



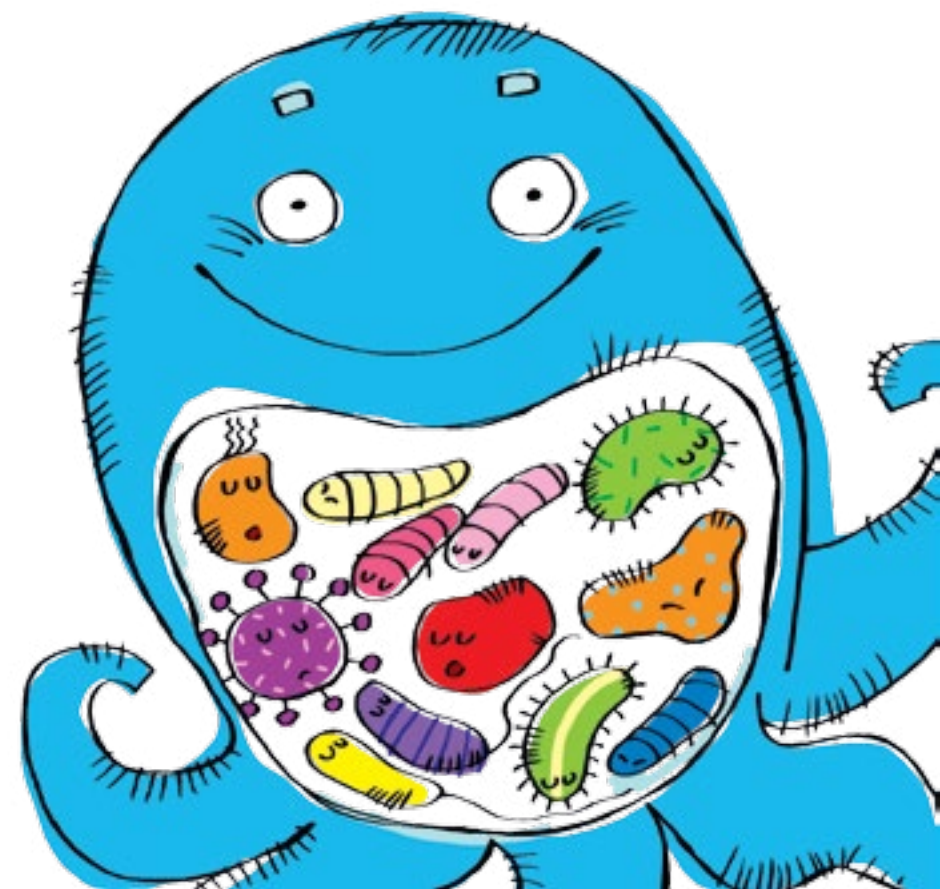
ORTIdiMARE

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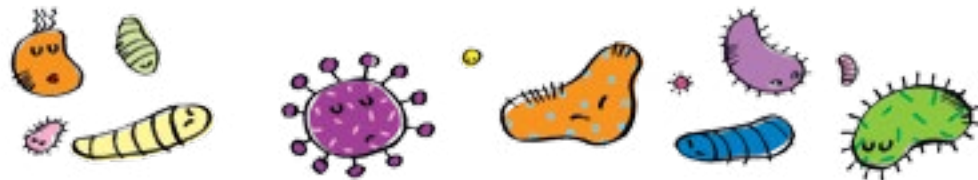
MICROBIOTA



*MY PARTNER  
IN CRIME*

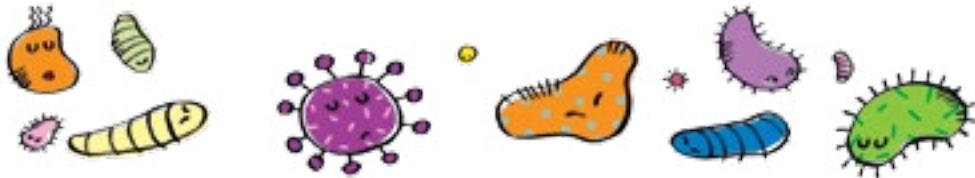


This booklet would like people to know a new horizon of scientific knowledge which may help us to improve our quality of life.



