

NORDWISE[®]
PROBIOTICS



MULTIPOTENT PROBIOTICS AND
TECHNOLOGICAL ADDITIVES

SCIENCE FOR HEALTH!

BIOCC OÜ (LLC)

BIO-COMPETENCE CENTER

EXPERTISE IN R&D

BioCC's work integrates its and international knowledge in the field of microbiology, biochemistry, genetics, metabolomics, food technology, genomics, physiology, and medicine.

EXPERIENCE

After many years of R&D work BioCC has developed both probiotics for functional foods and food supplements, and technological zootechnical additives. BioCC has carried out many clinical trials on functional foods and food supplements. Innovative probiotics and their properties have been patented internationally.

SERVICES

BioCC carries out interdisciplinary R&D and offer services throughout the entire food chain — starting from breeding, feeding and animal husbandry up to creation of health-promoting food products and conducting the clinical trials to demonstrate their the health benets.



Internationally recognized R&D company



Accredited – conforms to the requirements of EN ISO/EC 17025:2017



Registered and approved food producer



Authorized laboratories



Evaluated research institution

AWARDS



The best entrepreneur in Tartu in 2017

Best of Medicine and Life Sciences



Gold Prize KIWIE 2013

Korea International Woman Inventions Exposition Award



Best Estonian Food 2010

Best Estonian Dairy Product



Finnish Quality Innovation Award 2010

Best of Medicine and Life Sciences



Special Award EWIIN 2009

European Union of Women Inventors and Innovators Network Award



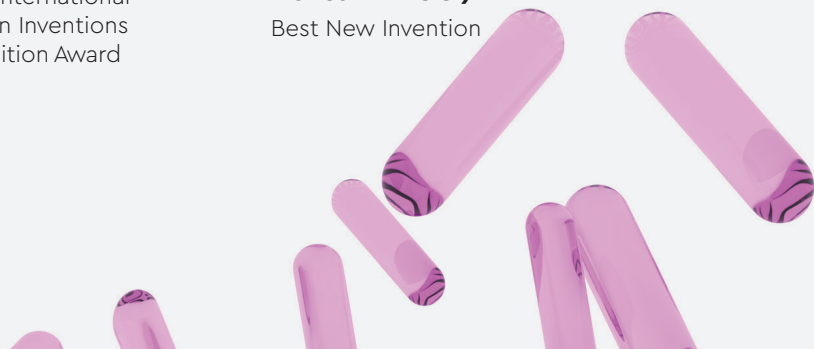
Gold Prize KIWIE 2009

Korea International Woman Inventions Exposition Award



The Best Entrepreneur in Tartu in 2009

Best New Invention



SERVICES



Probiotic Strains

Developing and licensing strains for use in functional foods or food supplements.



Functional Foods

Developing your idea to a product.



Food Supplements

Developing compositions for various target audience.



