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(71) Applicant: THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK

[US/US]; 412 Low Memorial Library, 535 West 116th Street, New York, New York 10027 (US).

(72) Inventors: STERNBERG, Samuel Henry; 412 Low Memorial Library, 535 West 116th Street, New York, New York 10027 (US). LAMPE, George Davis; 412 Low Memorial Library, 535 West 116th Street, New York, New York 10027 (US). KING, Rebeca; 412 Low Memorial Library, 535 West 116th Street, New York, New York 10027 (US).

(74) Agent: BARTON, Kelly A.; Casimir Jones, S.C., 2275 Deming Way, Suite 310, Middleton, Wisconsin 53562 (US).

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(54) Title: SYSTEMS, METHODS, AND COMPONENTS FOR RNA-GUIDED EFFECTOR RECRUITMENT

(57) Abstract: The present disclosure provides systems, kits, and methods provide systems and methods for recruiting one or more effector domains to a target nucleic acid and or modulating expression of a target gene in a cell utilizing an engineered Clustered Regularly Interspaced Short Palindromic Repeats (CRISPR)-CRISPR associated (Cas) system. More particularly, the present disclosure provides systems comprising: an engineered CRISPR-Cas system or one or more nucleic acids encoding the engineered CRISPR-Cas system, wherein the CRISPR-Cas system comprises: at least one Cas protein (e.g., Cas6, Cas7, Cas5, Cas8 and/or Cas12k); a guide RNA (gRNA) complementary to at least a portion of the target nucleic acid sequence; and, optionally, at least one transposon-associated protein (e.g., TniQ, TnsC, TnsA, and/or TnsB).



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