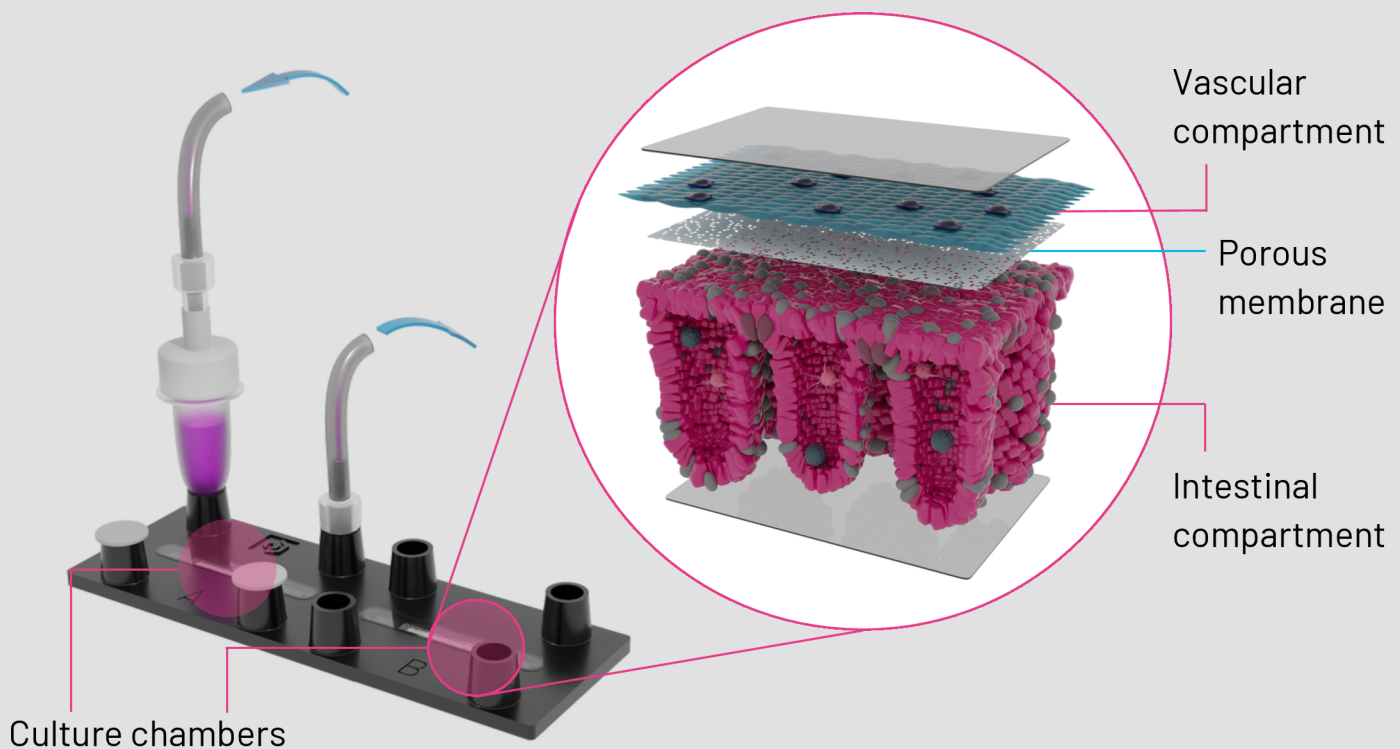


Discover our human immunocompetent intestine-on-chip, designed for modeling inflammation, immune cell recruitment, host-microbiota interactions, uptake studies, and drug screening. The Dynamic42 model supports research on cellular, molecular, and physiological processes, enhancing studies on microbiota co-culture and oral drug absorption.