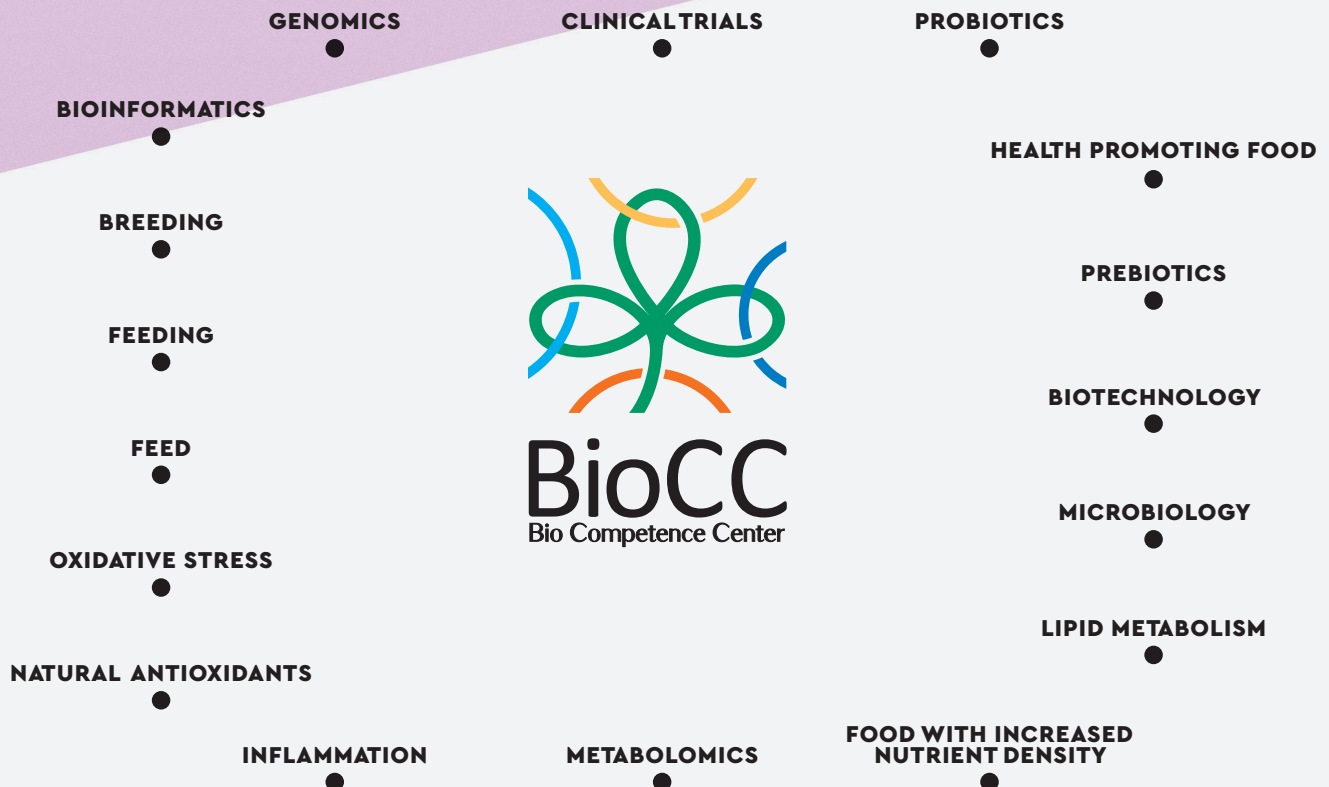
Clinical Trials

Testing tolerability, safety and functionality of food products including probiotics.



Feed

Developing and licensing technological and zootechnical additive.



LACTIPLANTIBACILLUS PLANTARUM

**The multipotent
antimicrobial and
antihypertensive probiotic**

TENSIA[®]



Probiotic
*Lactiplantibacillus
plantarum* TENSIA[®] is a
lactic acid bacterium of
healthy child origin.



TENSIA[®] has been
discovered and
investigated by BioCC
LLC researchers in
collaboration with
researchers from the
University of Tartu.
Clinical studies were
carried out in the
European Union.



Safety and functional
properties of
L. plantarum TENSIA[®]
have been thoroughly
investigated in
science-based
research throughout
several years in test-
tube, on laboratory
animals and humans.
QPS status granted by EFSA



Lactiplantibacillus plantarum TENSIA[®] is clinically validated on more than 800 subjects.



Functional properties of *L. plantarum* TENSIA[®] are described in European patent EP2309870 "Isolated microorganism strain *Lactobacillus plantarum* Tensia DSM 21380 as antimicrobial and antihypertensive probiotic, food product and composition comprising said microorganism and use of said microorganism for preparation of antihypertensive medicine and method for suppressing pathogens and nonstarter lactobacilli in food product", in Russian patent RU2309870 and in Korean patent KR10-1587195.

TENSIA®

HEALTH-SUPPORTING PROPERTIES

+

TENSIA® helps to maintain the cardiovascular system by producing blood-pressure reducing compounds:

* Nitric oxide (NO) from amino acid arginine. NO has blood vessel-relaxing properties

* Acetylcholine which induces the synthesis and release of nitric oxide from the endothelium.

* in food products expresses ACE II inhibitory activity, thus affecting the renin-angiotensin system, decreases the total water content of human body, helping to avoid water retention and arteriolar vasoconstriction.

+

TENSIA® helps to improve the general antioxidative defence of the human body due to antioxidative properties.

Produces conjugated linoleic acid (CLA) and polyamines. Both having antioxidative properties, reducing low-grade inflammation associated with cardiovascular diseases.

+

TENSIA® increases the number of useful lactobacilli in the gut, which ensures the breakdown of absorbable nutrient compounds.

+

TENSIA® helps to maintain and restore the balance of intestinal microbiota.

+

TENSIA® the extension of the shelf life of the food product by suppressing foodborne (pathogenic) bacteria due to antimicrobial activity against enteric pathogens like listeria, salmonella and shigella, and psychrophilic microbes.

