Exhaled particles for monitoring of airway inflammation

Sampling and analysis of endogenous particles from breath

Airway inflammation is a leading cause of many airway diseases. Asthma alone may affect as many as 300 million people in the world today. Spirometry is the most common tool for diagnosing lung dysfunction in the general population. Once an airway disease has resulted in reduced lung function and can be diagnosed by spirometry the damage to the airway tissues are often irreversible. The aim of this thesis was to contribute to the development of a method that can be used to non-invasively obtain a sample of the fluid that lines the small airways. The method should be quantitative, reproducible and easy to apply to the general population. Such a method could be a valuable tool for early detection of airway inflammation and also be used for monitoring subjects over time in order to characterize the pathophysiological mechanisms behind disease progression.

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