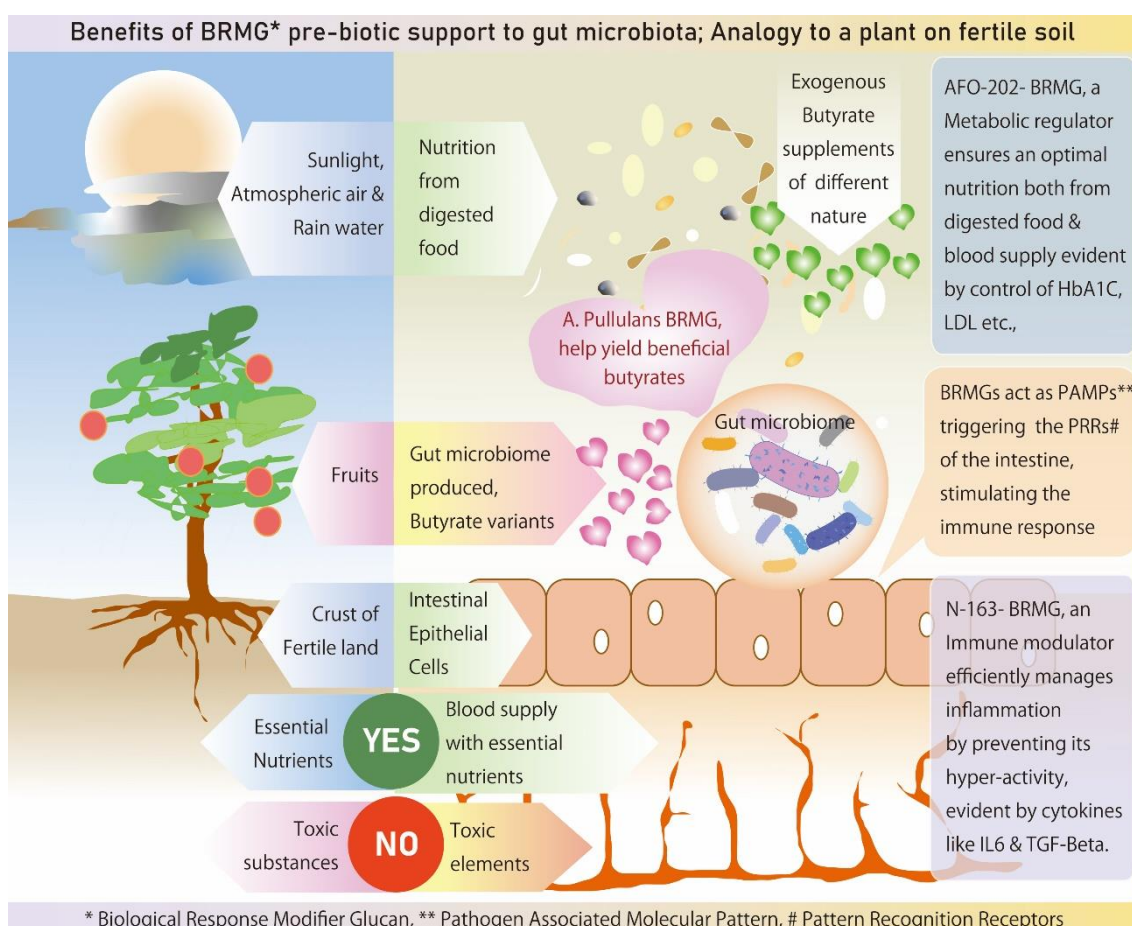


Japanese Nichi-beta glucans enhance Butyrate producing gut microbiome that help in anti-aging and enduring healthy long life - Indo-Japan collaborative research.

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An illustration explaining the analogy of a plant in fertile soil & its similarity to the healthy intestinal epithelial cell (IEC) for homeostasis of gut microbiome, which produce butyrate, an important metabolite to healthy long life. The Aureobasidium pullulans strain AFO-202 produced beta glucan yielded beneficial effects by metabolic regulation, delivery of optimal nutrients while the N-163 strain produced beta glucan managed the immune system keeping the environment around intestinal epithelial cells, free from pathogens. These two beta glucans help maintain intestinal health, especially that of the IECs thereby paving way for good microbiome that produce butyrate.