INTESTINE ON CHIP



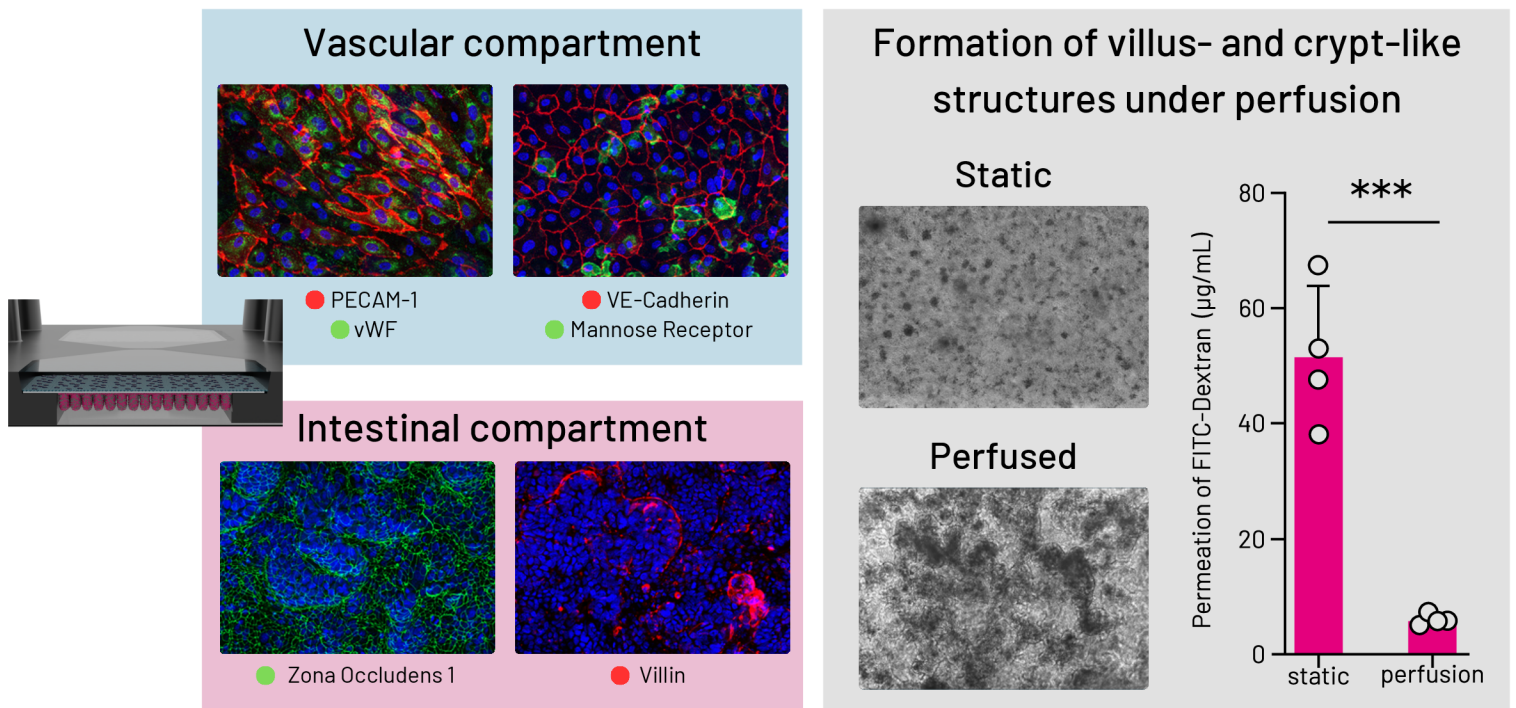
Applications

- / Barrier functionality
- / TEER measurement
- / Toxicological studies
- / Compound delivery & uptake
- / Disease modeling
- / Host-microbial interactions (e.g. infection, probiotics)
- / Nutritional studies
- / Multi-organ models

Key features

- / Formation of villus- and crypt-like structures
- / Differentiation of intestinal cells into highly specialized cell populations under dynamic perfusion
- / Immunocompetent (Integration of resident/circulating immune cells)
- / Bidirectional perfusion of vascular and intestinal tissue
- / Various configurations and different cell sources possible
- / Suitable for inoculation/infection with different microorganisms

Intestine model - morphology

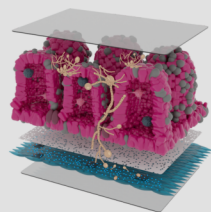


Application highlights

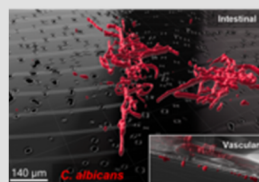
Disease & infection modeling

Drug testing in fungal infection model

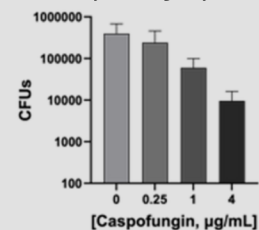
Candidiasis-on-chip



3D microcolony reconstruction



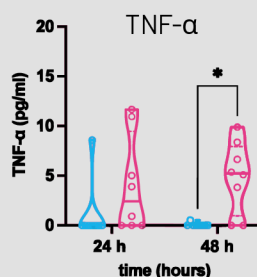
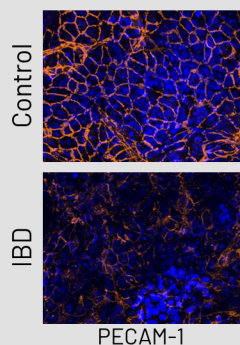
Intestinal fungal burden under caspofungin perfusion



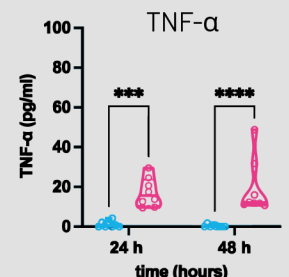
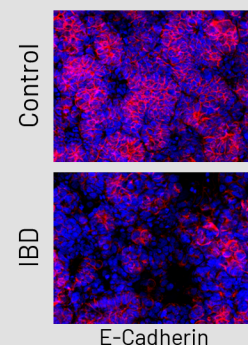
AppNote

Inflammatory bowel disease (IBD)

Vascular compartment

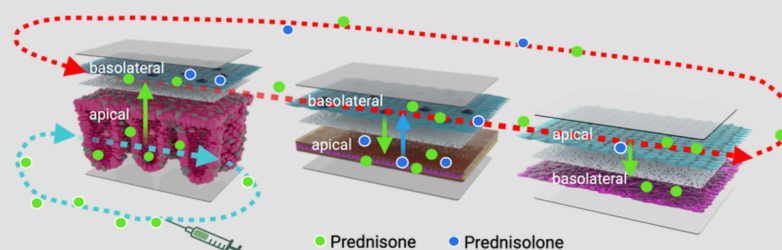


Intestinal compartment



Multi-organ models

Gut-liver-placenta model for ADME & PBPK



Paper