An urgent proposal by Dr. Teruo Higa

The Coronavirus Pandemic (COVID-19) and a Third Way

The new coronavirus that first occurred in Wuhan, China has become a global pandemic, and humankind is now entering the equivalent of World War III. To put it simply, the world is panicking in the face of the harsh reality that conventional medical technology is completely defeated by the new coronavirus. This has even led to the postponement of the Tokyo Olympics.

Common sense preventative measures include the use of masks, thorough washing of hands, and maintaining a safe distance to avoid viral splashes, etc., and eating and living in way to improve immunity; this is the first way. The second way involves medical measures using vaccines and medications, but this type of virus is difficult to deal with, leading to a worst-case scenario like the present pandemic.

The remaining third way is to improve the microbiome of the human body and the environment with good microorganisms, improve the antioxidant power of the environment and living organisms, thus creating a lifestyle that revives all fields, including the natural world, as well as enhances immunity.

That is, in order to improve healthy life, useful microorganisms are utilized, the quality of the environment and foods is improved, and microorganisms desirable for health are converted into foods and become part of daily life.

To give the conclusion first, we need to utilize EM (Effective Microorganisms) and focus on maintaining an EM-centered lifestyle.

EM has been used over the past forty years in primary industries and as measures against environmental pollution, and its safety has been confirmed worldwide. In the United States, Germany, Indonesia, etc., ProEM・1® is manufactured as a probiotic drink for human consumption, and is available to anyone through Amazon and many other online shopping sites.

Furthermore, EM is sold worldwide and is available everywhere. The EM may be activated and increased and used freely, in which case its use is the responsibility of the user, and the manufacturer is not responsible for its effects. That is, in order to assure safety, an activated solution needs to be prepared according to the manual and be at a pH of 3.5 or less.

Needless to say, at a pH level below 3.5, many viruses are inactivated within seconds and at the same time, harmful microorganisms cannot grow. For general specific use, refer to the Dr. Higa’s Living a Dream Vol. 147.
In the article #4 of this series (February 25, 2009), I discussed EM’s response to the avian influenza pandemic; this began with circumstantial evidence, and the results have been surprising.

After that, article #27 addressed foot-and-mouth disease in Miyazaki (May 2010), in #37 we discussed the use of EM for foot-and-mouth disease in Korea (January 2011); #69 discussed measures and prevention of avian influenza (H7N9) utilizing EM (April 2013), in #77 the antiviral effects of EM (December 2013) and the antiviral effects of EM Part 2 in article #89 (December 2014) were presented at the Japanese Society for Virology and no objection was raised regarding these results.

Again, the background, purpose, results and discussion are as follows.

**Background and Purpose**

EM・1 is used for environmental improvement in organic agriculture, livestock raising, aquaculture, river purification, etc., and is said to prevent infections in animals and plants caused by pathogenic microorganisms.

At the 61st meeting of the Japanese Society for Virology we reported the results of EM・1 inactivating the herpes simplex virus (presented), and will present the results of its ability to inactivate influenza virus, in order to examine the preventive effects of EM・1 on viral infection.

EM: Effective Microorganisms
**What is EM・1?**

1. Safety
   Registered as A feed for livestock. Has been used for thirty years and there have been no reports of harm to livestock.

2. Inexpensive, economical, adaptable
   It can be mass-produced inexpensively without the need for a special place or equipment, and can be used anywhere and anytime.

3. Results of its use
   It has been widely used in livestock houses and poultry houses for cleaning and spraying because of its many achievements in reducing odor and the outbreak of diseases.

4. Environmental purification
   EM has environmental purification properties. In addition to controlling pathogens only through its pH level, its environmental purification properties can increase the population of microorganism flora (good microbes) that provide a good sanitary environment for humans and livestock, maintain an environment good for health, and prevent the invasion of pathogens.

