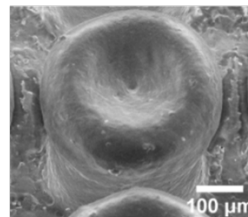
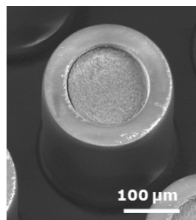
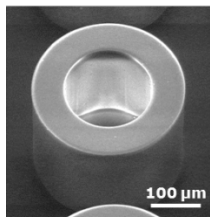


## Master project

# Delivery of prodrugs in microcontainers



Micrometer sized polymeric cylindrical containers (known as microcontainers) have been developed for oral delivery of therapeutics. Studies have shown that the microcontainers are engulfed in the intestinal mucus. This property may be used in the delivery and protection of prodrugs. Prodrugs need to reach the intestinal barrier and be transformed in prodrug only afterwards. Prodrugs often have low bioavailability since they are affected by the presence of enzymes in the intestinal lumen. To overcome this, microcontainers will be loaded with the prodrug and coated with a pH sensitive polymer to have the release only in the intestine.

### Example of specific project topics:

- Does pH sensitive coating prevent the release in the stomach?
- Is it possible to measure and distinguish drug and prodrug?
- Do microcontainers protect the prodrug throughout the gastrointestinal tract?

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**Location:** IDUN center of Excellence, DTU Health Tech

### About IDUN

*IDUN is a center of excellence funded by the Danish National Research Foundation and the Villum Foundation. The center is divided into two parts: IDUN Drug and IDUN Sensor, focusing on drug delivery and nanomechanical sensors, respectively.*