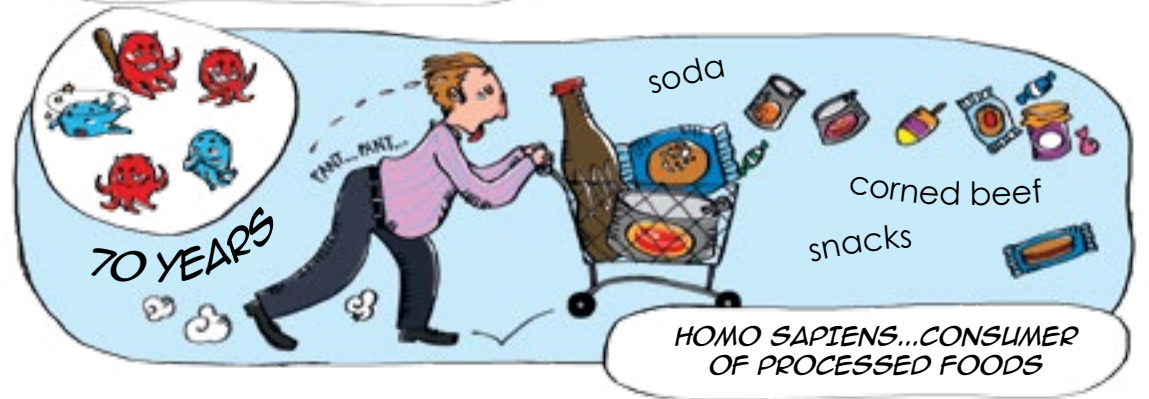
Every one of us cohabits with two kilograms of microorganisms, that all together form what we call MICROBIOTA. The co-evolution between the human body and the microorganisms, that inhabit it dates back to prehistory and it is now consolidated. In this long evolution, the man has been the protagonist of two fundamental steps for his health: the Neolithic Revolution, with the introduction of agriculture and livestock, and the Industrial Revolution, which has profoundly changed the way he feeds himself. These changes have occurred in 10,000 years, too few compared to the millions of years of its evolution; too short a period of time to adapt to new life and nutrition styles. Fortunately there are our microorganisms that reproduce very frequently and adapt themselves better than us to changing food resources and help us, making nutrients available to us in foods that would otherwise be unusable.

This long mutualistic relationship is of crucial importance for us when the character of symbiosis prevails, that is when those microorganisms that favour our health excel. When instead is the character of dysbiosis to prevail, in other words when an imbalance is dominant in our microbial community, this results harmful and favourable to the outbreak of diseases. Whether the relationship is symbiotic or dysbiotic also depends on us, on what we eat and on how our lifestyle is.



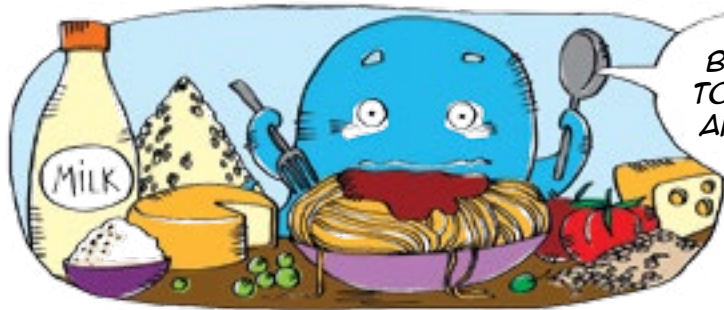


# THE DYNAMIC PREHISTORY THAT WE HAVE IN THE BELLY





# EVOLUTIONARY LEAPS



BUT WHAT AN EFFORT TO ADAPT TO CEREALS AND DAIRY PRODUCT...

