ON THE VERGE OF A NEW ERA
EVERYBODY WANTS TO STAY YOUNG FOREVER

Is it possible to slow down the aging process?

Aubrey de Grey, the world's leading expert in thwarting aging and DEM4 resident, says:

“An average of three months is being added to life expectancy every year at the moment and scientists estimate there could be a million centenarians across the world by 2030.”

The cause of early aging is shortening of the telomeres and destruction of chromosomes.
Do you think it is you? No, it's elementary microorganisms, the procaryotes, which outnumber our own body cells by at least 10 times. While the total number of bacterial genes is about 100 times as much as human genes.
The genes of the microorganisms living in the human body outnumber **THE HUMAN GENES BY ABOUT 100 TIMES**

This means that 99% of all genetic information in a person is the resident microorganisms' information and not the person's.
THE MICROBIOTA is the aggregate of all microorganisms carried by a human. The concept "microflora" has been succeeded by this term.

THE MICROBIOME is the aggregate genome of all microorganisms carried by a human. The term "microbiome" is sometimes used in much the same sense as the "microbiota"; the aggregate genome of microorganisms is also called the "metagene".
HOW DO OUR "MICRONEIGHBOURS" AFFECT US?

1. Emotional state
2. Appearance
3. Mood
4. Behavior
5. Digestion
6. Biological age
7. Immunity
1. The good bacteria. This is various probiotics that affect our body in many positive ways. They can be found in the digestive tract, on skin, and in our airways.
WHAT LIVES INSIDE US?

2. **Pathogenic bacteria** are disease-producing microorganisms that, under certain conditions, can cause death.

Salmonella, dysentery bacillus, plasmid, *Pseudomonas aeruginosa*, *Burkholderia cenocepacia*, *Mycobacterium avium*. 
WHAT LIVES INSIDE US?

3. Opportunistic pathogenic bacteria. These are the natural occupants of various parts of the body. They cause diseases when host defenses suddenly drop.
HOW DOES MICROFLORA DIS-BALANCE REFLECT ON YOUR WELLBEING AND AGING?

- Oxidative stress
- Poor absorption of nutrients
- Immunosupression
- Inflammatory processes
- Low energy and stamina
- Skin irritation & lack of luxuriance in hair and nails
- Weight fluctuation

- Digestive disorders
- Bad breath
- Sugar or alcohol cravings
- Allergies
- Anxiety and depression
THE CAUSES OF DISRUPTION IN MICROFLORA BALANCE:

- Malnutrition
- Low physical activity
- Stress
- Various diseases
- Intoxication and poisoning
- Antibiotics or other drugs
Intestinal microflora imbalance is called **disbiosis** or **disbacteriosi**s.

This is the state of the body when the healthy balance of microflora is disrupted: the number of good microorganisms decreases while the number of malicious ones increases.
THE EFFECT OF DISBACTERIOYSIS ON THE BODY:

1. DISTURBED DIGESTION AND METABOLISM:
   - The number of good intestinal bacteria decreases
   - Disrupted digestion, decay and flatulence
   - Development of obesity
   - Damage to the intestinal wall's protective barrier
   - Deterioration of the lipid composition of blood
   - Weakening of cell nocifensors against mutations and damage to genome
THE EFFECT OF DISBACTERIOSES ON THE BODY:

2. IMBALANCE OF PROTECTIVE SYSTEMS:

- Weakening of immune system
- Chronic inflammation
- Allergic reactions
- Disorders of the microflora of other regions
- Inflammation in any organs and tissues
- Weakening of other protective systems (endocrine, nervous)
- Increased carcinogenic damage to cells
THE EFFECT OF DISBACTERIOSIS ON THE BODY:

3. SYSTEMIC DISTURBANCES
- Diarrhea and consequent abrupt dehydration
- Diabetes type 2
- Chronic inflammation
- Bad overall health, chronic fatigue syndrome
- Early aging
- Mental disorders, depression
- Increased risk of cardiovascular diseases
FUNDAMENTAL SYMPTOMS OF DISBACTERIOSIS:

1. Fatigue, weakness, depression
2. Halitosis
3. Abdominal swelling
4. Nausea and occasional vomiting
5. Stomach discomfort or pain
6. Excess of intestinal gas
7. Constipation or diarrhea
Probiotics are the living microorganisms that have a healthy effect on the human body when taken in the right doses.*

