Does Fermented Soy affect the Incidence of Corona Virus Infection in Japan

1.0 Abstract

Japan’s incidence of corona virus Covid-19, is much lower than other countries. It is about 5.5 infections per million of population. Whereas Korea is 153 infections per million people. And Korea is lauded for doing an awesome job of keeping infections under control. What is it about Japan’s growth rate incidence being so slow of corona virus Covid-19. Japan is a very international country, yet it does not seem that the corona virus Covid-19 is growing as fast as other countries at the same latitude. This paper only points out that each country in the far east has different formulations for fermented soy. ACE2 factors, which is part of the virulence factor for the Corona Virus Covid-19, Scientists figure out how new coronavirus breaks into human cells[1]

2.0 Discussion

Soy sauce can be made with angiotensin converting enzyme peptide inhibitors. “Antihypertensive effect of peptide-enriched soy sauce-like seasoning and identification of its angiotensin I-converting enzyme inhibitory substances.”[5]

The Tricholoma matsutake mushroom is inhibitory on the Angiotensin Converting Enzyme ACE2. [2] This may affect how the corona virus Covid-19.

An evaluation of a probiotic lab strain or of fermenting co-cultures of selective microorganisms, LAB and yeast, for there proteolytic activity and capability to produce food products enriched with ACE inhibitory peptides without impacting the product flavor has also been done successfully.[3]

What fermented food, if any, may be inhibiting the ACE2 receptor from the corona virus Covid-19? Are there a group of countries in the far east that have a low incidence of corona virus Covid-19? Do they use the same cultures for fermented soy bean.

Aspergillus oryzae, used for fermentation of soy sauce, has has been shown to produce ACE2 peptide inhibitors, “γ-Aminobutyric Acid (GABA) Production and Angiotensin-I Converting Enzyme (ACE) Inhibitory Activity of Fermented Soybean Containing Sea Tangle by the Co-Culture of Lactobacillus brevis with Aspergillus oryzae”[4] Miso also uses Aspergillus oryzae for fermentation. It is suspected that aspergillus oryzae used in soy sauce and miso, or some other bacterial, fungal or mold ACE2 inhibiting peptides.

Japan infection incidence to determine if it continues to be so low compared to many other internationally countries. It will be difficult to determine the cultural differences of fermenting soybeans or other cultural difference since there are so many variations of how these foods are made in the far east.

My best guess is that it is related to Aspergillus oryzae
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4) References


2.) https://en.wikipedia.org/wiki/Matsutake

3.) (Chen et.al.2014, Chavez-Lopez et.al. 2014)
