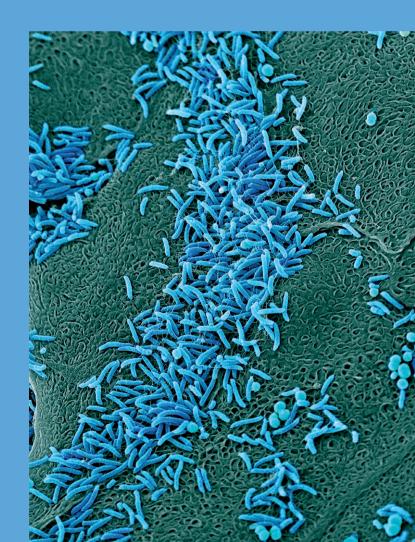


A noble purpose carries the soul of a company, it lights a strategic beacon that drives the business, it stimulates the commitment and passion of those who work in that company and encourages continuous innovation.

Giovanni Mogna – Probiotical Founder



# Index

**6** Who we are

Vision & Mission

10 Our Ecosystem

At the service of our customers

22 Probiotical Skin Tech

26 Market and Technology



We create innovative probiotics with a proven positive impact on life, thanks to a deep integration of research and production

Who we are

# A GROUP OF EXPLORERS OF AN INVISIBLE WORLD

The drive for innovation and research is in our very DNA. We work to preserve and improve well-being through probiotic bacteria.

We are a group of researchers and innovators who, through probiotics, want to provide natural solutions to make people live better, in perfect harmony with one's body and its complex nature.

The current company originates from ALCE, a dairy business founded in Novara, Italy, in 1950. Probiotical was an idea of Giovanni Mogna who, driven by a great passion and interest in anything related to health, had the intuition to exploit the expertise acquired in the fermentation of strains for dairy purposes to develop strains for human health.

To this end, since the very year it was founded, 1985, Probiotical undertook a period of in-depth research work on probiotic strains of human origin, on optimising production processes to manufacture them and on identifying increasingly specific and targeted activities such strains could have on human health, which lasted for over 10

years and which has allowed to create one of the largest and science-backed probiotic strain databases available.

A major turning point, which led to the fast growth of the company, occurs between 2010 and 2015, when Probiotical decides to offer its services both as a producer of raw materials and of finished products.

Our history shows we have grown strong in Italy, yet we thrive all over the world today. We see the prospects and strive to go beyond borders. We enjoy exploring opportunities, taking up challenges, seeking new partners and companions for this journey of ours.

Thanks to strong corporate ethics based on the due respect for our employees and their families, we have created an ideal workplace, an atmosphere of serenity that is reflected in the superior quality of our products and the excellent relationships with our customers.

We stand out thanks to a philosophy based on the development and manufacturing of finished products made through the latest technology and strong scientific research, determined to be seen as the ideal partner for any food, nutraceutical and pharmaceutical manufacturers that are seeking probiotic and/or symbiotic products.

We are a company built by four generations of a family of entrepreneurs and, above all, researchers. We have always invested with passion, courage and ambition in the future, with the strong belief that research work is what drives growth.

#### Our history

1950

The solid roots to build a great future

1985

A new point of reference in the industry

2000

Research and innovation to face new challenges

2022

The new Probiotical Skin Tech buiness unit is founded

TODAY

An Italian company growing strong worldwide and constantly investing in innovation: new probiotic strains, new clinical studies, new facilities.

The ALCE microbiological laboratory is founded, which will remain the Italian leading company in the production of lactic bacteria for the dairy industry for over seventy years. Mario Mogna, the founder, will be remembered especially for pioneering direct liquid inoculation into the boiler.

The knowledge and expertise gained from the background to successfully approach new application sectors: Giovanni Mogna founded Probiotical on these basis, focusing work on research and development in the early years of the company, and on design and implement of the first production processes.

Research work continues to identify the beneficial activities of probiotic strains in a wide number of therapeutic areas, to then validate such benefits through clinical trials carried out at major Italian and European research centers. In these years, Probiotical also works to perfect production processes.

Probiotical Skin Tech is the new business unit dedicated to the cosmetic and personal care industry. Probiotical unites state-of-the art microbial technology with a broad expertise in probiotics to pioneer new applications.

Vera Mogna introduces Probiotical into new market scenarios, by increasing the production of finished products and exploiting partnership opportunities, keeping the focus on constant innovation and strong research and development. Under her guide the company obtains important results, confirmed by the achievement of a number of patents and certifications.



## WE OFFER SOLUTIONS FOR IMPROVING PEOPLE'S QUALITY OF LIFE

We develop some of the most innovative probiotics in terms of activity and health applications - a range of natural solutions to foster well-being.

In our work, we strive to enhance research and development in the field of probiotics and, more generally, of the microbiota, to create cutting-edge, high quality, effective, safe raw materials and finished products in a branch of nutraceutical science that requires specific technical expertise.

Continuous development is our major goal, as we do not like to rest on the results we have achieved, but we rather wish to stretch to reach the very boundaries, explore the hidden perimeters of the world of probiotics and grow in new experimental market niches.

Every year we produce some of the most innovative probiotics: raw materials and formulations that we have studied with the aim of putting people, their needs and their aspirations for an ever better quality of life at the center of our activity.

We achieve results through co-operation with our customers, who grow with us over time to become true business partners of ours. Each new product and formulation breakthrough stems from the great passion for science and innovation that drives us, which allows to build the required expertise Probiotical puts at the service of customers, but also of the scientific community, thanks to research work we disseminate and often publish in the literature.

We integrate research with production to create products that are the result of experimentation, thorough investigation and accurate testing.

