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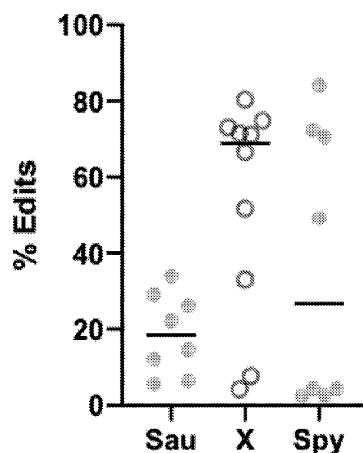


FIG. 24

(57) **Abstract:** Provided herein are systems comprising Class2, Type V CRISPR polypeptides, guide nucleic acids (gNA), and optionally donor template nucleic acids useful in the modification of a PCSK9 gene. The systems are also useful for introduction into cells, for example eukaryotic cells having mutations in the PCSK9 gene. Also provided are methods of using such CasX:gNA systems to modify cells having such mutations.

[Continued on next page]

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