Enhanced PEGylation Site Selection Algorithm for Protein Stability

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Executive Statement:

An innovative algorithm that identifies optimal PEGylation sites on proteins to improve their stability and pharmacokinetic properties.

Technology Overview:

This technology offers a novel method for selecting PEGylation sites on proteins, utilizing an algorithm designed to enhance both conformational and proteolytic stability. PEGylation, the process of attaching polyethylene glycol (PEG) chains to proteins, is a critical technique in developing protein-based drugs with improved pharmacokinetic profiles. This invention provides a structured approach to identify the most effective sites for PEGylation, thereby accelerating the development of PEGylated protein drugs.

Key Advantages:

- Accelerates the development of PEGylated protein drugs
- Improves pharmacokinetic properties of protein drugs
- Enhances conformational and proteolytic stability of proteins
- Provides a structured, algorithm-based method for site selection
- Applicable to a wide range of proteins

Problems Addressed:

- Lack of guidelines for efficient PEGylation site selection
- Suboptimal pharmacokinetic properties in protein drugs
- Low conformational and proteolytic stability of therapeutic proteins

Market Applications:

- Pharmaceutical development of protein-based drugs
- Biotechnology research and development
- Licensing opportunities for biotech companies
- Enhancement of existing protein therapeutic formulations