

Unraveling the Pathways Involved in Gut Vascular Barrier Impairment in Metastatic Colorectal Cancer.

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Beyond the intestinal epithelial barrier, another barrier exists namely Gut-Vascular Barrier (GVB). We have demonstrated that impaired GVB leads to increase blood vessels permeability allowing migration of bacteria in the liver.

Moreover, as unpublished data, we have recently identified a new marker of GVB derangement. This marker is expressed in primary tumors of Colon Cancer (CC) patients that have developed metachronous distant metastases. Notably, CC patients with impaired GVB in the primary tumor have two times higher the probability to develop distant metastasis within 5 years. However, it is still unknown how this marker is regulated.

To address this aim, taking advantage of an ex-vivo organ culture model, we are testing different bacteria and tumor-secreted factors on colon healthy tissue. Reversing the events responsible for the vasculature disruption represents a useful weapon against tumor cell dissemination.