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(54) **Title:** EVOLVED INTEGRASES AND METHODS OF USING THE SAME FOR GENOME EDITING

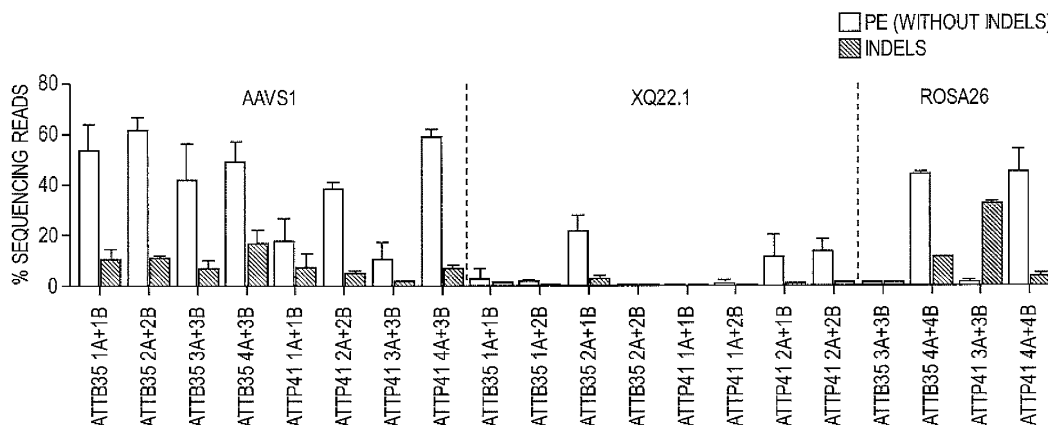


FIG. 1

(57) **Abstract:** Disclosed are evolved Bxb1 and PhiC31 integrases that exhibit increased insertion activity and efficiency as compared to their wild-type counterparts and use of the evolved integrases to modify any sequence within the genome of a cell or subject.

WO 2025/006468 A2