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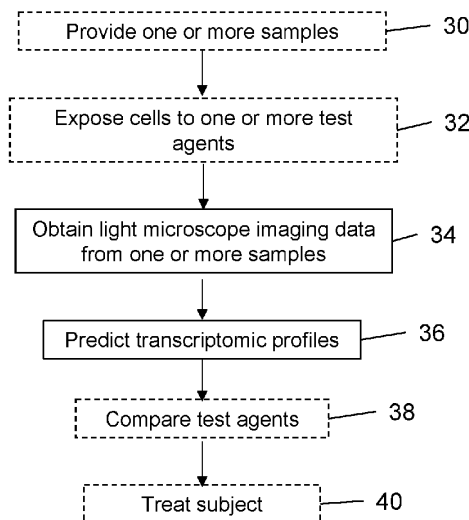


Fig. 3

(57) Abstract: The present invention sets for a technique for determining a transcriptomic profile of a sample comprising one or more cells. The disclosed techniques include obtaining one or more single cell images of the sample. The techniques also include predicting a transcriptomic profile for one or more cells of the sample using a machine learning model configured to take as input one or more single cell images and produce as output a predicted transcriptomic profile for the one or more cells in the single cell images. According to the disclosed techniques, a measured transcriptomic profile comprises a set of values indicative of the level of expression of a respective transcript, and a predicted transcriptomic profile comprises a plurality of values that are each indicative of the expression level of a plurality of transcripts.

[Continued on next page]

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