Changes in Abundance of oral Microbiota Associated with oral cancer

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Trillions of microbes have evolved with and continue to live on and within human beings. A variety of environmental factors can affect intestinal microbial imbalance, which has a close relationship with human health and disease. Here, we focus on the interactions between the human and the host in order to provide an overview of the microbial role in basic biological processes and in the development and progression of major human diseases such as infectious diseases

Therefore, we propose that research should focus on the host-microbe interaction and on cause-effect mechanisms, which could pave the way to an understanding of the role of gut microbiota in health and disease, and provide new therapeutic targets and treatment approaches in clinical practice.

Cancer is a multifactorial pathology and it represents the second leading cause of death worldwide. In the recent years, numerous studies highlighted the dual role of the gut microbiota in preserving host's health. Gut resident bacteria are able to produce a number of metabolites and bioproducts necessary to protect host's and gut's homeostasis. Conversely, several microbiota subpopulations may expand during pathological dysbiosis and therefore produce high levels of toxins capable, in turn, to trigger both inflammation and tumorigenesis. Importantly, gut microbiota can interact with the host either modulating directly the gut epithelium or the immune system

Certain steps may manifest in families that live with SRAD and the effect the family members suffer with this issue corresponds to the difficulties experienced by the drug user in the family. Defense mechanism, used in periods of tension and disagreements, in which people keep from saying what they actually think and feel about the problem. Subsequently, the family shows heightened concern and attempts to control the use of drugs, as well as its physical, emotional, occupational and social consequences. In this Numerous gut populating bacteria, called probiotics, have been identified as protective against the genesis of tumors. Given their capability of preserving gut homeostasis, probiotics are currently tested to help to fight dysbiosis in cancer patients subjected to chemotherapy and radiotherapy. Most recently, three independent studies show that specific gut resident species may potentiate the positive outcome of anti-cancer immunotherapy. The highly significant studies, uncovering the tight association between gut microbiota and tumorigenesis, as well as gut microbiota and anti-cancer therapy, are here described. The role of the *Lactobacillus rhamnosus GG* (LGG), as the most studied probiotic model in cancer, is also reported. Overall, according to the findings here summarized, novel strategies integrating probiotics, such as LGG, with conventional anti-cancer therapies.

In the recent years, numerous evidences pointed towards the central role of commensal bacteria colonizing body surfaces as key determinants of health or pathologic conditions, including cancer . Among the human symbiotic microbial populations, the gut microbiota is the most extensively studied and it deeply influences host's homeostasis . Gut microbiota is the name given to the heterogeneous population of commensal microorganisms, mainly bacteria, but also fungi, archaea and viruses, populating the intestinal tract, mostly the large intestine, and it can be considered as one factor to which we are persistently exposed and Among all the pathologies linked with the gut microbiome, tumorigenesis is one of the mostly studied. The link has been found both with local gastro-intestinal cancers, as well as with other distal tumors and Metabolomics and metagenomics studies highlighted the dual role of the gastro-intestinal microbiome in cancer prevention, tumorigenesis and anti-cancer therapy