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(54) **Title: BIOMARKERS FOR RESPIRATORY DISEASE AND METHODS USING THE SAME**

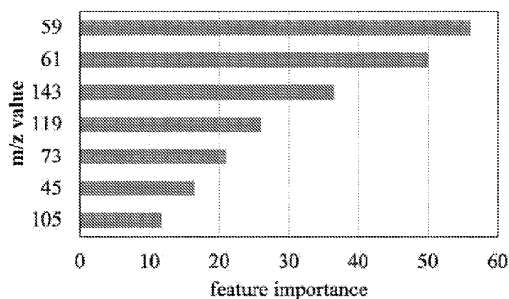


FIG. 3

(57) **Abstract:** The present application relates to methods of detecting the presence of a respiratory disease in a subject. The method comprising the step of detecting or measuring a concentration of two or more biomarkers selected from the group consisting of Water, Methanol, 1,3-Butadiene, Acetone, Isoprene, Isobutyronitrile, 3-Methylpyridine, Pentanoic Acid, m-Cresol or p-Cresol, N,N-Dimethylaniline, and n-Decane in a sample obtained from the subject. Other biomarkers may include Hydrogen Peroxide, Trimethylamine, Methacrolein, Butanal, Propanoic Acid, Butanol, Carbon Disulfide, Aniline, Furfural, Cycloheptene, 1-Octene, Benzoic Acid, 6-Methyl-5-Hepten-2-one, 1-Decene, Dodecane, β -Damascenone, Sesquiterpene, and Tetradecanoic Acid. The methods include applying the concentrations to a decision tree or a logistic regression model.

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