May 23, Chennai; Butyrate, a short chain fatty acid (SCFA), directly linked with anti-aging phenomena and endurance of healthy long life, has been reported to have an enhanced production by gut microbiome, by orally consuming the Japanese Nichi Glucan range of food supplements in a study in a fatty liver animal model. This path breaking research study conducted jointly by Nichi-in Centre for Regenerative Medicine and Medinippon Healthcare Pvt Ltd with GN Corporation, Japan, has been published in the journal [BMJ Open gastroenterology](#).

Enduring a healthy long life has been the dream of humans from time immemorial. This study has drawn its inspiration from Japan on the following three counts.

1. As a country, for long, Japan is known for the best of all healthcare indicators, especially the lifespan. Per capita number of centenarians are the largest in Japan.
2. Second fact is based on the [study by Prof. Yuji Naito of Kyoto Prefectural University of Medicine](#), who has reported that the ultimate demarcating difference between two communities in Japan: one with the longest lifespan and large number of centenarians in Kyotango city and their counterparts in an urban community in Kyoto city was the difference in the levels of butyrate between the two, which is produced by a good or beneficial microbiome in their gut.
3. Third, & the most important fact has been a novel beta glucan produced in Japan with unique characteristics consumed in Japan more than twenty-five years, yielding beneficial reconstitution of the gut microbiome and health indices in animal models of diseases and in healthy human volunteers.

Taking cues from the above three factors, the reported study was undertaken in NASH models of mice to whom two variants of these novel beta glucans from Japan; one produced by AFO-202 strain and another by N-163 strain of a yeast *Aureobasidium Pullulans* were fed and comparison was performed against negative controls which were not fed any of these and positive controls which were fed with Telmisartan, a standard of comparison drug. When the gut microbiome, metabolome and amino acids were evaluated, the group which were fed with both AFO-202 produced B-Glucan, [Nichi Brite](#) and N-163 produced, [Neu REFIX](#), yielded the highest levels of Butyrate producing beneficial gut microbiota evaluated by whole-genome sequencing, without any external metabolite supplementation.

Butyrate being the single most significant factor to help support a healthy long life, which are produced by the “good” gut bacteria, suffer a setback during gut dysbiosis or altered gut microbiome jeopardizing butyrate production. This study with Nichi Brite and Neu REFIX beta glucans has not only helped recover the butyrate levels but also the gut microbiome and metabolome reconstitution apart from improving the clinical parameters in the animal model of NASH. In the background of globally, rampantly increasing metabolic conditions such as NASH causing organ fibrosis and liver cirrhosis responsible for one third of deaths due to non-communicable diseases next to cancer, is a proof that these beta glucans have phenomenal potentials to help ensure a healthy long life when consumed appropriately as they have been having a safety track record of several years of consumption in Japan where they are produced in a GMP facility in the Kochi prefecture.

Gut microbiome considered as the second genome, with trillions of organisms in the human gut have a major influence on human immune system, different body functions especially on the nervous system via the gut-brain-axis. Though, fecal microbiome transplant (FMT) and supplementation with probiotics of good or beneficial microbiome have been in practice, post-transplantation or consumption, whether those good microbiomes will survive in the digestive tract to yield the necessary beneficial effects long enough remains a question. According to Prof Naoki Yamamoto, an eminent virologist who is researching on the gut microbiome, “similar to maintaining a fertile soil of the crust of earth with adequate nutrition sans weeds being an important factor to lay the bed for growth of plants that will yield good quality vegetables and fruits, ensuring the integrity of intestinal epithelial cells with optimal nutrition without any pathogenic microorganisms along with strong immune balance is of paramount importance in maintaining the environment good enough to nurture a beneficial gut microbiome and therefore the health”.

The AFO-202 strain produced Nichi Brite β -glucan being a good metabolic regulator and the N-163 Neu REFIX B-glucan being a good immune modulator, can act synergistically to pave way for maintaining such a bed of healthy intestinal epithelium for survival and proliferation of beneficial gut microbiome ensuring an optimal production of butyrate and this perspective has also been [published](#)

[recently](#) attracting research collaboration from globally eminent institutes with the GN Corporation led research consortium, the sole exporters of these beta-glucans from Japan to the rest of the world

References:

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