



Bulk Enteric Capsules

Scientists in Aston's School of Life and Health Sciences have invented a novel capsule for orally-administered, post-gastric drug delivery. Aston's Business Partnership Unit is now actively seeking commercial partners to exploit this potentially lucrative technology.

Highlights

- Enables oral-delivery of active pharmaceutical ingredients otherwise unsuitable for gastric release
- No coating required after encapsulation
- No animal products or sequestering agents necessary
- Simple manufacturing process

Background

Many active pharmaceutical ingredients (APIs) are unsuitable for gastric release. Such APIs irritate the gastric mucosa, are unstable or reactive to stomach acid pH, interfere with gastric metabolism, or fail to reach drug targets located far down the GI tract. When post-gastric delivery is required, gelatine capsules loaded with an API or the API itself are spray-coated with an acid-insoluble polymer. Spray-coating however is expensive and time-consuming, and is afflicted by uneven application, lack of adhesion, and cracking of the coating which affects the appearance and performance. Gelatine capsules further pose religious and ethical concerns for many users. Alternatives to gelatine exist, but none has bulk enteric properties. Still others consist of softgel, which necessitates a complex manufacturing process.

The Technology

Aston researchers have devised a hard two-piece capsule with bulk enteric properties that overcomes these difficulties. The invention is a polymer composition comprising a film-forming, water-soluble polymer, an acid-insoluble polymer, an auxiliary for gelation, a plasticiser, and optional minor ingredients, such as colouring and flavouring agents. The balance of the composition is water. No animal products or sequestering agents are necessary. These ingredients are combined into a gel mass, which can be moulded into capsule form and dried. Capsules so manufactured may contain APIs or dietary supplements.

Intellectual Property Protection

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

<i>Title</i>	<i>Patent Applications</i>	<i>Priority Claimed</i>	<i>Our Ref</i>
Enteric Pharmaceutical Capsules	US TBA EP 08718872.8	March 29, 2007	PAT-2006-004

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