Morinaga BB536
Leading the Probiotic Revolution
-by Nora Isaacs
A million people around the world have discovered what people in Japanese medical circles have known for decades: healthy amounts of an intestinal bacteria called **bifidobacteria** that can help alleviate constipation and diarrhea, strengthen bones, balance intestinal flora, boost the immune system, ease allergies, reduce the risk of certain cancers, and help avoid an overgrowth of Candida that can lead to infections.

When the **Morinaga Milk Company**, Japan's second largest dairy company, started developing a probiotic powder containing beneficial amounts of bifidobacteria, its efficacy wasn't well known in the United States. But as more consumers become aware of the myriad of benefits of **probiotics**—and see their health improve—interest in, and demand for products containing these healthy bacteria are increasing dramatically.

**BACTERIA: GOOD VS. BAD**

When **Dr. Fumiaki Abe**, the R&D Director at Morinaga Milk traveled from Japan to Chicago for a presentation on bifidobacteria, he packed dozens of bags of the white probiotic powder in his luggage. Since it was soon after 9/11, security was very tight. When asked about the contents by the customs officers, Dr. Abe explained that it was bacteria, which made them even more suspicious. After continued questioning, Dr. Abe finally gave the officers a short presentation on the benefits of bifidobacteria, and he was finally released.

Customs officials aren't the only ones taken aback at the mention of the word **“bacteria”**. But there's no need to be alarmed: the fact is, a whopping 100 trillion bacteria—over **100 kinds**—live in the human intestines. **Some are good and some are harmful**; all of these bacteria fight against each other, creating a balance that affects one's overall health and well being.

Infants have an **abundance** of “good” bacteria in their bellies but research shows that the levels of good bacteria diminish significantly as we age.

The ratio of bifidobacteria in 3-month old infants is **99%**, while it dramatically decreases to 12% for a 24-year old adult.

Poor eating habits, stress, and the aging process, can cause “bad” bacteria to dominate, which can lead to diarrhea, constipation, and lowered immune function.

On the other hand, good bacteria like bifidobacteria creates a favorable intestinal environment by suppressing the proliferation of **unfavorable bacteria**. In other words, the more good bacteria you have, the healthier you are likely to be.

So how do we create a state where we have more good bacteria than bad? The answer seems simple: just increase your intake of bifidobacteria. But finding a stable strain that can deliver live bacteria and can effectively increase the level of bifidobacteria in the intestine is very difficult to achieve.

This is what led Abe to develop a specialized strain known as **“B. longum BB536”**, which has since become Japan's top selling probiotic ingredient. This strain meets the obvious but frequently missing requirement for probiotics to be efficacious: “it has the advantage of reaching the intestines in a living state,” says Abe.

The efficacy of **BB536**, now proven in over 25 human clinical studies, not only has to do with its stability, but also with its particular characteristics. The premise for the development of BB536 was that you would get the most efficacious probiotic by most closely replicating the bifidobacteria strain found in the bellies of healthy infants, which is critical to their survival and growth. Fortunately for Abe and his colleagues, this premise proved to be true. The fact that BB536 closely resembles the naturally-occurring strain found, is likely to be one of the key reasons why it has proven to be so effective as a nutritional supplement for adults seeking to improve their intestinal health and to **strengthen their immune system**. So by using BB536 to increase our levels of bifidobacteria, we can ensure that we are winning the battle of good bacteria over bad.
DEVELOPING A SUPERIOR PROBIOTIC STRAIN

Bifidobacteria has been used as a probiotic supplement in health foods, pharmaceutical products, and dairy products since the 1970s, especially in Japan and the European countries where its powerful positive effect on the gastrointestinal system is widely accepted. Over the past ten years, Morinaga researchers have been targeting the most effective means to get this probiotic into the system and bring it to the American market.

Bifidobacteria powder is freeze-dried for convenience. In the past, more than 90% of the active bifidobacteria added to food products died during the storage period because all the water had been excluded from the cells. Another hurdle was that human bifidobacteria had low stability when added to food products. But Morinaga stuck to the idea of using human bifidobacteria for human consumption rather than using the animal bifidobacteria that was easier for manufacturing.

With Abe at the helm, a team set out to develop a probiotic freeze-dried powder containing bifidobacteria that was stable at room temperature for a long period of time. Abe, who has been working with bifidobacteria since he started with the company, worked on developing the precise combination of water, carbohydrates, vitamins, protein, and hundreds of other elements that comprise the medium for culturing bifidobacteria. He experimented with various combinations of conditions such as pH, temperature, and culturing time. He tested the bacteria for freeze-drying and stability. Finally, after ten thousand attempts, he achieved his goal; developing the most reliable, highest quality, highest stability and most effective human bifidobacteria.

The next step? Bringing it to mass production. Abe traveled around the world, pitching markets in Europe and the United States, which ensured the great success of Morinaga Bifidobacteria today: To date, bifidobacteria B. longum BB536 incorporated into nutritional supplements and foods, has been used in more than 30 countries by a million people around the world!

SUPPORTING RESEARCH STUDIES

Anecdotally, people who eat yogurt with bifidobacteria say they feel more balanced, less bloated, and healthier overall. But behind the scenes, researchers have also come to their own conclusions about the powerful effects of the specific strain; B.longum BB536.

One study with female patients, showed that those who consumed B.longum BB536 bifidobacteria, experienced improved health: Twenty five percent of these patients reported improved gastrointestinal conditions, a 30% decrease in gas, and a 76% improvement (reduction) in constipation. In another study, healthy adult subjects reported a positive influence on the intestinal environment of the subjects who supplemented their diets with BB536 versus those who ate regular yogurt.

Another study illustrated that leukemia patients who ingested BB536 were less likely to develop an overgrowth of Candida, making the probiotic useful in preventing respiratory and urinary infections that can be caused by Candida.

In another study, it was concluded that all the strains of a same species do not have an equivalent effect on the intestinal flora, putting to rest the idea that all good bacteria are the same. In all, over 25 human clinical studies of this specific strain point toward the life-changing benefits of BB536.

Meanwhile, scientists and researchers at Morinaga are busily conducting more studies and research to better understand these bacteria and continue proving its positive effects.

With more and more people understanding the benefits of this powerful probiotic, Abe is well on his way to achieving his dream: To have people all over the world living healthier lives by supplementing their diets with BB536.