invention of agriculture and farming

MHHH, LET'S SEE WHO DARES MORE



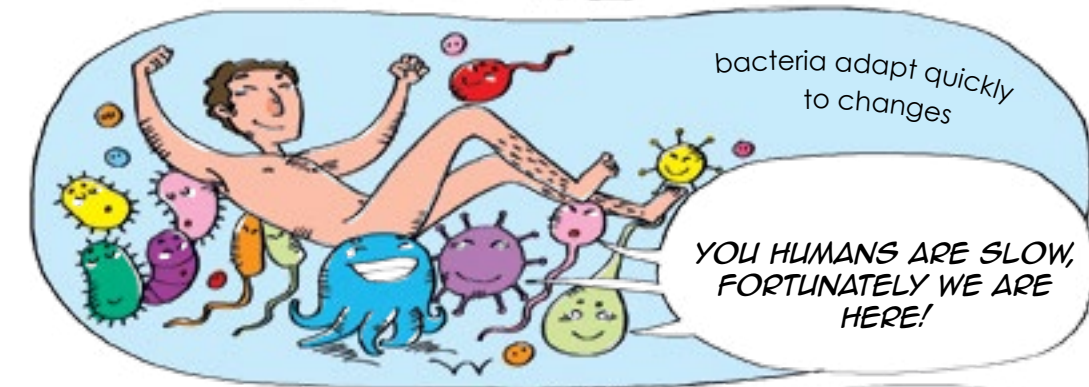
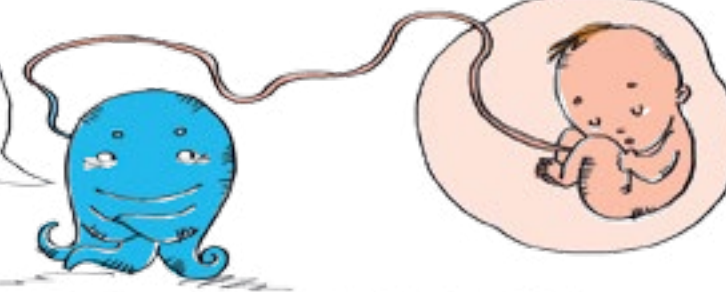
ACC... PROCESSED FOOD, WORST-OFF, UNVARIED AND WITH EVEN MORE SUGAR. AND THEN, AS IF THAT WASN'T ENOUGH, THE ANTIBIOTICS... HERE ENDS THAT THE BAD GUYS WIN.

the industrial revolution



# LET'S GET TO KNOW ONE ANOTHER

I'M MY MOTHER'S GIFT.



bacteria adapt quickly to changes

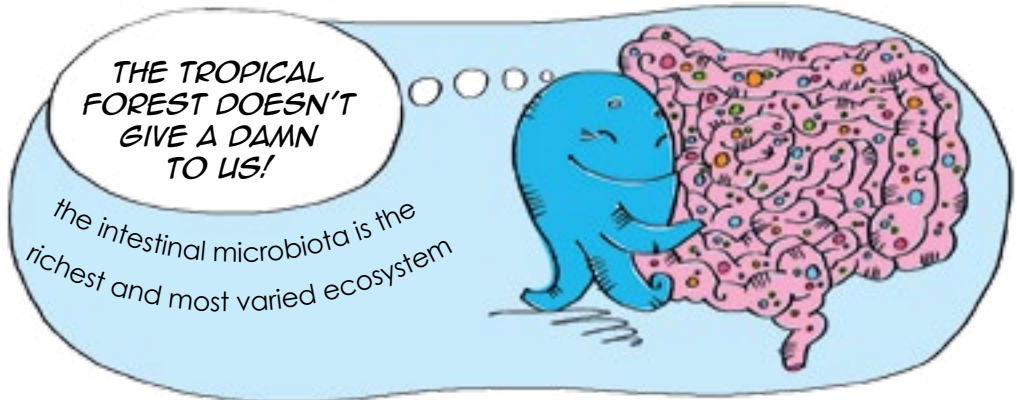
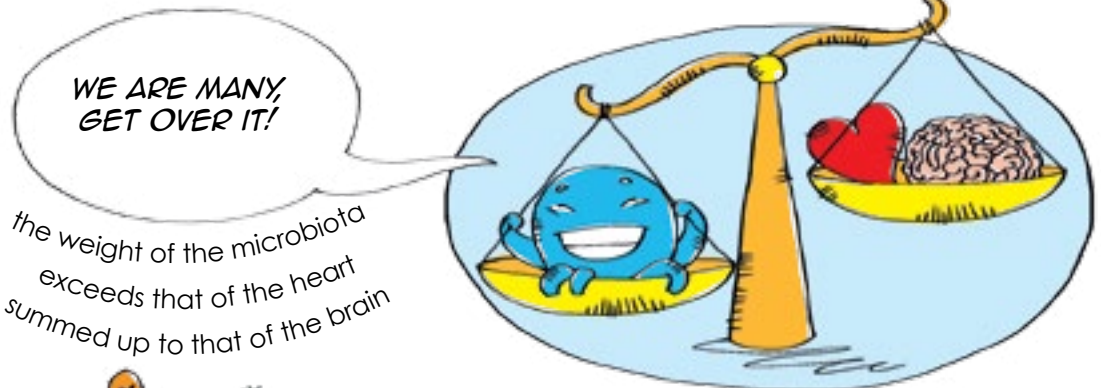
YOU HUMANS ARE SLOW, FORTUNATELY WE ARE HERE!



