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[Continued on next page]

(54) Title: SYNTHETIC *OPLOPHORUS* LUCIFERASES WITH ENHANCED LIGHT OUTPUT

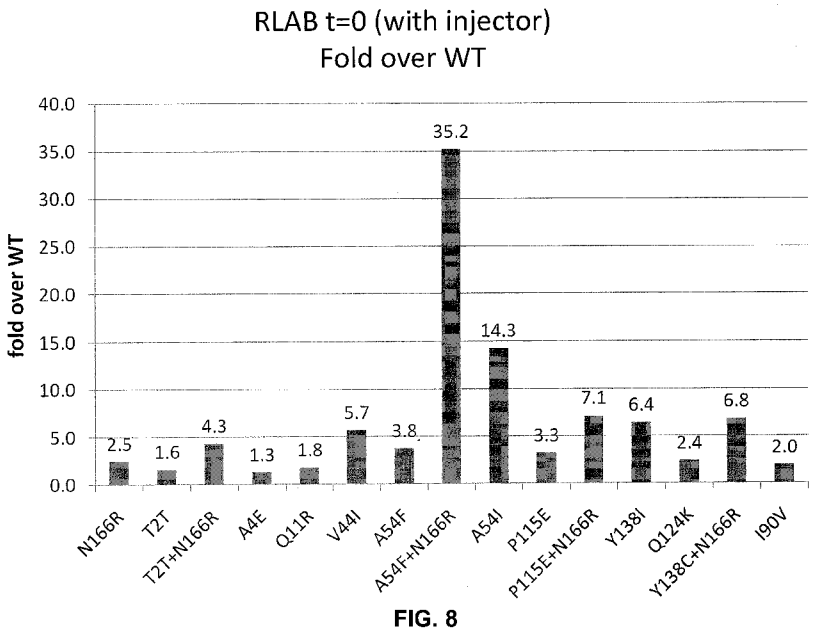

FIG. 8

(57) Abstract: A polynucleotide encoding a modified luciferase polypeptide. The modified luciferase polypeptide has at least 60% amino acid sequence identity to a wild-type *Oplophorus* luciferase and includes at least one amino acid substitution at a position corresponding to an amino acid in a wild-type *Oplophorus* luciferase of SEQ ID NO: 1. The modified luciferase polypeptide has at least one of enhanced luminescence, enhanced signal stability, and enhanced protein stability relative to the wild-type *Oplophorus* luciferase.

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