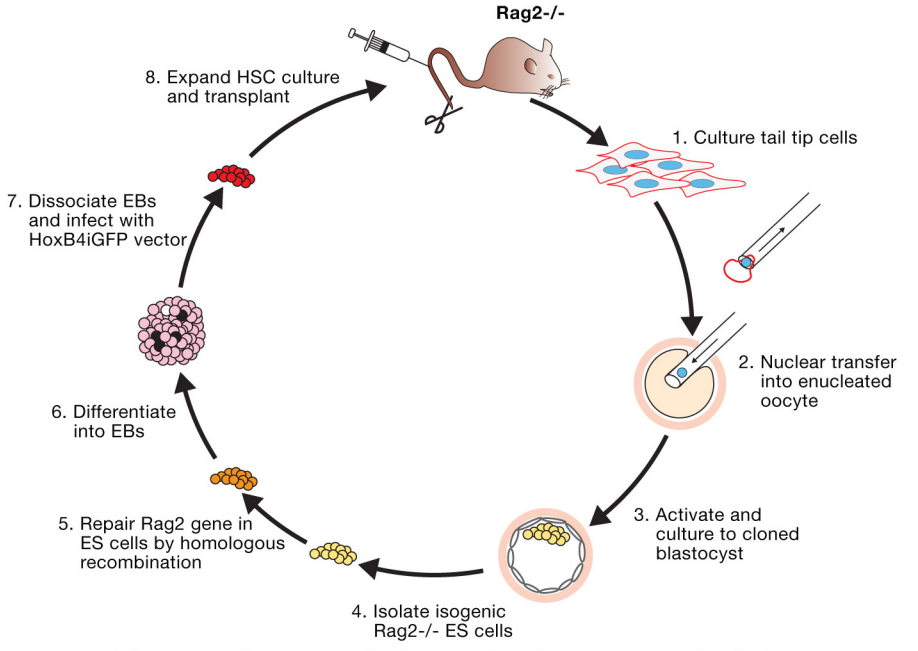

Figure 10. Scheme for Therapeutic Cloning Combined with Gene and Cell Therapy

A piece of tail from a mouse homozygous for the recombination activating gene 2 (*Rag2*) mutation was removed and cultured. After fibroblast-like cells grew out, they were used as donors for nuclear transfer by direct injection into enucleated MII oocytes using a Piezoelectric driven micromanipulator. Embryonic stem (ES) cells isolated from the nuclear transfer-derived blastocysts were genetically repaired by homologous recombination. After repair, the ntES cells were differentiated in vitro into embryoid bodies (EBs), infected with the HoxB4iGFP retrovirus, expanded, and injected into the tail vein of irradiated, *Rag2*-deficient mice. (Reprinted, with permission, from Hochedlinger and Jaenisch 2003 [© Massachusetts Medical Society].)