+

TENSIA® enhances the human body's natural resistance to several gastrointestinal pathogens due to strong antimicrobial activity through the production of a variety of antimicrobial compounds (organic acids and hydrogen peroxide, plantaricins).

Applications of probiotic *Lactiplantibacillus plantarum* TENSIA®

Dairy products

cheese, yogurt, kefir, sour cream, cottage cheese, drinking milk, processed cheese, soft ice cream etc.



Food products & food supplements, etc.

capsules, lyophilized form, plant-based foods



&

LACTIPLANTIBACILLUS PLANTARUM

**The multipotent
antimicrobial and
cholesterol lowering
probiotic**

INDUCIA[®]



Probiotic
*Lactiplantibacillus
plantarum* INDUCIA[®] is
a lactic acid bacterium
of healthy child origin.



It has been discovered
and investigated by
BioCC LLC researchers
in collaboration with
researchers from the
University of Tartu.
Clinical studies were
carried out in the
European Union.



Safety and functional
properties of
L. plantarum INDUCIA[®]
have been thoroughly
investigated in
science-based
research throughout
several years in test-
tube, on laboratory
animals and humans.
QPS status granted by EFSA



Lactiplantibacillus plantarum INDUCIA[®] is clinically validated on more than 500 subjects.



Functional properties of *L. plantarum* INDUCIA[®] are described in following patents:
„A composition comprising a hypocholesterolemic probiotic microorganism strain *Lactobacillus plantarum* Inducia DSM 21379 for use in the prevention of cardiovascular diseases.“ Estonian patent EE05799
"Isolated *Lactobacillus plantarum* strain Inducia DSM 21379 as probiotic that enhances natural immunity and food products and medicinal preparations comprising it". European patent EP2288360, Russian patent RU2486234 and Korean patent KR10-1595042.
"Composition comprising probiotic microorganism strain *Lactobacillus plantarum* Inducia DSM 21379 for use as antimicrobial agent against *Clostridium difficile* associated diarrhoea (CDAD)" EE05809
"Lactobacillus plantarum Inducia DSM 21379 as enhancer of cellular immunity, hypocholesterolemic and anti-oxidative agent and antimicrobial agent against *Clostridium difficile*." USA patent US10272122

INDUCIA®

HEALTH-SUPPORTING PROPERTIES

+

INDUCIA® helps to maintain the cardiovascular system by reducing the level of LDL-cholesterol in the blood via hydrolyzing bile salts due to BSH (bile salt hydrolase) activity and by assimilation of dietary cholesterol in the intestine

+

INDUCIA® enhances the human body's natural resistance to several enteropathogens due to strong antimicrobial activity through production of variety of antimicrobial compounds (organic acids and hydrogen peroxide, plantaricins)

+

INDUCIA® reduces the level of oxidized low-density lipoprotein (ox-LDL) and the oxidative stress index of the human body

+

INDUCIA® supports antioxidative network of the human body due to its strong antioxidative properties and the presence of a complete intracellular glutathione system

+

INDUCIA® produces polyamines. Polyamines possess antioxidative properties, reducing low-grade inflammation associated with cardiovascular diseases. Polyamines also enhance the integrity of intestinal mucosal barrier

+

INDUCIA® increases the amount of useful lactobacilli in the gut, which ensure the breakdown of nutrients to more absorbable compounds

+

INDUCIA® helps to maintain and restore the balance of intestinal microbiota.

Applications of probiotic *Lactiplantibacillus plantarum* INDUCIA®

Dairy products

cheese, yogurt, kefir, sour cream, cottage cheese, drinking milk, processed cheese, soft ice cream etc.



&

Food products & food supplements, etc.

capsules, lyophilized form, plant-based foods



LACTIPLANTIBACILLUS PLANTARUM

**The multipotent
antimicrobial and
anti-inflammatory
probiotic**

MCC1



Probiotic
*Lactiplantibacillus
plantarum* MCC1 is a
lactic acid bacterium of
healthy child origin.



It has been discovered
and investigated by
BioCC OÜ researchers
in collaboration with
researchers from the
University of Tartu.
Clinical studies were
carried out in the
European Union.



Safety and functional
properties of
L. plantarum MCC1
have been thoroughly
investigated in
science-based
research for 15 years
in test-tube, on
laboratory animals
and humans.
QPS status granted by EFSA



Lactiplantibacillus plantarum MCC1 is clinically validated on more than 180 subjects.



