Aston University
Business Partnership Unit

Commercial Opportunity

Inhaler Composition

Scientists at Aston University have invented a novel spray-dried powder inhaler composition that displays controlled release of active agents and improved dispersibility. Aston's Business Partnership Unit is now actively seeking commercial partners to exploit this innovative drug delivery system.

Highlights

- Decreased oropharyngeal deposition
- Increased fine particle fraction
- Modified release of active agents

Background

Drugs delivered by inhalation are used to treat various human illnesses. Several inhalation-based drug delivery systems exist: liquid nebulisers, aerosol-based metered dose inhalers, and dry powder dispersion devices. Such devices aim to deliver drugs to the lungs, so they can be either distributed throughout the body via the alveolar epithelium and the blood circulatory system, or deposited locally to the central bronchioles. Interest has recently shifted towards spray-dried powders, in an effort to decrease oropharyngeal deposition, increase fine particle fraction and achieve modified release of one or more drugs.

The Technology

Scientists in the Aston Pharmacy School have discovered that the combination of an amino acid and a biodegradable polymer can achieve these goals. The formulation utilises Chitosan, a pharmaceutically acceptable biodegradable polymer used to sustain drug release, and Leucine, an essential amino acid used as an aerosolisation enhancer. Spray-dried powders manufactured with these components display modified release of the active agent and improved dispersibility.

Intellectual Property Protection

This technology is the subject of several National Phase patent applications:

Title	*Application Number*	*Priority Claimed*	*Our Ref*
Respirable Powders	US 12/095046 EP 06779215.0 CA 2630772	August 25, 2006	PAT-2005-021

Further Information

Further information can be made available and commercial discussions commenced on entering into a non-disclosure agreement.

Contact Details

Business Partnership Unit
Aston University
Aston Triangle
Birmingham B4 7ET
United Kingdom

Tel: +44 (0)121 204 4242
Email: bpu@aston.ac.uk
www.astoninventions.com