*official definition of probiotics by World Health Organization and Food and Agriculture Organization
Benefits of **probiotics**: 

1. NORMALISED DIGESTION: 
   - release agents that fight pathogenic organisms; 
   - facilitate development of intestinal epithelium; 
   - keep up normal gas composition in the intestine and other visceral cavities; 
   - control intestinal peristalsis; 
   - prevent obesity.
Benefits of probiotics:

2. IMPROVED METABOLISM OF THE ENTIRE BODY:

- break up some carcinogens;
- resist cell mutations;
- produce vitamins (B7, B9, B12, K);
- protect from free radicals;
- Prevent cardiovascular diseases.
Benefits of **probiotics:**

3. **STIMULATION OF DEFENCE REACTION:**
   - improve defense of the intestine, prevent allergens and toxins from entering the bloodstream from the intestines;
   - Stimulate the immune system;
   - reduce allergic reactions.
Prebiotics are nutrients for probiotics. They have a significant effect on stimulation of probiotic efficiency.
Effect of **prebiotics:**

- they are nutrients for probiotics;
- stimulate growth and reproduction of bifidus bacteria and lactobacteria, which suppresses growth of malicious bacteria;
- normalize intestinal peristalsis.
Bio-In uses the specially made FOS prebiotics complex with varied length chains. What makes it unique is that 96% of the prebiotics go to the large intestine where they are mostly digested by the bifidus bacteria.
Synbiotics is a combination of a specific bio-organic polymer (fructooligosaccharide) and specific strains of freeze-dried bacteria which strengthen each other's beneficial health effects in a synergistic way.
Cobiotics

Are specific nutrients that nourish human cells and probiotics at the same time.
Amino acids are the result of proteolysis. Fatty acids and glicerol are the result of fat and oil splitting. Sugar is the result of splitting of complex carbohydrates, glycoproteins, glycolipids. Microelements: calcium, magnesium, potassium, zinc, iron, phosphorus, copper.
Bad bacteria produce:
- Toxins
- Carcinogens
- Free radicals
- Harmful by-products

Good bacteria:
- Produce antioxidants
- Kill bad bacteria
- Neutralize toxins
- Improve the intestinal barrier
- Neutralize toxic compounds

These materials accelerate the aging process of cells on the molecular level.

This neutralizes free radicals in the body and slows the aging process.
Aging is the natural biological process of gradual systemic degradation of the body's cells.

Early aging is caused by internal and external factors which trigger the chain of molecular changes in the cells which causes early aging.
SCIENTISTS CLAIM THE CONSUMPTION OF PRO-AND PREBIOTICS CAN SLOW DOWN AGING

Good bacteria in your gut destroy toxins and free radicals that cause early aging. Probiotics also help digest and better assimilate the nutrients from food, which means your body receives more of the antioxidants, vitamins and minerals it needs to stay young and healthy.
The main cause of aging on the molecular level is the shortening of the telomeres that protect against damage in chromosome ends and allow normal cell division.

Probiotics process such polyphenols from food like resveratrol and quercetin to enable their digestion by cells of the digestive system. These compounds activate the telemerase ferment that is able to restore telomeres, thus protecting genetic material from destruction and aging.

Research conducted by the Federal Nutrition and Food Institute (Germany) and Yangzhou Medical University College (China).
Telomere shortening is also enhanced by psychological stress.
It has been shown that the stress hormone cortisol is able to suppress the action of telomerase.

Probiotics produce various neuromediators, such as gamma-aminobutyric acid (GABA), dopamine, serotonin and others. These compounds enhance emotional well being, help to cope with depression and anxiety, and increase brain performance, cognitive function, memory and learning. In this way probiotics help to cope with stress and the related aging processes.
AGING ALSO OCCURS DUE TO DAMAGE TO OUR GENETIC MATERIAL – DNA. THIS DAMAGE IS CAUSED BY FREE RADICALS.

Probiotics enhance the bio-synthesis of the natural antioxidant glutathione, which captures and neutralizes free radicals. In this way probiotics help us to cope with the reason for DNA damage and slow down aging processes.

