

GOOD MICROBES

One of Auroville's most "cutting-edge" experiments is the research undertaken by a Colombian, Dr. Margarita Correa, on probiotic technology.

PROBIOTICS REFER TO LIVE MICRO-ORGANISMS, bacteria or yeasts, which, given in adequate amount, bring benefits to the host. It's important to remember that bacteria are not just bad germs that you should get rid of at any cost with antibiotics! Many bacteria do exist in our diet which can be beneficial to our digestive tract. The digestive tract hosts several hundred billion bacteria of about 600 different species, which form the intestinal flora. Through the secretion of enzymes they facilitate digestion, but they also have a key role in the body's defence system against external aggressions. Whereas antibacterial products indiscriminately kill all bacteria (healthy and harmful), probiotic products decrease the percentage of harmful micro-organisms.

PROBIOTICS IN AUROVILLE

Convinced of the benefits of probiotics for health and for the environment, researchers Guidelma Grandi from Italy and Margarita Correa from Colombia created MGEcoduties in Auroville in 2011. Their idea was to bring a new concept of environmentally friendly products that would be made with all-natural ingredients and therefore non-toxic, non-hazardous to health, non-corrosive; in other words, fully biodegradable.

For example, MGEcoduties does not use palm oil, knowing that the industry associated with this oil is causing a long-term environmental, social and economic disaster.

Waste caused by packaging is also minimised; recycling and re-use of the original packaging are encouraged.



Under the brand name Probiotics House, MGEcoduties has developed a variety of products ranging from soaps and washing powder to shampoo, shaving soap, various disinfectants, cleaning products, etc. It has even created a liquid dietary supplement, very complete, which has the advantage that it does not need to be refrigerated. All “natural” ingredients are carefully selected; local ingredients are primarily used to ensure the economic, ecological and social sustainability of the products.

The goal is to provide high-quality, low-cost and effective products that will have a positive impact on people, on animals and on the environment.

The Aurovilian research in the technology of probiotics has also led to the development of ceramic rings, a perfect support for energising, revitalising and improving the quality of water, as well as for use in ceramic jewellery.

The probiotic ceramic rings are immersed in water. They emit remote infrared rays (a radiation corresponding to a spectrum of 20 THz to 300 GHz), which reduce the size of aggregates in drinking water, allowing a better transfer of nutrients and minerals to cells with the advantage of a rapid hydration promoting the functions of the immune system. The water thus restructured can be used by humans, by animals or even for plants.

MGEcoduties also make probiotic ceramic jewellery. These are

of great benefit to the body through remote infrared rays (invisible waves of energy) that can penetrate up to 7 centimetres inside the tissues. It helps to restructure bodily fluids, to stimulate circulation and vitality, and to reduce muscular or rheumatic pains.

ENVIRONMENTAL IMPACT

For Guidelma and Margarita, their work is a unique opportunity to bring consciousness into matter. Indeed, our Earth is overloaded with polluting waste and is in urgent need of these kind of products.

Their goal is to educate not only Aurovilians, but also visitors, customers, volunteers and students, and make them aware of the benefits of the products.

A very important point: these products are available in Auroville in large containers, without individual packaging. It brings about a significant reduction of plastic waste. In such a simple and efficient system, “producers” and “consumers” are collaborating.

Cleaning products are given free of charge to Auroville schools; this is part of the GSP – Green Schools Programme – which aims at significantly reducing the use of commonly used hazardous cleaning agents and plastic bottles.

Probiotic cleansers promote positive bacteria, providing natural protection to our skin. They create an environment where pathogenic bacteria cannot survive because “healthy” micro-organisms are dominant. Thanks to natural ingredients and positive micro-organisms, these products are exceptionally gentle to the skin. Compared to conventional cleansers, they offer significant benefits in eliminating microbiological impurities, naturally controlling odours and mould.

Livestock farming and agriculture can also benefit from the application of probiotics, whether for the washing or for the feeding of animals. The struggle towards sustainability needs an understanding of the close link between humans, animals and agriculture.

