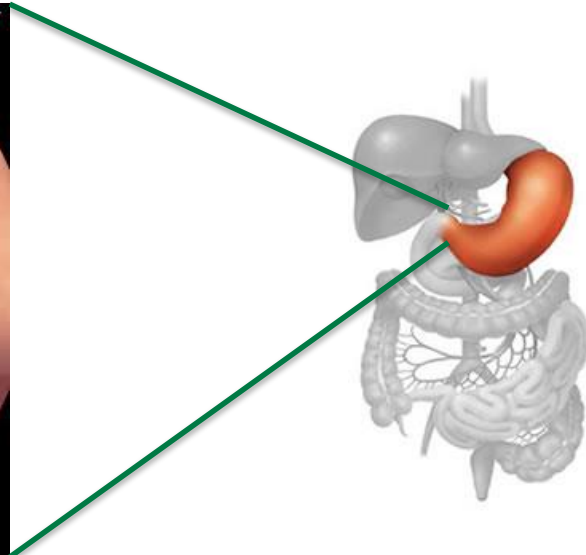
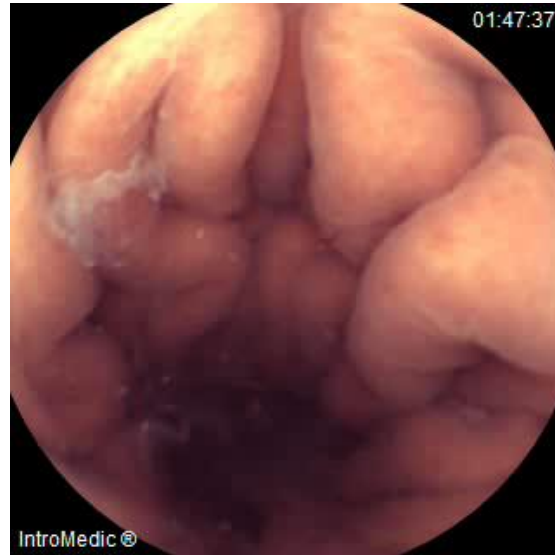




# Gastro-intestinal digestive tract

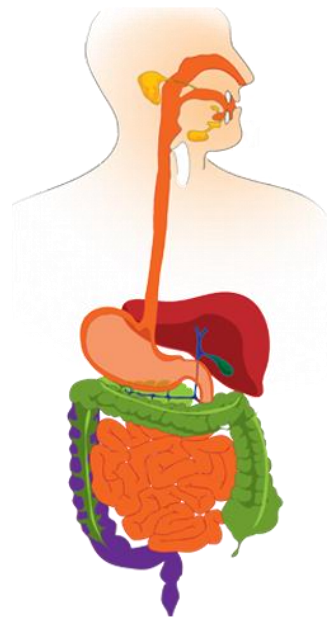


Wireless endoscopy





# Simulating Food Digestion – *In Vitro*



Oral phase



Stomach



Intestine

nature  
protocols

PROTOCOL

<https://doi.org/10.1038/s41596-018-0119-1>

## INFOGEST static in vitro simulation of gastrointestinal food digestion



# Simulating Food Digestion – In Vitro



nature  
protocols

PROTOCOL

<https://doi.org/10.1038/s41596-018-0119-1>

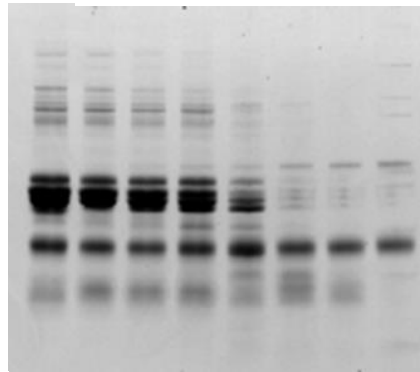


## INFOGEST static in vitro simulation of gastrointestinal food digestion



# Digestion of whole foods

Digestion of proteins  
Gel electrophoresis



→ Pepsin  
} Caseins  
→ Whey protein

Time of Digestion →



# Processing → digestion

Proteins  
Fats  
Carbohydrates

Minerals  
Vitamins  
Other minor  
Fibre



# Whey Proteins





# Mirocam<sup>®</sup> In Vivo Imaging



All-Ireland hurler, Teagasc  
PhD student and “subject”  
"Shane O'Donnell



# Fast Whey Proteins vs. Slow Caseins



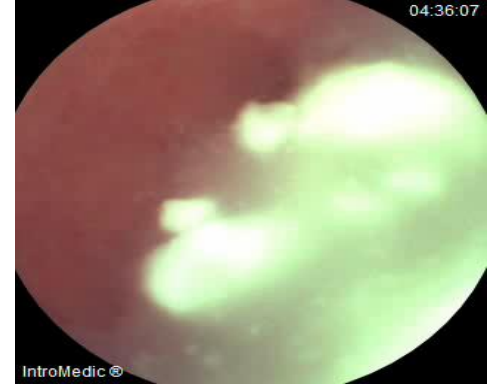
0 minutes



+ 90 min



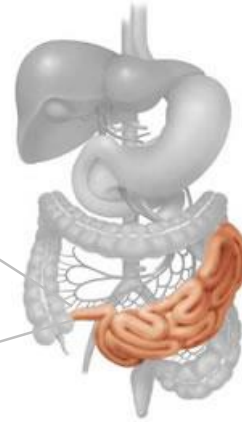
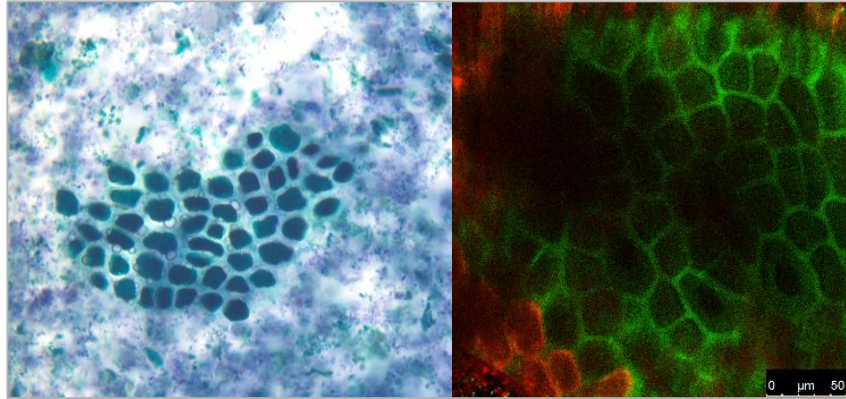
+ 160 min



Commercial Whey proteins

Whole milk





*in vitro* vs. *in vivo*