

Gut Microbiome and Brain Damages

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Received: September 21, 2021; Published: October 29, 2021

Typical human microorganisms are bacteria, micro-eukaryotes, Mushrooms, yeast, archaea, laminates, protozoa, parasites and viruses or phages. All those are mainly found in the internal space of the body, such as the airways, digestive system, urogenital system, and body surface, with more than 95% of them in place in the colon [1,2].

All microbes, exist in an ecosystem/habitat called microbiota, and the collective genomic, protein or metabolite content of all microbes in a given ecosystem/A habitat called a microbiome, for example, the bacterial community, In the gut it is called a microbiota of the gut or intestinal flora [3].

One reads in the literature about the contribution of microbes on neurological dysfunction [4].

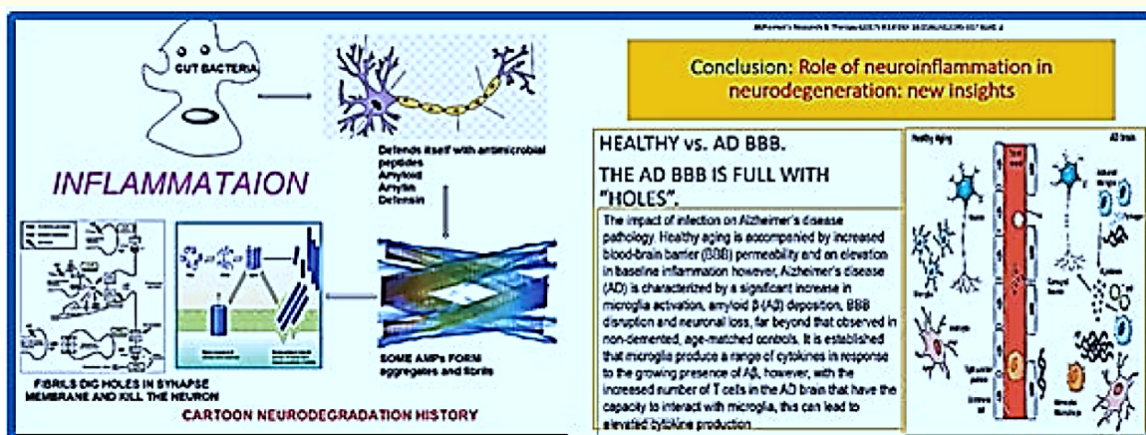


Figure 1: Damaged BBB allows crossing of microbes (Bacteria, viruses, fungi and more).

Microbial involvement in Alzheimer disease development and progression

β -amyloids, as the brain cytokines, are formed by the immune system in the brain after infiltrating the gut microbiota into the brain through the leaky BBB, via the vagus nerve for example. Those antimicrobial agents are causing the brain tissue's destruction in many ways. In the case of infiltration of the covid-19 virus [5] and toxic by-products into the brain tissue, via the gut-nerves system for example - vagus, to end with interception and death. This may take an extended period of time. Other viruses have the potential for a similar process. For example, the Covid -19 causing viruses and mutants. Infiltration into the brain triggers a multi-years crawling inflammation that produces nerve cell killing antimicrobial agents and cytokines that ruin the delicate mechanism of nerve cells communication and the cells themselves, to bring the infected individual to death [6-8].

The human microbiota consists of 10 - 100 trillion symbiotics Microbial cells that every person receives, especially intestines bacteria; Human microbiology consists of the genes found in these Cells. Worldwide microbial projects have been launched for understand the roles that this symbiosis plays and their impact on human health [9]. Just like the question, "What is it to be a human being?", there disturbing