Functional properties of MCC1 are described in European patent EP2678419 „ISOLATED MICROORGANISM STRAIN LACTOBACILLUS PLANTARUM MCC1 DSM 23881 AND ITS USE“, in Korean patent KR10-1586778, in Japanese patent JP578275, in Russian patent RU2603059 and in Chinese patent CN201280020352.2

MCC1

HEALTH-SUPPORTING PROPERTIES

+

Lactobacillus plantarum **MCC1** has been researched for its use in the reduction of milk allergy and irritation symptoms of lower urinary tract accompanying benign prostate hyperplasia and oxidative stress and inflammation associated with these.

+

MCC1 can be used for the manufacture of hypo-allergenic food products and/or food supplements for infants, children, and adults.

+

Anti-inflammatory effect: **MCC1** fermented food products contributed to an improvement of the quality of life in men with moderate lower urinary tract symptoms, by improvement of urinary function, reduced lower urinary tract symptoms, systemic oxidative stress markers (MPO, ox-LDL, 8-EPI) and seminal plasma inflammatory status.

+

Fermented food products comprising of postbiotics of **MCC1** are more hypo-allergenic having several anti-inflammation and oxidative stress-related effects (causes less allergic responses compared to cow's milk based on studies in children).

+

MCC1 increases the number of useful lactobacilli in the gut, which ensure the breakdown of nutrients into more easily absorbed compounds.

+

MCC1 can be used to create food products that are of remarkably high bioquality.

+

Increases the body's natural resistance to a number of gut infections and helps to maintain and restore the balance of intestinal microbiota.

Applications of probiotic *Lactiplantibacillus plantarum* MCC1

Dairy products

cheese, yogurt, kefir, drinking milk, soft ice cream etc.

Food products & food supplements, etc.

capsules, sachets or mixed products in lyophilized form, plant-based foods

&





FUNCTIONAL FOODS

Add a twist of functionality to your food product!

Probiotics can be incorporated into various food matrixes (jams, dairy products, water, meat products, etc.).

Strains with different functional properties can be used to develop tailor-made products containing lactic acid bacteria for clients.

FOOD SUPPLEMENTS

Target specific consumers with nutritional supplements!

Providing custom recipes and compositions helps you develop a nutritional supplement from scratch. Our probiotic collection contains strains of microbes of different phyla, incl. lactic acid bacteria of human, farm animal, environmental and plant origin. Majority of the microorganisms are lactobacilli.



Anne Veski, Estonian pop singer



TECHNOLOGICAL ADDITIVES

Healthy food starts with healthy animals!

Technological additives improve the fermentation quality in silage and inhibit undesirable microorganism and pathogens development.

Feed additives minimize the loss of nutrients in fermentation while supporting and directing silage fermentation.



PARTNERS



REVAL ♥ CHOCOLATE

FOR DISTRIBUTORS

INTERESTED IN DISTRIBUTING THE MOST RESEARCHED SUPPLEMENTS IN THE NORDICS?




Nordwise® Probiotics portfolio includes lactic acid bacteria that support human health, the effects of which are aimed at preventing cardiovascular problems and allergies, reducing oxidative stress, stimulating immunity and improving digestion, etc. Food supplements are produced according to the highest standard and certified for sale in all European Union countries.

BioCC OÜ (LLC)

BioCC OÜ (BioCC LLC) is a private R&D company, established by food and feed producers and universities.

BioCC conforms to the requirements of EN ISO/IEC 17025:2017

 F.R. KREUTZWALDI
TARTU,
ESTONIA,
51006

 biocc@biocc.eu

 biocc.eu

 [biocc-llc](https://www.linkedin.com/company/biocc-llc)


INTERNATIONALLY RECOGNIZED R&D AND INNOVATIVE BIOTECHNOLOGICAL SOLUTIONS

BioCC carries out internationally recognized R&D to create, develop and implement innovative biotechnological solutions for feed, food and food supplements, integrating its and international knowledge in the field of microbiology, biochemistry, genetics, metabolomics, genomics, physiology, and medicine.

Nordwise Biotech OÜ (LLC)

Nordwise Biotech OÜ is a company focusing on distributing European produced clinically validated proprietary probiotics, food supplements, functional foods and feed additives.

 RIIA 181A,
TARTU,
ESTONIA,
50411

 info@nordwise.eu

 [nordwise](https://www.linkedin.com/company/nordwise)

 [nordwiseprobiotics](https://www.facebook.com/nordwiseprobiotics)

 [nordwiseprobiotics](https://www.instagram.com/nordwiseprobiotics)

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European Union
European Regional
Development Fund



Investing
in your future