

Microbial Fruits of Istanbul

Istanbul has been home to many of us. Over 8500 years, the city has hosted countless generations of humans, animals, plants and microorganisms, who shaped its land, water, and air, based on their interests. While the human inhabitants built and unbuilt settlements, ports, gardens, and transformed the city through a variety of architectures, other species built other Istanbul(s) – under the soil, across empty lots, or deep below the sea. Every species witnesses their city in their own way and often does not see from each other's perspective.

“Microbial Fruits of Istanbul” intends to offer a moment of reflection. This kit is designed to introduce you to some ancient residents of Istanbul, who have been quietly living underneath the soil for centuries. Here, we would like to present you to *Peribacillus simplex* (94.13%), *Weissella paramesenteroides* (95%), *Staphylococcus carnosus* (100%) and *Enterococcus hirae* (99.87%) with their probability scores. They are from Roma, Langa, Piyalepaşa, and Kuzguncuk, respectively. In your kit, you will find two of these organisms which are known for their probiotic capabilities.

Our team dug these organisms out of soil, tried to identify their names by sequencing their DNA, and reproduced them outside their familiar environments – in biology labs – so they could be made visible to the human eye. This is not to say that they were not already part of our lives though. Some of their distant cousins are in our fermented food, air, and water, or perhaps already living inside our bodies. It is just that as humans we rarely see them in this form. Or acknowledge their presence.

These organisms are locals to Istanbul's community gardens (*bostans*), which have been part of Istanbul's history for many decades. Bostans sourced food for generations and have been witnessing different types of human intervention whether it is responses to immigration, rapid urbanization, industrialization, or inevitably the experience of the global climate crisis. As the city evolves, so do its bostans.

With this kit, we invite you to experience a moment of empathy with this rather unacknowledged world and explore new relations with its residents. We ask you to incorporate them into your food, add them as ingredients next time you make boza, bread, cheese, or a pickled dish. You can also mix them into your plants' soil, where they can be part of their nutrition. As you let them pass through your life, they will spread further, find new places to live and form new relationships with other humans, land and landscape.

At microbialfruits.design.bio you will also find our special recipe which will combine all three organisms into a new probiotic popsicle design. We call this design the “Impossible Fruit” as it creates an unusual environment where these organisms can coexist for the first time, having lived in very different places until now. And unlike a fruit that naturally grows on a tree, these organisms grew out of our installation at the Özgürlük Parkı – a place that brings different species together.

So, what does it mean for you to eat the impossible fruit?

Rewilding your gut

Your gut is already a host to billions of microorganisms similar to those in these sachets. Depending on where we are from, what we eat, what medicine we use, our zip code, we share our bodies with many different communities of bacteria. If you or your parents grew up in Langa, your gut might have already met with *Weisella*, for instance.

The communities of organisms in our body shape our well-being. They alter mood, affect mental abilities, and trigger all kinds of medical conditions. And similar to bostans, our guts also witness the effects of urbanization or the climate crisis. Over time, the antibiotics in drinking water, industrially processed food, lack of access to soil causes our guts to lose biodiversity, turning them into endangered places. Millions of human and animal guts lose their organisms like the bostans.

One way to replenish the organisms is to ingest new organisms through fermented food products or taking probiotic supplements. Often a selected breed of organisms known for their health benefits are industrially grown in labs and artificially added to food or turned into medical supplements for your consumption. The impossible fruit offers a similar approach. But instead of providing organisms that are born in a lab, we work with organisms that come from Roma, Langa, Piyalepaşa, and Kuzguncuk. They are referred to as “wild” types. They come from families of organisms that are known to have health benefits, but also differ from them as they have evolved naturally in Istanbul and witnessed the many histories of the city. These organisms have inherently different capabilities over the lab-born ones, but, more importantly, offer a very different connection to our sense of place. They also are from Istanbul.

When you ingest *Weisella*, you will be “rewilding your gut”, introducing a local of Langa into your body, forming an intimate relationship with a new species, who has seen many Istanbuls through countless generations of evolution, compared to our brief lives as humans on the planet...

Gentrifying Your Gut

What does it mean for your gut to welcome *Staphylococcus* and *Weisella*? What happens to the locals in your gut when they encounter these new species? If rewilding occurs as promised, what are its consequences for the existing diversity in the gut?

Gentrification is a term that is often used by urban planners to describe displacement: when developers transform neighbourhoods to open up residencies and allow newcomers to displace locals. The process has many undesired consequences such as damaging the social fabric of neighbourhoods, disrupting historically evolved communities, and forcing lower income citizens to leave their places for the wealthier class. When you introduce new organisms to your gut you may also displace some of the old ones. Depending on how your local communities will react to

the newcomers, your gut may get “gentrified.” While this sounds quite dramatic, in reality, you need to consume the impossible fruits for many months for a full transformation. Exposing your guts to a new set of beneficiary bacteria does not mean that they can easily inhabit your body and become a local. And if gentrification occurs, it might be the result of a long-term adaptation of your body to the new organisms. We just invite you to explore this encounter, or opportunity... What happens if we become a garden for these organisms? Millions of people, millions of bostans.

Saving Organisms, Saving Guts

Through this new encounter between microorganisms and humans, we also like to invite you to think about what it means to live together in Istanbul. With this kit, we ask you to “save” these organisms that you never heard of. Here, the organisms are dried and have been kept in deep freezers before distribution. In this form, they will not evolve or reproduce until they are re-hydrated; become part of your dishes or return back to the soil. Unlike those in the bostans, they are “saved” from the effects of time, they can preserve their probiotic capabilities for a long time.

But our “saving” is not similar to a saving to prevent loss or escape extinction. *Peribacillus*, *Weissella*, *Staphylococcus*, and *Enterococcus* are not in danger. They will never leave Istanbul or Istanbul will never be without them. As the perpetual locals, they will always be able to resist, endure, or evolve into many different futures. We are just trying to preserve a small group, who still cares about inhabiting human guts and contribute to our health and well-being. Similar to time capsules, saved for future generations of humans.

These organisms may very well lose interest and decide not to cohabit our food or bodies in the future. What would you do if the yeast that makes your Boza disappears one day? Or the bacteria that make our pickles sour decide to live elsewhere? This is to remind us, humans, about our own fragility and our own dependency on Istanbul’s microbial life.

Please visit microbialfruits.design.bio to see how to prepare your own “impossible fruit.” Until you use them, we recommend that you keep these capsules in your fridge. You will also be able to see other organisms coming from different gardens in our microbial fruit tree.