The MGEcoduties company supplies its products not just to Auroville. It is also a commercial company, so far mainly focused on chemicals, that sells its products on the market and is proud to



*Margarita and
Guidelma*

be among those that are trying to change the mode of consumption. Guidelma and Margarita's current dream is to bring financial resources to Auroville, generating income from healthy and sustainable practices while respecting nature.

Probiotics Consortia Technology would like to transfer this knowledge and these practices. This has always been the dream of Margarita, the founder and principal scientific consultant of the project. Through numerous conferences at Auroville and elsewhere, Margarita shares her knowledge with others.

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Alain Bernard & Claude Arpi



Margarita's dream

“ I have been a consultant in probiotics for the last 20 years, which took me to 56 countries across 5 continents. After settling in Auroville with Guidelma, we started to bring cleaning products to PTDC [Pour Tous, see p. 120]. Our main purposes were: 1) to provide technical help in the functioning of the Auroville septic systems and water treatments plants, and 2) to reduce the impact of plastic generation, by promoting the re-filling system.

Our products prevent noxious odours in the waste water treatment plants, and also prevent blockages which are unfortunately so frequent: time and again sludge accumulates and then a machine has to be used to remove the sludge and we throw it away in the forest! So we prepared liquid probiotics to be poured into sinks so that living probiotic bacteria flow in the drains and cleanse them. But after a while, we realised that it was not working due to the negligence of most Aurovilians. Also our contacts with the main water groups did not work out. So I got discouraged and I decided to give up and go for retirement.

One night I went to sleep with this idea. Then I had a dream in which I heard a word whispered several times in my ear: soap, soap, soap... I awoke with a jerk and began to figure out what it meant. SOAP! Yes, if people were taking bath using probiotic soaps or shampoos, or if they were putting a probiotic laundry liquid or washing powder in their washing machines, or if they were washing dishes with probiotics, then the living probiotics would automatically flow with the water and go down the drains! That was the beauty of the concept.

At that time we did not know yet how to make probiotic soaps and cleaning products! Actually they did not exist anywhere at that time, except for one Japanese scientist who was making probiotic soaps in Japan. It took us seven years of trial and error, and hundreds of laboratory analyses and testings to prove the concept and to master the technique. But now we are able to make all kinds of probiotic soaps and other products for beauty care and well-being. We have had tests done in top laboratories, which showed that indeed living probiotic bacteria are present and therefore released in drains whenever probiotic soaps, shampoos, washing liquids or powders are used.

There is even a claim that if one third of the population of any city would use probiotic products for washing, it would clean the rivers passing through. What a prospect!

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The Aquaculture adventure

“The company Tata Chemicals wanted to diversify their production as they felt that chemical products would not be sustainable in the long run. They wanted to create green products.

So they created a subsidiary company called Rallis India for making low-cost green compost for farmers. They also wanted to make green aquaculture products for shrimp production. A 2015 law had forbidden the shrimp hatcheries in India from using antibiotics, because this is what had caused the Cambodia, Vietnam, and Laos shrimp exports to lose the huge EU market, and then to drastically reduce their activity.

So they had to find something to replace antibiotics and keep the water safe. They were looking for a serious probiotics company and they contacted us. We began a collaboration and we produced the liquid probiotic supplement needed. Then for two and a half years, along with the Rallis people, I visited aquaculture ponds and hatcheries in seven Indian states (Tamil Nadu, Andhra Pradesh (biggest producer), Odisha, West Bengal, Gujarat, Punjab, Madhya Pradesh).

We had to explain everything to farmers and we trained as many as 25 trainers. That was a huge work.

For shrimp farmers, our product is low-cost. And since there are no antibiotics, I can say that the shrimps of India are very healthy. Another advantage is that, as the water of aquaculture ponds is constantly renewed, it means lots of probiotics go into the rivers and into the sea.

Rallis India Limited is doing the marketing and distribution, MGEcoduties is doing all the production and technical support. It works very well. The next project with Rallis is about probiotic compost, and it has already started.”



Margarita: field training in aquaculture ponds in Andhra Pradesh with the TATA Team