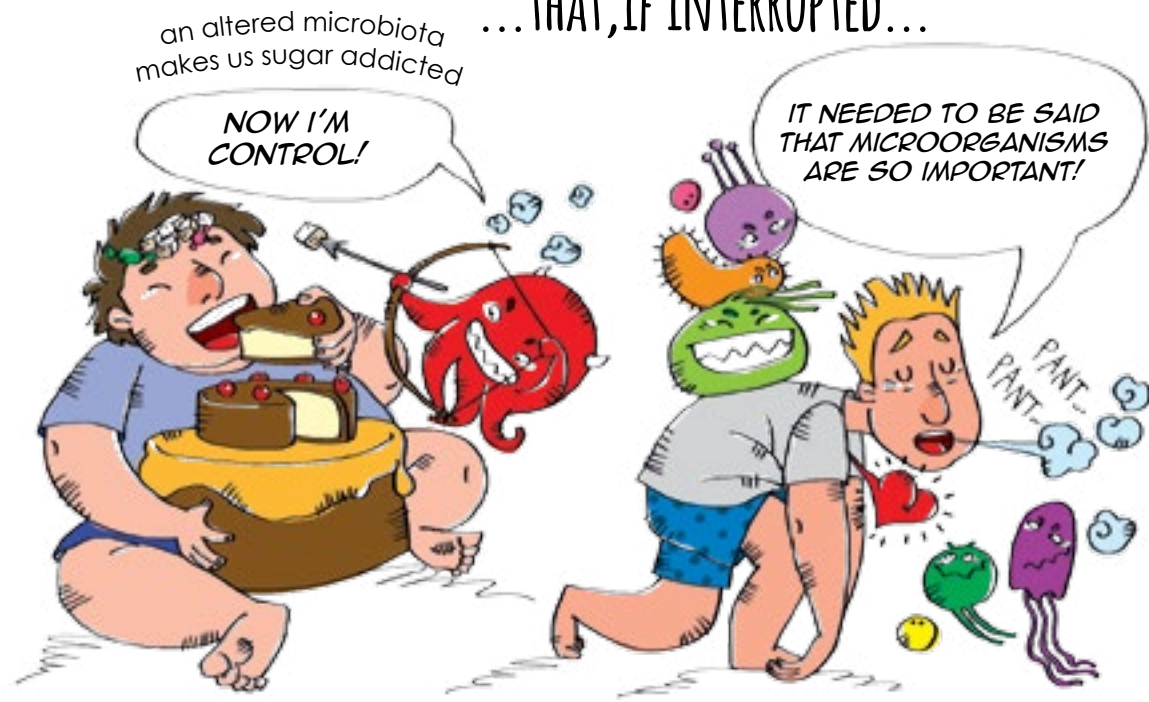
REMEMBER THAT I'M ESSENTIAL FOR YOUR QUALITY OF LIFE!



# A LONG MUTUALISTIC FRIENDSHIP



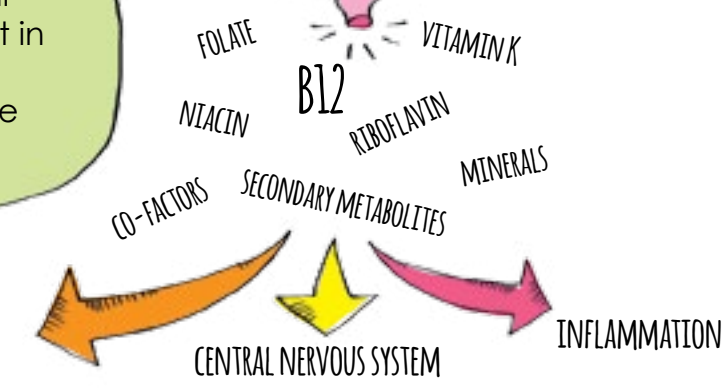
...THAT, IF INTERRUPTED...



