Diagnostic Test for Chronic Obstructive Pulmonary Disease (COPD)

Technology #1952

“Lead Inventor: Gerard M. Turino

Chronic Obstructive Pulmonary Disease (COPD) Diagnosis Requires Sensitive, Accurate Detection of Elastin One of the key measurements in Chronic Obstructive Pulmonary Disease (COPD) diagnosis is lung elastin degradation which occurs with the development of pulmonary emphysema. Current measurements of elastin peptides are dependent on immunoassays, which have varied specificity with different antibodies. Therefore, there is a need for standardized methods of accurately detecting and measuring elastin components for the purpose of diagnosing and/or treating COPD, chronic bronchitis, emphysema, refractory asthma, and other related diseases.

This technology provides a more sensitive and more accurate method to detect and quantify elastin components by mass spectrometry. By this technology, better diagnosis and treatment for COPD and other related diseases could be developed.

Mass Spectrometry Technology for COPD and Elastin Fiber Injury Diagnosis and Treatment This technology adapted mass spectrometry to detect and quantify desmosine and isodesmosine in body fluids or tissue, as a marker of determining the level of elastic fiber degradation in patients.

Applications: • Method of diagnosing and treating elastin fiber injuries • Method of validating candidate compounds for use in treating COPD, chronic bronchitis, emphysema, refractory asthma, and other related diseases

Advantages: • This technology provides more sensitive and more accurate method to quantify elastin components by mass spectrometry, compared with previous methods • The technology allows detection and quantification of different elastin components spontaneously


Licensing Status: Available for Licensing and Sponsored Research Support

Inventors

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