

### Prevention and/or treatment of a mental disorder with memory impairment in a subject by using microbiota composition

#### BACKGROUND

There is an emerging and consistent link between the gut microbiota (the billions of bacteria living in the intestine) and different health conditions, weight gain, exercise, sleep, skin appearance and many other correlations being investigated, including the mental health.

The decline of neurocognitive function is currently among the greatest health concerns of old age. There is preliminary evidence that some bacteria species live within the human brain

Related to this, recent evidence in mice shows a potential link between the gut microbiota and the brain. The gut microbiota is increasingly recognized to be associated with cognitive traits and memory. Further, the same agents that have shown to delay or prevent cognitive impairment (weight loss, antidiabetic drugs) are well known to cause microbiota shifts.

#### THE TECHNOLOGY

The present invention is a gut microbiota composition comprising a wide range of species of genus with a vast array of applications for use in the specific prevention and/or treatment of a mental disorder with memory impairment in a subject:

- in which said memory impairment is an impairment in verbal memory, in immediate memory, in non-spatial memory, or in the memory function.
- in which said mental disorder with memory impairment is Parkinson's disease, Alzheimer's disease or dementia.
- in which said composition is presented in the form of a pill, tablet, a capsule, solution, suspension, syrup, or a food containing the probiotic bacteria, and the form of administration of said microbiota composition.

#### STATE OF DEVELOPMENT

Pre-clinical studies have been performed.

#### INTELLECTUAL PROPERTY

A European patent has been filed (EP20382592), priority date: July 1<sup>st</sup> 2020

#### MARKET OPPORTUNITY

Pharmaceutical sector, nutritional supplements sector and clinical diagnosis sector.

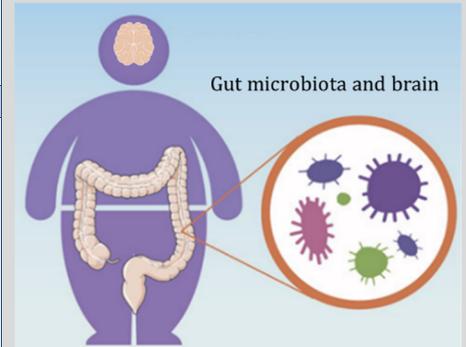
#### RESEARCH TEAM

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#### MORE INFORMATION

**Obesity Impairs Short-Term and Working Memory through Gut Microbial Metabolism of Aromatic Amino Acids.** Cell Metab. 2020 PMID: 33027674.

In collaboration with:



#### COMMERCIAL OPPORTUNITY

We are looking for a partner for product development and clinical trials, and/or patent licensing.

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#### KEYWORDS

cognition, memory, microbiome, metagenomics, metabolomics, obesity, brain structure

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