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(54) Title: SYSTEMS AND METHODS FOR REGULATING TARGET GENES

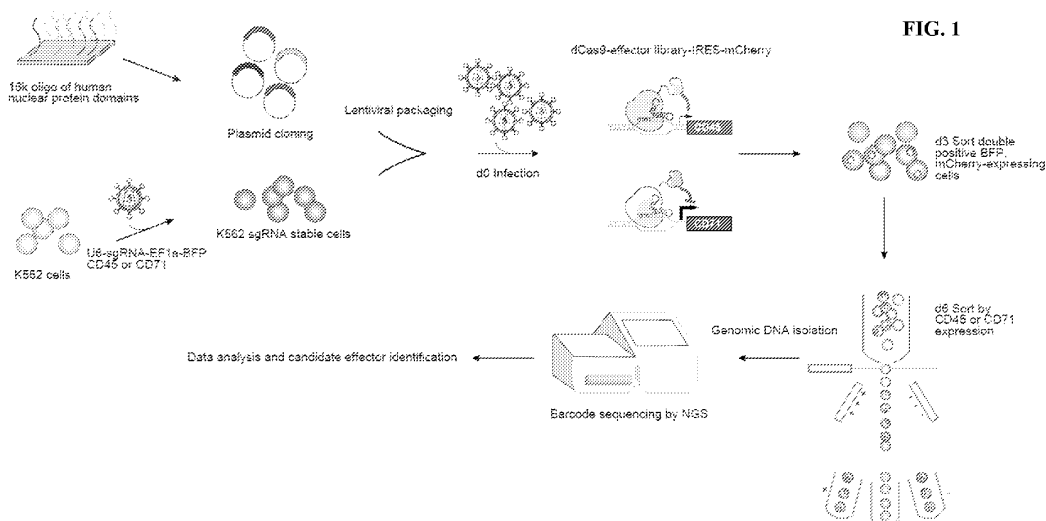


FIG. 1

(57) **Abstract:** The disclosure provides compositions, methods, and systems for modulating expression of target genes (e.g., target endogenous genes). Complexes of the disclosure can be useful for bringing one or more heterologous gene effectors into close proximity with a target gene or target gene regulatory sequence, thereby facilitating modulation of an expression or activity level of the target gene. The disclosure provides, for example, compositions, systems, and methods for high throughput screens to identify heterologous gene effector domains and complexes of the effector domains with guide moieties to modulate expression of particular target gene(s). The disclosure also provides complexes identified by systems disclosed herein that can be employed for other purposes, such as research or as therapeutics.

[Continued on next page]

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