# THE BENEFICIAL SYMBIOSIS

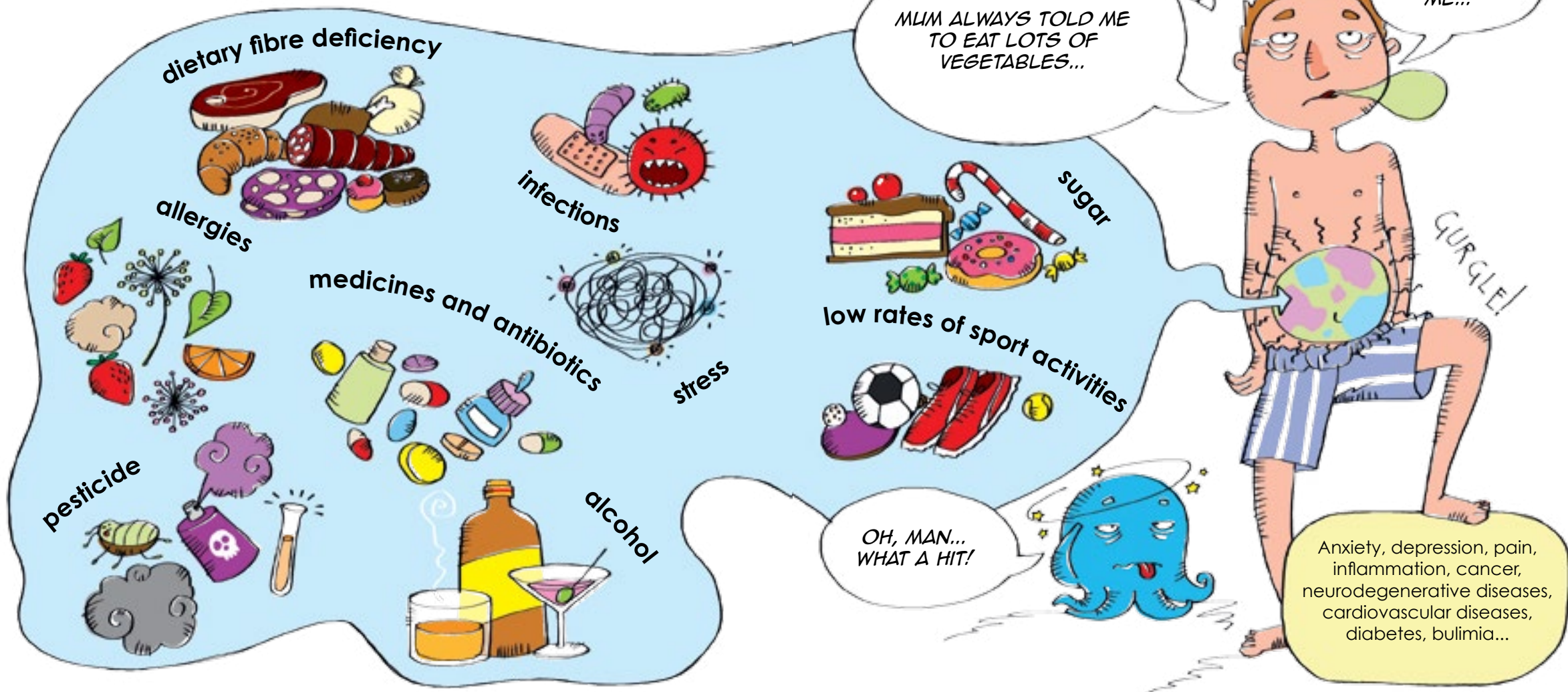


20% of the small molecules present in the blood, are produced by the microbiota.





