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(54) Title: PIGGYBAC TRANSPOSON VARIANTS AND METHODS OF USE

(57) Abstract: The present invention provides hyperactive piggyBac transposons, in particular hyperactive piggyBac transposons from Trichoplusia ni (cabbage looper moth) that transpose at a higher frequency than wildtype. The invention also features integration defective piggyBac transposons. The piggyBac transposons and transposases can be used in gene transfer systems for stably introducing nucleic acids into the DNA of a cell. The gene transfer system can be used in methods, for example, but not limited to, gene therapy, insertional mutagenesis, or gene discovery.