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(54) Title: A METHOD OF ALTERING A DIFFERENTIATION STATUS OF A CELL

(57) Abstract: There is provided a method of altering a differentiation status of a cell, the method comprising: modulating the expression of one or more differentiation factors with a nuclease-deactivated Cas9 (dCas9) fusion protein, the dCas9 fusion protein comprising dCas9 and an effector comprising a transcriptional regulator, optionally the transcription regulator is a transcriptional activator. Also disclosed are cells, gRNA, oligonucleotides, compositions, kits, and methods of treating a disease thereof.