# DYSBIOSIS HAS MANY CAUSES AND PROMOTES MANY DISEASES



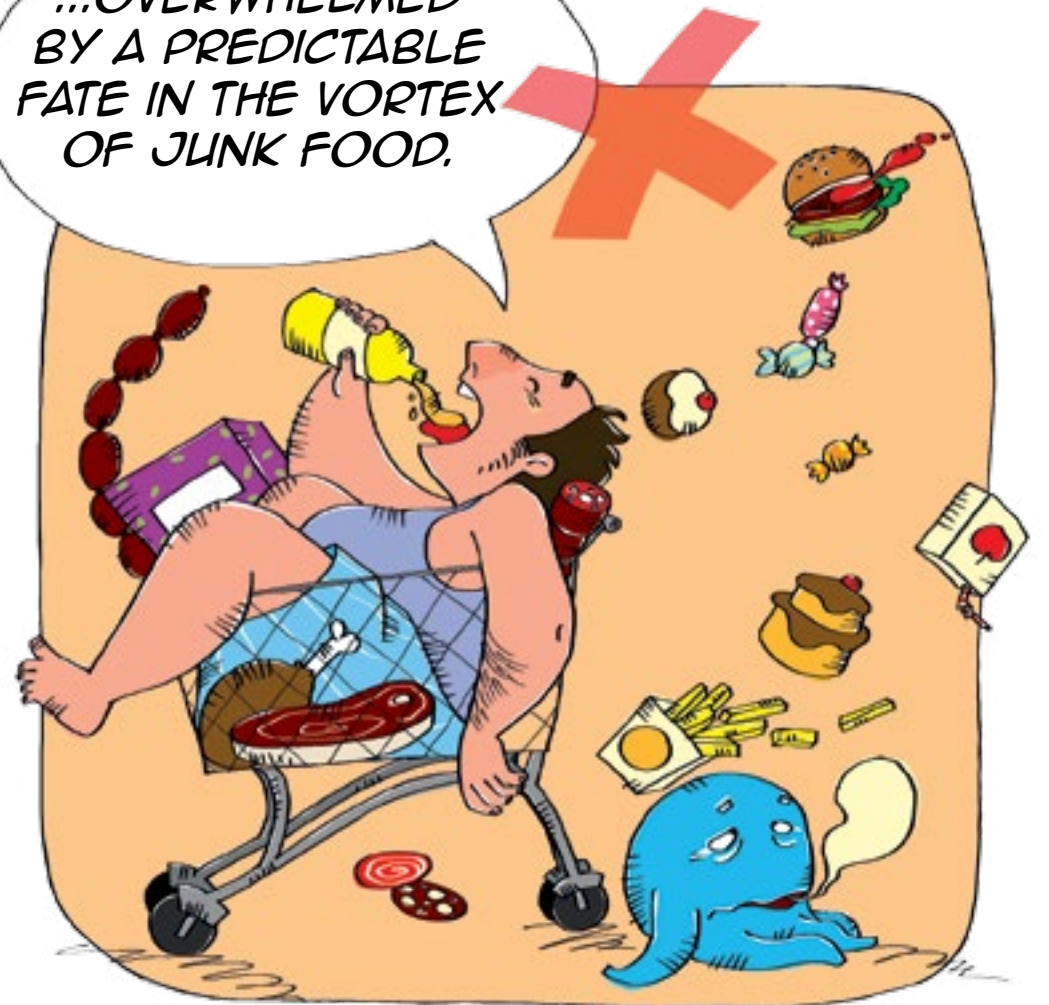
SYMBIOSIS OR DYSBIOSIS:

ALSO DEPENDS ON YOU

...VARIETY...  
...SEMPPLICITY...  
...FIBROUSNESS...



...OVERWHELMED  
BY A PREDICTABLE  
FATE IN THE VORTEX  
OF JUNK FOOD.





# SUPER FOODS

## SOME EXAMPLES



ALMONDS



WALNUTS



POMEGRANATE

TURMERIC



CHICORY



ARTICHOKE



# THE KARL POPPER



SALAD

- . salad plants
- . courgettes
- . turmeric tofu
- . walnuts
- . celery
- . sun-dried tomatoes
- . rocket
- . olives
- . black pepper
- . lemon
- . extra virgin olive oil
- . whole salt

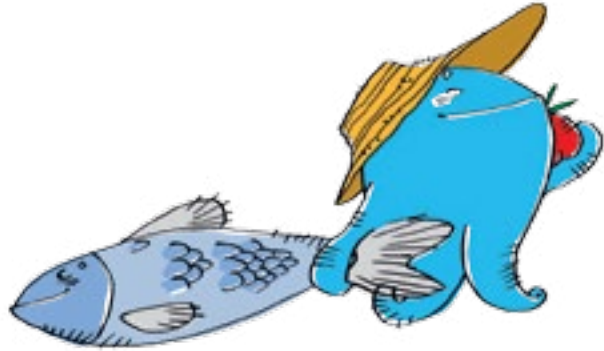
BUT NOW  
IT'S TIME TO  
TAKE ACTION!





