

Acoustic device for asthma monitoring



Value Proposition

The present technology enables acoustic monitoring of asthma by assessing correct inhaler use, drug administration and lung function with an add-on device for common asthma inhalers. When the inhaler is used the device generates sounds that are recorded by a smart phone allowing the user to assess the inhalation and track their condition. The add-on device and the inhaler are coupled forming a single device and is intended to provide simultaneous drug administration and asthma monitoring.

Business Opportunity

The team behind the invention is working on a product for asthma monitoring and is currently seeking funding for a spin-out company, Sonohaler. The global asthma therapy market is estimated at USD 22 billion and an upcoming smart inhaler market is predicted to grow to USD 1.6 billion by 2022. We see an immense opportunity for improving the lives of the +300 million asthma patients worldwide and reducing healthcare costs associated with hospitalization by better individual control of asthma and a reduction in asthma attacks.

Technology Summary

The device can be used alone or designed to fit a specific inhaler or other devices. The device contains an acoustic element that produces a sound when inhaling or exhaling through the device. The sounds generated can then be used to correlate with the flow rate produced allowing measurements. The sounds can be recorded and processed using software to allow further assessment of inhalation and inhaler use. The technology can be used to monitor inhalation and drug administration giving an indication of lung health and treatment profile.

Development Phase

Prototype devices have been produced and tested in combination with inhalers or as stand alone devices to administer medicine. Correlation between sound and flow rate has been established and software can be used analyze inhalation parameters. It is expected to test the powder flow performance of the product in the near future to demonstrate compatibility with inhaler drug administration. Software and algorithms are under development.

The inventors

Adam Bohr
 Johan Bøtker
 Henrik Jensen

Contact Information

Peter Stein Nielsen
 Commercial Officer
 +45 21 64 74 47
 peter.nielsen@adm.ku.dk

Seeking

- Funding/Investors
- Partner/Research Collaboration