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(54) Title: COMPOSITIONS AND METHODS FOR EVALUATING VIRAL RECEPTOR/CO-RECEPTOR USAGE AND INHIBITORS OF VIRUS ENTRY USING RECOMBINANT VIRUS ASSAYS

(57) Abstract: The present invention provides a method for identifying whether a compound inhibits entry of a virus into a cell which comprises: (a) obtaining nucleic acid encoding a viral envelope protein from a patient infected by the virus; (b) co-transfecting into a first cell (i) the nucleic acid of step (a), and (ii) a viral expression vector which lacks a nucleic acid encoding an envelope protein, and which comprises an indicator nucleic acid which produces a detectable signal, such that the first cell produces viral particles comprising the envelope protein encoded by the nucleic acid obtained from the patient; (c) contacting the viral particles produced in step (b) with a second cell in the presence of the compound, wherein the second cell expresses a cell surface receptor to which the virus binds; (d) measuring the amount of signal produced by the second cell in order to determine the infectivity of the viral particles; and (e) comparing the amount of signal measured in step (d) with the amount of signal produced in the absence of the compound, wherein a reduced amount of signal measured in the presence of the compound indicates that the compound inhibits entry of the virus into the second cell.