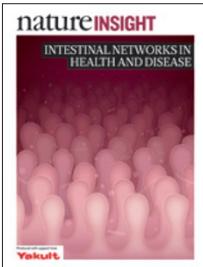


nature INSIGHT

INTESTINAL NETWORKS IN HEALTH AND DISEASE

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Our bowels have two major roles: the digestion and absorption of nutrients, and the maintenance of a barrier against the external environment. They fulfil these functions in the context of, and with help from, tens of trillions of resident microbes, known as the gut microbiota.

This Insight has as its topic the various relationships that contribute to keeping this complex system in balance, and that help to protect us from a wide spectrum of diseases, including chronic inflammatory bowel disease, colorectal cancer and metabolic disease. It explores the interactions between the environment and host genetics, between the type and amount of food we eat and the composition of the microbial community, and between the microbiota, the intestinal epithelium and the immune system. It also highlights the regulatory mechanisms that control the rapid and continuous renewal of epithelial cells in the intestinal lining from resident stem cells. It discusses the cellular and molecular pathways that help to maintain intestinal homeostasis, and explores the mechanisms that cause pathology and disease when these pathways fail.

We hope that these articles will contribute to a better understanding of the nature of these complex networks, and point to future strategies that will be successful in paving the way for more effective preventative and therapeutic measures, ultimately benefitting human health.

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Ulla Weiss

Insights Editor

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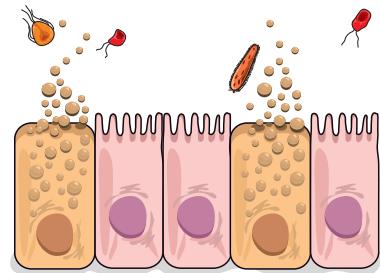
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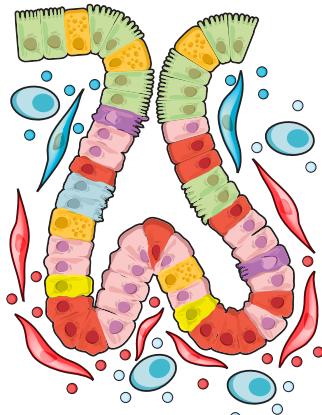
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