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**Influenza virus is inactivated at mildly acidic pH (acetic acid, lactic acid, citric acid). What are the benefits of EM・1?**

- Mixed fermented liquid mainly composed of lactic acid bacteria, yeast and phototrophic bacteria
- Lactic acid bacteria ↓
- ↑ phototrophic bacteria
- Yeast →

**Main uses:**
- Soil improvement
- Organic farming
- Livestock (feed, reducing odor)
- Aquaculture (shrimp, etc.)
- River purification
- Cleaning kitchens, toilets and bathrooms
- Cleaning swimming pools

**Organic JAS (Japanese Agricultural Standard) compatible materials**
- A feed for livestock
Swine fever (porcine cholera), which became pandemic in China last year, was also a virus. It has been reported that livestock farms in China properly using EM did not become infected at all even if outbreaks occurred in the neighborhood. EM has an inhibitory effect on various viruses.

Those who have read this far may wonder why such a good thing is not used more widely, but the answer is simple. Even a layperson can understand that increasing the population of microorganisms that are useful for the environment and health can resolve harmful situations. However, in reality, a method to deal with the huge number of cases over many years using EM is impossible within the conventional research system.

Therefore, since there is no expert in the public sector, no matter how much this technology may be a Godsend, it will not be used. That said, all EM technology is open to the public, and even without guidance from specialists it is safe to use, can be used by laypersons at their own risk, and can even be implemented in the lower grades of elementary school. As we experience again another pandemic at present, experts in this area are unlikely to find a third way, but the conclusions have already been reached.

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**Results and Discussion**

1. Influenza virus is inactivated by EM • 1. It was confirmed that virus inactivation depends on the EM • 1 concentration and occurs under mild acidity (pH<4.3). Virus inactivation (reduction of infectivity titer to 1/10,000) occurs in five seconds at room temperature and one minute at 0°C.
2. After influenza virus is adsorbed in cells, mild acidity (pH 5.0-5.6) within the endosome induces changes in the envelope protein M2 and HA structures, and infection begins. It is believed that the virus particles exposed to EM • 1 undergo structural changes in M2 and HA at a weakly acidic pH, and irreversible inactivation occurs.
3. Non-toxic and inexpensive EM • 1 is used for livestock barn and indoor spraying. Influenza virus inactivation by EM • 1 occurs rapidly even at room temperature and 0°C. The effect of preventing influenza virus (bird, swine, human) infection is considered a promising research topic in the future.
4. The inactivation ability of EM • 1 was demonstrated in regard to herpes virus (last year at the Society) and influenza virus. It was suggested that one of the reasons EM • 1 suppresses the occurrence of various infectious diseases in plants and animals is that its weakly acidic pH suppresses pathogens.
Busan Gijang-gun distributes eco-friendly 'useful microorganisms' to prevent corona 19

Photo 1: Activated EM · 1 solution is sprayed in response to the new coronavirus (Gijang County, Busan, Korea): Article published in CBS uncut News https://www.nocutnews.co.kr/news/5303926

Photo 2-3: A factory in Indonesia
In *Dr. Higa's Living a Dream Vol. 147*, I introduced the case of Busan city (photo in this magazine) where EM is being sprayed to control the new coronavirus, and the Seoul Daily (Seoulilbo) also has reported on the use of EM in Gwanak District, Seoul. Many other countries, including Japan, should take serious note of these reports.

Seoul Daily (Seoulilbo) reports that Gwanak District, Seoul, has provided disinfection and disinfection services to households located in the blind spot of the COVID-19 epidemic using effective microorganisms (EM) and alcohol to prevent the spread of infectious diseases. As the Seoul Daily (Seoulilbo) reports, “These epidemic measures are based on the use of alcohol and EM, which is harmless to humans and certified by the Ministry of Health and Welfare and the EPA. It is effective not only in preventing the spread of infectious diseases, but also in controlling pests, removing odors in sewers, and removing mold, and is expected to greatly contribute to creating a comfortable living environment for vulnerable groups living in semi-underground dwellings.” (Source article-Seoul Daily [Seoulilbo]: Gwanak District, Seoul, 200 vulnerable households disinfection support_URL: http://www.seoulilbo.com/news/articleView.html?idxno=410591)

*Photo 4: Article published in Seoul Daily (Seoulilbo)*