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(71) Applicant: 12343096 CANADA INC. [CA/CA]; 6229 rue Saint-Denis, Montreal, Québec H2S 2R8 (CA).

(72) Inventor: GAGNON, Étienne; 6400 rue d'Iberville, Montréal, Québec H2G 2C4 (CA).

(74) Agent: LAVERY, DE BILLY, LLP; 1, Place Ville Marie, Bureau 4000, Montréal, Québec H3B 4M4 (CA).

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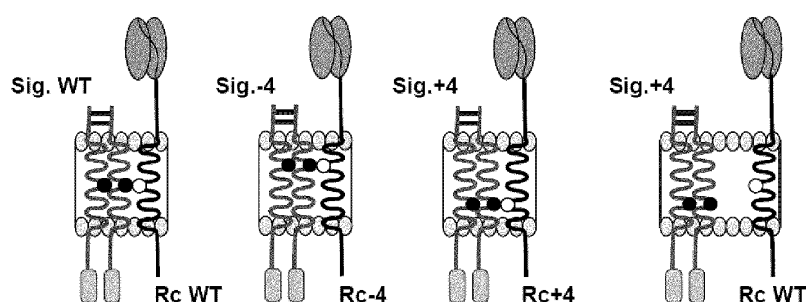


FIG. 1D

(57) Abstract: The present application relates to modular chimeric receptors, such as chimeric antigen receptors (CARs) comprising chimeric receptor and signaling modules with synthetic transmembrane domains that favor electrostatic interactions between the synthetic transmembrane domains in the cell membrane while eliminating or minimizing electrostatic interactions with the native transmembrane domains of immune receptors and signaling proteins. The modular chimeric receptors, which mimic the structure and signaling of native immune receptors, enable the distribution of the signaling domains across different cytoplasmic chains, display suitable surface expression as well as improved kinetics and sensitivities relative to current standard-of-care (SOC) CAR-based therapies.

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