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(54) Title: A METHOD AND A SYSTEM FOR OPTIMAL VACCINE DESIGN

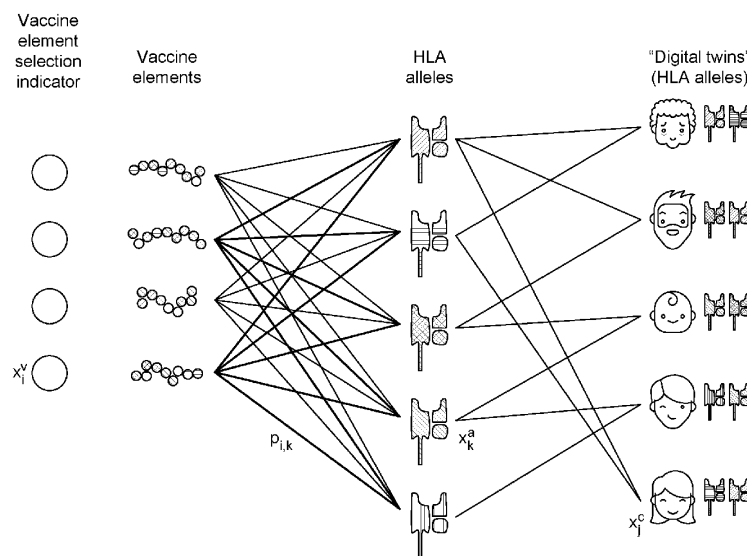


FIG. 1

(57) Abstract: According to an aspect of the present invention, there is provided a computer- implemented method of selecting one or more amino acid sequences for inclusion in a vaccine from a set of predicted immunogenic candidate amino acid sequences, the method comprising: identifying an immune profile response value for each candidate amino acid sequence in respect of each one of a plurality of sample components of an immune profile, wherein the immune profile response value represents whether the candidate amino acid sequence results in an immune response for the sample component of an immune profile; retrieving a plurality of immune profiles for a population; generating a plurality of representative immune profiles for the population, wherein the representative immune profiles overlap with the sample components of an immune profiles; and, selecting the one or more amino acid sequences for inclusion in the vaccine that minimises a likelihood of no immune response for each representative immune profile, based on the immune profile

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