for his seminal contributions to the understanding and application of homologous recombination and gene targeting in mouse embryonic stem cells for which he was awarded the Nobel Prize in 2007. Dr. Capecchi's work was essential for the field of transgenesis, having opened up the field to the possibility of generating exact genetic mutations in the mouse genome. In his 1986 Cell publication, Dr. Capecchi showed that 1 in 10^3 cells in culture would undergo the process using homologous recombination. The following year, Capecchi successfully knocked out the Hprt gene in mouse ES cells and Smithies independently demonstrated repair of the gene. Dr. Capecchi gave the process the name by which we know it today, "gene targeting".

Mario Capecchi's Laboratory WEB page