Microbiology – Human food

Use of probiotics in the prevention and treatment of cancer, and in particular for colorectal cancer

Description

Luis Bermudez team (INRA, Micalis, France) has isolated a new strain of lactobacillus brevis from pulque (alcoholic beverage from Mexico). This strain (LBH1073) is able to stop the cell proliferation on intestinal epithelial human cells (HT-29, HTC116 et Caco-2) and on other epithelial cells (like TC-1 from pulmonary epithelial cells of mouse) at a comparable level of 5-fluoro-uracile (5-FU : anti-cancer drug used as a positive control in the experiments).

Type of expected transfer

Licence option with R&D programme or licence

Advantages

QPS strain - Team expertise in micobiota and interaction between microorganisms and host

Possible applications

The idea is not to replace the actual treatments but to complement those treatments with probiotics. This association can improve the treatment efficiency, decrease the side effects or solve the problem of antibiotics resistant cells. Besides, it has been illustrated in three articles published in Science magazine at the beginning of 2018 (Sivan et al., 2015; Vetizou et al., 2015; Gopalakrishnan et al., 2018; Routy et al., 2018).

Key words

strain ; probiotic ; cancer ; tumor ; anti-proliferation ; lactic bacteria ; qps ; gras ; safe

TRL Scale

1 2 **3** 4 5 6 7 8 9

Development level

The next step of this project is to validate the anti-tumoral effects of this strain Lactobacillus brevis LBH1073 in vivo. Then to carry out a clinical pilot study.

Laboratories:
Micalis

Researchers:
Luis Bermudez

Contact:
Clément Shekoory clement.shekoory@inra.fr
Héloïse Simonson heloise.simonson@inra.fr
Technology transfer officer

Date: 01-08-2019