people from the beginning of documented history Question, “What is the human microbiome?” Some researchers have disturbed since Joshua Lederberg coined the term in 2001. The human microbiome, the complete array of microorganisms life on humans and humans, or rather, Collection Of microbial genomes that contribute to a wider, or manganese, Genetic image. The genome that makes up the human bacterium represent a wide range of microorganisms including bacteria, Archaea (primitive unicellular organisms), fungi and even some non-living ones Viruses. Bacteria are without a doubt the dominant members of man Microbiology: The bacterial population alone is estimated at about 75 trillion Up to 200 trillion individual organisms, while the human body is complex Of 50 trillion to 100 trillion somatic cells. The expected bacterium Abundance suggests that the human body is in fact a “body organism” A collection of human and microbial cells and genes, Thus combining human and microbiological traits. The scientists Proved that “bacteria-free” mice were animals 1 that never entered them Any contact with microorganisms - produces twice the amount of stress Hormone (such as cortisol) in distress from “normal” mice [10]. We and almost all creatures living on earth live in symbiosis with Their bacterial nemesis, which consists of many species of microorganisms: Bacteria, viruses, fungi and parasites and more. Some say so Billions of such cells are in and around us, internally and externally. Now people know that not only the gut has a habitat Microbiome: even the skin, blood, and even the nervous system. Including the brain, populate the microbiome. The evolving sequence and analytical methods and methods are strengthened in our ability Understand the human microbiome and how we define it. The microbiome and its components [11].

Substances derived from nutrients, to fight inflammation and reptile infection may be the right approach to treat the search for a cure for degenerative diseases is already more than a hundred years old. Unclear, applying the moist sophisticated Ultra-modern methods and equipment, what actually happens in the human brain when this curse strikes. However, today.

The perception is that the intestinal microbiome penetrates the brain through the “brain-brain” axis. Either through nerves or through the bloodstream By moving from a leaky gut to a damaged blood-brain barrier. Furthermore, when in the brain, causes inflammation and then Infection, which moves in the brain in a fertility-like mechanism, from one cell to its neighbor until it reaches the introspect (death).

Like other parts of our body, the brain is home to bacteria, viruses and fungi, such as yeast and larger parasites such as amoebas.

It changes the clinical landscape of many conditions, including autism, degenerative diseases such as Alzheimer’s and Parkinson’s and chronic inflammatory response syndromes (CIRS). It also forces us to consider the ‘mind’, ‘self’ and ‘agency’ obscure the

Lines between science and philosophy [12].

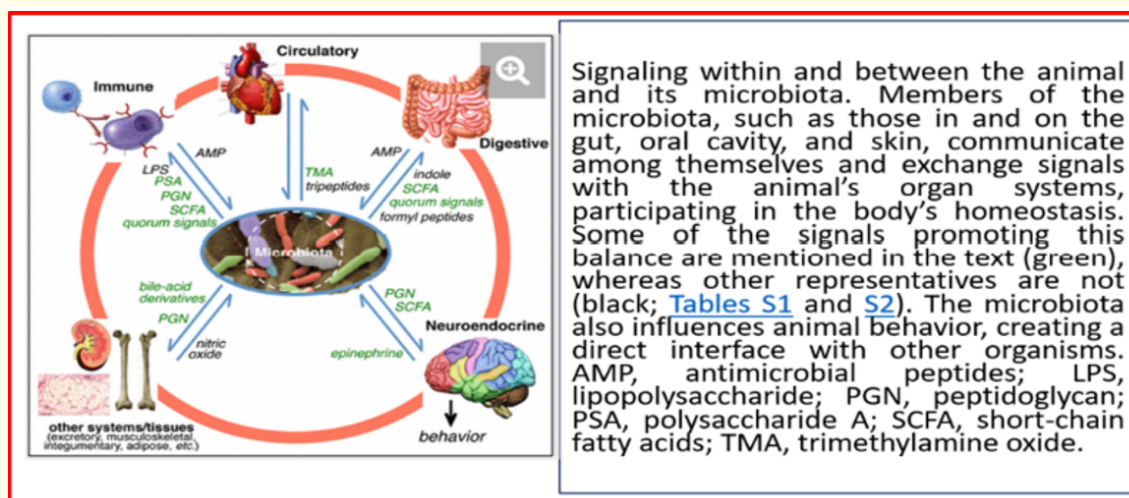


Figure 2

Interdomain communication [13]: How the bacteria facilitated the origin and development of animals; How animals and bacteria affect the genome of it; How normal animal development depends on bacterial partners; How homeostasis is maintained between their animals Symbionts; And how ecological approaches can deepen our understanding of the multiple levels of interaction between animals and bacteria. As the answers to these basic questions arise, so do all biologists will be challenged to extend their appreciation to these interactions and include investigations of the relationship between and between bacteria and their partners and animals as we search for better Understanding of the natural world.

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Volume 9 Issue 11 November 2021

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