Supplementary Material

**The Complex Puzzle of Interactions among Functional Food, Gut Microbiota and Colorectal Cancer**

Lígia Aurélio Bezerra Maranhão Mendonça\*1, Rosângela dos Santos Ferreira 2\*, Rita de Cássia Avellaneda Guimarães 2, Alinne Pereira de Castro1, Octávio Luiz Franco1,3, Rosemary Matias4,5, Cristiano Marcelo Espinola Carvalho1,5

**\* Correspondence:** Lígia Aurélio Bezerra Maranhão Mendonça lmendoncanutri@gmail.com

# 1 Supplementary Table 1

**Table 1.** Studies associated with various *phyla* of microorganisms and their etiological link with the CRC

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **MO\*#** | **Population** | **Identification Method** | **Conclusion of the Authors** | **Ref.** |
| *H. pylori* | Patient with CRC *vs* Patient with colon polyps | Endoscopy, IgG serology, Hp, IgG and CagA expression and biopsy | Non-significant association | [55] |
| *S. bovis* | Patients with bacteremia of *S. bovis* | Colonoscopy | * Approximately 30.6% of the patients studied presented CRC | [54] |
| Patients randomly selected (n= 203) | 24 % of the patients had bacteremia of *S. bovis*, of these approximately 35 % presented CRC | [55] |
| *S. gallolyticus* | Patients with CRC *vs* colonic mass of patients “healthy” | qPCR | Present but low prevalence of *S. gallolyticus* infection | [56] |
| *E. faecalis* | Patients with bacteremia of *E. faecalis* | Colonoscopy | Infiltration of CRC (bacterial translocation) | [57] |
| *C. septicum* | Patient with necrotizing fasciitis | Colonoscopy and histological methods | High virulence of the *C. septicum* is related to the development of CRC | [58] |
| *E.* *coli* | Patients with CRC *vs* Patients with uncomplicated diverticulitis | Biopsy of the intestinal epithelium and pathological methods | Relationship among unfavorable prognosis and colonization of colonic mucosa by *E. coli* in both conditions | [59] |
| Patients with CRC | Biopsy of the colonic mucosa and standard biochemical methods | High incidence of *E. coli* in patients with CRC | [60] |
| Patients with CRC  (n= 55) | qPCR | Important association between bacterium *E. coli* and CRC | [61] |
| *Fusobacterium* | Patients with CRC | PCR, MSI, DNA methylation, KRAS, BRAF, mutations of PIK3CA | The increase of phylum is reflected pathogically in the intestinal microbiota, immune control and neoplasia | [62] |
| Patients with CRC  (n= 55) | qPCR | Important association between the *phylum* and CRC | [61] |
| *B. fragilis* | Patients with CRC  (n= 155) | Colonoscopy | Positive association between the present bacterium and CRC | [63] |
| Patients referred for colonoscopy (n= 150) | qPCR | Important association between the bacterium *B. fragilis* and CRC | [63] |

\*MO: Micro-organisms. #Natural Reservoir: gastrointestinal tract.