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## Microfluidic Digestive Systems for Drug Analysis

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Propositions belonging to the PhD thesis

## **MICROFLUIDIC DIGESTIVE SYSTEMS FOR DRUG ANALYSIS**

by

**Pim de Haan**

1. The human gastrointestinal tract has two main functions: digestion and absorption. Model systems termed 'gut-on-a-chip' should be able to do both.
2. A challenge in emulating the functions of the gastrointestinal tract is that it comprises a combination of batch processes and continuous processes.
3. The conversion of a batch-wise process to a continuous process allows for the transposition of distance to time.
4. The use of a microfluidic set-up allows for rapid customization of previously developed *in vitro* digestive systems.
5. A process can be occurring and not occurring at the same time dependent on its kinetics.
6. Characterization of the behavior of drugs in the gastrointestinal tract is essential in drug development.
7. Undergraduate programs should be more selective in their admissions and reject the current bottom quartile of students.