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(54) Title: QUANTITATIVE METHODS, SYSTEMS AND APPARATUSES FOR GENE EXPRESSION ANALYSIS

(57) Abstract

The present invention provides methods for quantifying the relatedness of a first and second gene expression profile and for ordering the relatedness of a plurality of gene expression profiles to a single preselected gene expression profile. The methods are demonstrated to be useful for quantifying the relatedness of environmental conditions upon a cell, such as the relatedness in effects of pharmaceutical agents upon a cell. The methods are also useful in quantifying the relatedness of a preselected environmental condition to a defined genetic mutation of a cell and for quantifying the relatedness of a plurality of genetic mutations. Also presented are systems and apparatuses for performing the subject methods. Further provided are quantitative methods, systems, and apparatuses for selecting informative subsets of genes for gene expression analysis.