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(54) Title: OFF-TARGET PREDICTION METHOD FOR ANTIGEN-RECOGNITION MOLECULES BINDING TO MHC-PEPTIDE TARGETS

(57) Abstract: Computational systems and methods for predicting amino acid position(s) within a target peptide presented in a complex with a major histocompatibility complex (MHC) molecule (MHC-target peptide complex), the amino acid position(s) being involved in interacting with an antigen-recognition molecule that recognizes said MHC-target peptide complex, are presented herein. Computational systems and methods for estimating a number of off-target peptide(s) for an antigen-recognition molecule that recognizes a target peptide presented in a complex with a major histocompatibility complex (MHC) molecule (MHC-target peptide complex) is presented herein. Computational systems and methods for ranking potential target peptides to mitigate off-target toxicity are presented herein. Such computational systems and methods can streamline development of effective, well tolerated antigen-recognition molecules to treat diseases.



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