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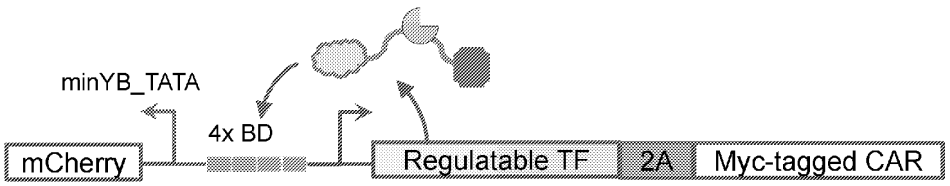


FIG. 4A

(57) Abstract: Provided herein are compositions and methods for regulating expression of effector molecules using regulatable transcription factors and/or activation inducible promoters. In one aspect, provided herein are engineered nucleic acids comprising: a first expression cassette comprising a first promoter and a first exogenous polynucleotide sequence encoding an activation-conditional control polypeptide (ACP); and a second expression cassette comprising an ACP-responsive promoter and a second exogenous polynucleotide sequence, wherein the ACP is capable of inducing expression of the second expression cassette by binding to the ACP-responsive promoter.

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