### ***MERENDA BELLA***

Oatmeal, raisin, barley flakes, sunflower and flax seeds, hazelnut, pomegranate and/or blueberry and/or strawberries, bananas and almond milk without sugar. Assemble it all and serve.



### ***ALTERNATIVE ZIMINO***

Cook the beets and spinach with a little salt. Then pass them again in a frying pan or wok with extra virgin olive oil by adding some previously boiled and boned mackerel pulp, or you can use it purchased ready-to-serve in a box from sustainable fisheries. Also add turmeric, black pepper and broken almonds. Keep it all on fire for a few more minutes and complete the dish with a drizzle of olive oil before serving.



### ***MEDITERRANEAN BUCKWHEAT***

Stew in a pan artichoke hearts with a clove of garlic, extra virgin olive oil, parsley and a little salt. Boil, in salt water, Pizzoccheri or other buckwheat pasta (50 grams per person if dry pasta) together with a few pieces of potato. Once cooking is completed, drain pasta while keeping a little cooking water and add it to the pan of artichokes by adding pieces of raw milk Pecorino, or other raw milk cheese. Mix everything on low heat for a few minutes and sprinkle with Parmesan and pepper before serving.



### ***PANZANELLA IN THE ELBAN MANNER***

Dunk pieces of hardened Tuscan rustic bread (type 2 flour) in cold water, wring out and combine seedless tomatoes, small pieces of cucumber, slices of sweet onion, bonito or sustainable fishing tuna, salt, pepper, extra virgin olive oil, vinegar and abundant basil.





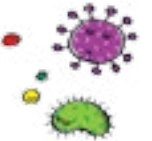
Each person has his own specific microbiota since birth. This microbiota, in its initial composition, is transmitted by the mother and it is the result of a long co-evolution, mediated by the conditions and the life choices of each population and of each of us. The microbiota is involved in many biological processes that affect illness and health. Different correlations between dysbiosis and conditions/diseases such as obesity, inflammatory states, type 2 diabetes, cardiovascular diseases, cognitive disorders, psychiatric type and more. The microbiota is plastic and, at least partly modifiable, both in the direction of the disease and in that of the recovery. Nutrition and nutritional supplementation can affect the microbiota. Prebiotics, probiotics and other substances that influence the microbiota and its products should be considered useful remedies in the prevention and in the therapy of some certain conditions and diseases; this in the context of a more complex lifestyle that takes into account our evolutionary adjustments and our specific microbiota.

## IN ORDER TO DEEPEN

- Alanna Collen** - 10%Human. How Your Body's Microbes Hold the Key to Health and Happiness - William Collins 2015  
**Michael Pollan** - The omnivore's dilemma - Bloomsbury 2001  
**Tim Spector** - The Diet Myth - The real science behind what we eat - Weidenfeld & Nicolson 2015  
**Giulia Enders** - GUT the inside story of our body's most under-rated organ - Scribe 2017  
**Kris Verburgh** - The Food Hourglass. Stay younger for longer + lose weight - Harper Collins 2014  
**Daniel Lieberman** - The Story of the Human Body - Penguin Books 2014

## SOME WEB-BASED RESOURCES

AVAILABLE ON YOU TUBE BY TYPING THE AUTHOR'S NAME AND PART OF THE TITLE



### TO GET STARTED

- How Bacteria Rule Over Your Body** - The Microbiome Gut Reaction Pt.1 (Canadian Health Recovery Centre)  
**Gut Reaction Pt.2** (Gut Health, Bacteria and Food ABC Science)  
**Your microbiome, Your Health.** (University of California Television)  
**Karen Madsen** - Introducing the Human Gut Microbiota  
**Giulia Enders** - The surprisingly charming science of your gut (Ted)  
**Robynne Chutkan** - The Microbiome Bidding Farewell To Medication

### TO FOLLOW UP

- Hera Vlamakis** - Gut microbiome in health and disease  
**Tim Spector** - Microbiome (Supported by British Council)  
**Warren R. Peters** - Microbiome Gut Bugs and You (TED x La Sierra University)  
**Emeran Mayer** - The Microbiome Mind and Brain Interactions (University of California Television)  
**Martin Blaser** - Human Gut Microbiota (New York University)



PROJECT: ORTIdiMARE

TEXTS AND CONTENTS: Vittorio Rigoli e Roberto Adamoli

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