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- (54) **Title:** PREDICTIVE MODELING AND CONTROL OF CELL CULTURE

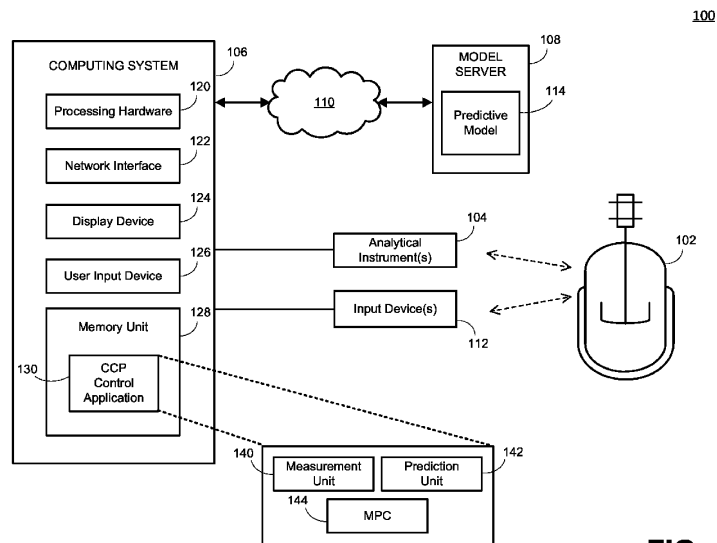


FIG. 1

- (57) **Abstract:** A method of controlling a cell culture process includes, for each time interval of one or more time intervals during the cell culture process, obtaining current values of one or more cell culture attributes associated with a cell culture, predicting one or more future values of a particular cell culture attribute associated with the cell culture, and controlling one or more physical inputs to the cell culture process. Predicting the future value(s) includes applying the current values of the cell culture attribute(s), and an earlier value of at least one of the cell culture attributes, as inputs to a data-driven predictive model using historical data. Controlling the physical input(s) includes applying the future value(s) as inputs to a model predictive controller.

SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN,
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