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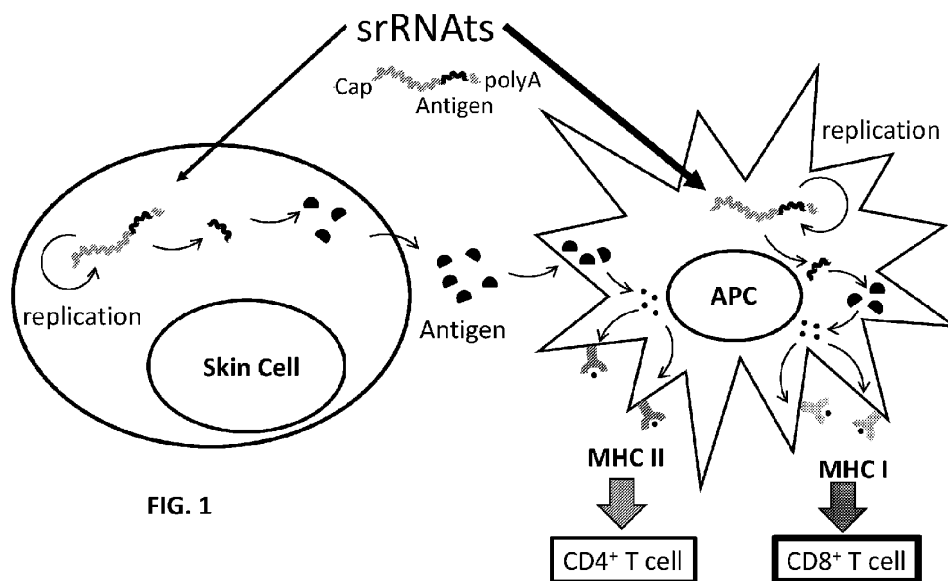


FIG. 1

(57) Abstract: The present disclosure relates to mRNA, self-replicating RNA, and temperature-sensitive, self-replicating RNA encoding a coronavirus nucleocapsid protein or an influenza virus nucleocapsid protein in operable combination with a mammalian signal peptide. The present disclosure relates to mRNA, self-replicating RNA, and temperature-sensitive, self-replicating RNA encoding other viral nucleocapsid protein(s) in operable combination with a mammalian signal peptide. The RNA constructs are suitable for active immunization against a virus in a mammalian subject, such as a human subject.

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