

Helvetica Neue 55 Roman 11/17.5pt

Helvetica Neue 65 Medium 14/17.5pt

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Sub Header / Department / Faculty / School / UEA

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## Main Title / Headline

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A woman with long dark hair and a grey scarf is looking down. The background is a soft, out-of-focus natural setting. Overlaid on the image is white text. The top line reads 'Technology offering'. The second line, in bold, reads 'An innovation to aid administration of tablets in patients who cannot swallow.' The bottom line reads 'Research, Enterprise & Engagement'.

Technology offering

**An innovation to aid administration of tablets in patients who cannot swallow.**

Research, Enterprise  
& Engagement

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## Background

Dysphagia is a term used to describe difficulty in swallowing, a condition particularly prevalent amongst the elderly population and in patients suffering from neurological diseases such as Parkinson's disease (PD) and multiple sclerosis (MS), or recovering from stroke.

Although some medicines can be administered by alternative routes, the majority of drugs are only available for oral delivery as tablets or liquids. Whilst liquid formulations might be ideal for patients with swallowing problem, not all drugs are available in liquid forms. Even when liquid formulations are available they are frequently more expensive and of a consistency that increases the likelihood of aspiration (entry into the respiratory system).

Consequently, patients and carers resort to crushing tablets and putting them into food (e.g. yoghurt, jam or similar) to try to aid swallowing. This may lead to changes in bioavailability, due to changes in particle size and/or compromising the coating on tablets. In the case of sustained/delayed release systems, potentially dangerous rapid release of the drug due to the breakdown of the release restraint mechanism can occur.

To date, no standard administration aid system has been available whereby the patients can be given a tablet, secure in the knowledge that a validated and safe method of assisting swallowing has been used. This invention addresses this clinical need for a properly tested and validated, easy to use, swallowing aid for patients with dysphagia or for other patients such as children who dislike or have trouble swallowing tablets.

## The invention

A novel, easily handled and administered patent-protected swallowing aid based on a semi-solid gel has been developed by scientists from the School of Pharmacy at the University of East Anglia.

- This semi-solid gel is composed of Generally Recognised as Safe (GRAS) ingredients
- The patient or carer simply places the tablet into the small, soft gel unit, which does not interact with the drug coating (+Stability data).
- The gel becomes 'slippery' inside the mouth, on contact with saliva or water, enabling the tablet to be easily swallowed.

### Benefits of the swallowing aid

- **Ease of use**  
The semi-solid gel can be easily handled and swallowed and requires minimum involvement from the patient or carer. Existing products require time and often complex manipulation from patient/ carer. With pre-made, solid gels, shaped for accommodating tablets, drugs could be delivered easily in a relaxed manner with minimum time investment from patients or carers.
- **Ease of handling of very small tablets**  
Small tablets inserted into the gel could ease the handling of such small tablets, likewise additional weight and size could make oral manipulation of the tablets easy too.
- **Reproducibility**  
Using such a system, the patient experience would be identical on each administration due to reproducibility of the gel unit. The system provides the first standardised approach to delivering tablets to dysphagic and elderly patients.

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