Department of Clinical and Experimental Medicine, Division of Surgery, Linkoping University and University Hospital Linkoping, Sweden.
The immune, endocrine and nervous systems are the most important parts of the protective mechanism of the human body against external and internal harmful factors.

Immunity and probiotics
The constant contact of the body with bacteria stimulates production of immune cells. Opportunistic pathogenic organisms play a special role here.

The induced immune response cells not only stay in the intestine but are also dispensed throughout the body causing training of the entire immune system.

The immune system is tightly connected with the endocrine system and thus it affects other physiological processes and the general health of the person.
Benefits of probiotics for the immune system:

1) They create a continuous layer that prevents malicious bacteria from penetrating.
2) Stimulate intestinal epithelium cells to produce mucous.
3) Activate and "train" immune cells.
4) Suppress inflammatory reactions.
WHO recognizes allergies as the main epidemic disease in children. In the last 10 years the rate of sickness has doubled.

25% of people are susceptible to allergies.

In the last 20 years the number of asthmatics in the world has increased by 160%.

The higher the population density the higher the risk of being susceptible to allergic reactions.

The better the economic state of the country the more people suffer from allergies.
Allergies are an acute immune response that causes an improper reaction in the body to a certain compound (allergen) that is actually safe for it.

Allergies are the result of a failure in the immune system.
Allergies and microflora

There is a proven direct dependency between allergies and human intestinal microflora.

People with allergies have a lower population of *Bifidobacterium* and *Lactabacillus* while the population of pathogenic and opportunistic pathogenic bacteria is greater.
Cancer is the quick and non-controllable emergence and reproduction of mutated cells.
What causes cancer:

- Mutation of human cells when transmission of genetic information fails.
- Impact of free radicals on cell metabolism.
- Impact of external factors: tobacco smoke, pesticides, bacterial toxins, alcohol, UV radiation, etc.
Good bacteria are protection against cancer

1) They destroy carcinogens and decrease their activity early while in the digestive tract.
2) They protect the body from free radicals that cause cell mutations.
3) Produce fatty acids and vitamins B7, B9, B12, and K essential for the protection of genetic material.
4) Activate production of stem cells.
PROBIOTICS ARE THE FUTURE OF DIETARY SUPPLEMENTS AND MEDICINES

This fact is confirmed by the world's leading nations – the USA, Sweden, Switzerland, Germany, Japan, the United Kingdom and France.

Based on probiotics sales worldwide, 2014.
A unique and highly effective solution for stopping early aging and increasing your quality of life at the same time!
Bio-In does not disguise symptoms but efficiently fights the causes

- **Destroys** pathogenic bacteria
- **Prevents** toxins and allergens from getting into the bloodstream
- **Acts** as protection against free radicals
- **Increases** absorption of antioxidants, vitamins and minerals
- **Slows** aging
- **Protects** cells against mutations
- **Alleviates** the harmful effects of stress
- **Maintains** normal metabolism
- **Increases** immunity
- **Accelerates** the formation of collagen
- **Protects** cells against viruses
- **Prevents** obesity and digestive tract disorders
- **Prevents** cardiovascular diseases and cancer
The background

More than 18 years of research and successful practice in nutrition and quality of life control at the global level

A holistic, systematic approach to human health as the basis for sustainable results
A unique 120-day program

Maximal synergetic effect thanks to balanced and consistent consumption.

The perfect combination of 14 patented probiotic strains and prebiotics, antioxidants, vitamins, minerals and cobiotics*

Herbal extracts to increase efficiency of probiotics in the digestive tract

Unlike prebiotics, the *Cobiotics© nourish not only the probiotics but also human cells
Tailored to suit individual needs

The customer gets an individual Bio-In program based on expert recommendations.

Each customer gets the personal Nourishing Plan made by Europe's leading nutritionists.

Bio-In customers can choose a personal Life Quality Manager who will deliver free services.
Highly effective probiotics

1.5 trillion probiotics in each Bio-In program

4 types of probiotics: Lactobacillus, Lactococcus, Bifidumbacteria, Streptococci
It is assured that more than 90% of probiotics will arrive in the large intestine in an active state, settle there and start reproducing.

