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(54) Title: RAPID METHOD OF SELECTING CELLS FOR GENE DISRUPTION BY HOMOLOGOUS RECOMBINATION

(57) Abstract: Procedures and vectors are provided for the specific alteration of particular genetic loci in eukaryotic cells. One procedure comprises the utilization of ATG-minus fluorescent protein gene targeting (AMFP) DNA vectors for the purpose of creating and identifying cells which have vector sequences integrated into the host cell genome via site-specific homologous recombination. The procedure also comprises the utilization of sequences encoding in vivo detactable markers for the identification of cells which have exogenous vector sequences integrated into the genome of the host cell, either via site-specific homologous recombination or nonhomologous recombination or insertion. The invention also includes vectors for creating modifications in eukaryotic cells. In addition, the invention includes cells and organisms generated from cells with specific genetic alterations through the implementation and use of provided procedures and vectors.