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(54) Title: METHODS FOR PREDICTING AND MODULATING GLYCATION OF A PROTEIN

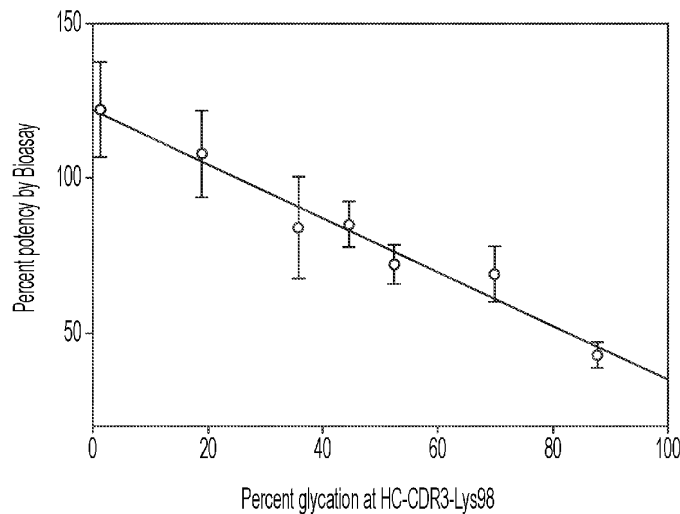


FIG. 2

(57) Abstract: Embodiments provide for methods of predicting glycation percentage of an amino acid in a therapeutic biomolecule. In one example, a method of predicting a glycation percentage of an amino acid in a biomolecule includes determining a first set of rates for a de-glycation reaction for a first set of temperatures, inferring a second set of one or more rate(s) for the de-glycation reaction for a second set of temperatures, and using the second set of one or more rate(s) to predict the glycation percentage at any temperature corresponding to the second set of temperatures and over any time duration. Also provided are methods for maintaining a glycation percentage of an amino acid within a predetermined glycation percentage range over a shelf-life of a therapeutic biomolecule, and methods for either reducing or increasing a potency of a therapeutic biomolecule in a subject at a time of administration.

[Continued on next page]

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