The Bio-In program FOS (prebiotics) are resistant to the environment of the small intestine and thus 96% of them will safely get into the large intestine.
The special organic polymer that covers the bacterium surface repels water molecules from the walls of the cell.
Patented 5th Generation Cryo-Technology

Freezing, slow sublimation. Lyophilising technology. Unique technology (patent US 6653062B1). Bacteria resistance and efficiency is 90%.
An additional encapsulation of bacteria between layers of macrocrystal.

Double bacteria encapsulation ensures maximum protection.

Uniform macrocrystalline matrix assures even encapsulation and protection.

Microencapsulated bacteria is additionally placed into macrocrystalline matrix that consists from polymer scales.
Guaranteed efficiency

Each sealed sachet holds a great amount of CFU

We are the only company who guarantees the declared amount of living probiotics till expiration of the product

The probiotics retain their vital capacity at room temperature thanks to the state of the art Bio-In packaging system
Guaranteed efficiency

Packaging of Synbiotics

- Three-layer sachet wall
- Pliable structure (non-deformation)
- The sachets are fully hermetic
- High durability
- Water, oxygen, light proof
- Careful filling of the sachet prevents damage to the microorganisms
- Nitrogen treated to increase properties of resistance
- Highest international quality standards compliance - EU Directives 1935/04/EC and 2002/72/EC
Guaranteed efficiency

Alu-Alu pack

- Multilayer structure of totally inert and non-toxic material makes a perfect barrier for moisture, gases, light and malicious microorganisms. The capsules are easy to remove.
The 120-day Bio-In program consists of 8 stages.
**PRODUCT LINE**

**DIGESTICO**
Cleanses the digestive tract and prepares the body for the intake of synbiotics.

**SYNBIOTICS with Antioxidants**
- Helps fight toxins, cleanses cells and improves body function.
- Antioxidants help assimilate beneficial bacteria and protect them from free radicals.

**SYNBIOTICS for Men's health**
- Prevents prostatitis, improves men's reproductive health and stimulates physical and mental development.

**SYNBIOTICS for Women's health**
- Beneficially influences women's health, helps normalize acidity and restores vaginal flora.
SYNBIOTICS for Oral care
Takes care of your mouth. Reduces bleeding gums and improves their general condition.

SYNBIOTICS Bonecare
Improves the absorption of calcium, magnesium and other minerals, stimulates collagen formation and bone mineralization and improves skeleton and cell growth.

SYNBIOTICS for Respiratory system
Improves the body's oxygen supply. Recommended for those suffering from frequent upper respiratory tract infections.

SYNBIOTICS for Hypersensitivity
Recommended for those suffering from hypersensitivity and frequent allergic reactions.
COBIOTICO

Helps digest food using special small particles – cobiotics. Unlike prebiotics, cobiotics not only ensure nutrition for probiotics, but for human cells as well.

SYNBIOTICS (Probiotics & Prebiotics)

Stimulates the production of antimicrobial agents that help fight harmful bacteria.

FOOD SUPPLEMENT with Vitamins and Minerals

Ensures the strength of the whole body and stimulates multiplication of beneficial bacteria and tissue regeneration. Fills the body with missing nutrients.

SACHET OPENER

The limited edition Bio-In sachet opener was specially created to ease your daily usage. Sachets of Bio-In have three layers and no perforations and are packed in a nitrogen environment.
The formulas were created in Denmark, Lithuania and France, clinical tests submitted in Denmark, and the bacteria was grown in the USA, packed in Italy and stored in Austria.
People creating the future

The innovative virtual DEM4 Laboratory has brought together top specialists from various research fields to find out how to make the trillions of microorganisms inside every human being work to eliminate factors causing the early aging process.
CERTIFIED PRODUCT
The Bio-In program is for those who:

- Are ready to invest in their health
- Are looking for an efficient personalized product
- Prefer sustainable long term results
- Wish to take control and slow down the aging of their bodies
The Bio-In program is for those who:

- Want to increase their immunity and vital energy
- Want to balance their microflora
- Choose to self-regulate their bodies and create the conditions for naturally developed metabolism and the function of the digestive tract
- Are aiming to control and overcome stress
Forecasts predict that by 2020 probiotics will hold over 50% of the nutrition market and will replace 80% of pharmaceuticals.

- Euromonitor, 2014