# A SYNERGIC ECOSYSTEM DEVOTED TO EVOLUTION AND DISCOVERY

Probiotical stands as a unique enterprise in the probiotic sector. In fact, it boasts the first plant in the world specifically designed and built for the research, development and production of probiotic microorganisms.

We work to create probiotic-based raw materials and products for innovative therapeutic applications, to meet the needs of the ever-growing healthcare market.

We work through an integrated product development chain in which the synergistic efforts of technicians and scientists, from concept design to final production, allow to yield products that meet the highest standards in terms of quality and stability.

Product development is a complex process that is carried out entirely in our research & development and manufacturing facilities, through systems based on state-of-the-art technology we have developed ourselves.

#### **Production**

An advanced industrial complex where we work on the selection of our probiotic strains, develop the clinical testing, freeze-dry, mix and package our preparations.

9.000

square meters of production space

### Research and Development

Within the industrial complex, we have a large area devoted to R&D – a unique and innovative plant where we carry out our technicalscientific investigation work, and which enables us to isolate and test our probiotic strains, as well as design the clinical studies we carry out on them.

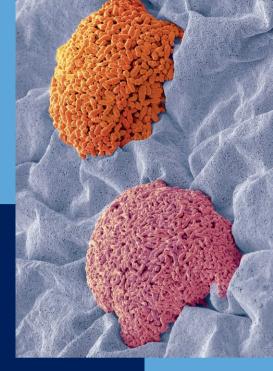
1.200

square meters of R&D space



60+

Strains currently in production



We push ourselves to seek unexplored worlds

Our adventure into the future of probiotics to meet the needs of a constantly evolving market

2.000

Strains available in our collection

#### Research and Development

Our work is driven by the urge to discover. To this end, Probiotical's research and development unit plays a crucial role and is the true engine of the company - up to 10% of our turnover is invested in research, patent and innovation.

Research aims at the selection and investigation of new probiotic microorganisms, identified for their specific beneficial properties. Our researchers are constantly engaged in both basic and applied research. Basic research has the objective of discovering probiotics having different types of activity, while applied research focuses on the design of effective products, in which probiotic properties are guaranteed up to the product expiry date.

Product design is based on research to identify prebiotic fibers that allow to optimise the development of probiotic cultures, the biocompatibility of the strain with other active components or excipients of the formulation and the efficacy and stability of the finished product.

The Probiotical laboratories are a unique and stimulating workplace, where our researchers use their creativity and great skills to design unprecedented solutions. Our spirit to explore and the regular investments we make have led us to build a large bank of proprietary probiotic strains and secure patents on formulations, production technologies and preservatives systems.

Each microorganism has been taxonomically classified, assessed for its resistance to antibiotics (as required by the official EFSA guidelines) and registered in international culture collections to ensure traceability and patentability.

All our research and development activities are backed by rigorous studies, which are published in the most important international journals pertaining to our sector.

#### **GASTROENTEROLOGY**

**IMMUNOLOGY & ALLERGOLOGY** 

**DERMATOLOGY** 

**HEALTHY AGEING** 

**BONE HEALTH** 

**CARDIOMETABOLIC** 

**GYNAECOLOGY** 

**UROLOGY** 

**NEUROLOGY** 

**OPHTHALMOLOGY** 

**SPORT** 

**ORAL CARE** 

Tailor-made and specific products for different therapeutic areas

We have developed innovative formulations whose benefits are not just limited to rebalancing the intestinal microflora. Each individual probiotic strain has its own, unique properties, tailored to suit certain applications, and whose effectiveness is demonstrated by scientific and clinical studies.

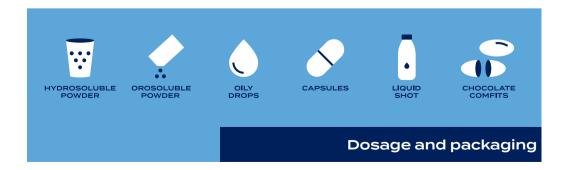
# WE STAND BESIDE OUR CUSTOMERS TO PRODUCE EXCELLENCE

Our production processes undergo continuous optimisation to improve product performance all the time.

At Probiotical, we manage the entire production process in our plants. From product design to the finished product, the manufacturing cycle is 100% in-house, comprehensive, safe and occurs through the following phases:

- Fermentation
- Freeze-drying
- Microencapsulation
- Production and packaging of the formulation

The strong expertise of the Probiotical production team, supported by smart solutions devised by our research and development staff, has led to creating specific technologies that allow to preserve the vitality of probiotic cells throughout the duration of the production process and, subsequently, for the entire duration of the shelf life of the product



# Our strains

Among the strains we manufacture, a number of these are designed to have benefits for human health, while other strains are developed to be particularly active against specific pathogens.

Examples of these strains and their beneficial effects are:

Reduction of **gastrointestinal discomfort**, IBS, IBD, constipation and diarrhoea

Reduction of plasma cholesterol

Production of specific **group B vitamins** (folic acid, cobalamin, vitamin b12)

Antioxidant or anti-inflammatory properties

Immunomodulatory properties created to help to resolve and prevent conditions related to allergies such as **asthma**, **rhinitis** a **atopic eczema** 

Strains having specific benefits

Against Candida spp. and Gardenella vaginalis

Against gas-forming coliforms in colicky infants

Against bacteria responsible for infections such as:

S. aureus, Klebsiella pneumonie

Against coliforms responsible for urinary tract infections

Strains targeting pathogens

In compliance with GMP (Good Manufacturing Practices) guidelines, Probiotical has been authorised by the Italian Ministry of Health to manufacture active ingredients and food supplements.

In addition, we have also been authorised by AIFA (Italian Medicines Agency) to manufacture API (Active Pharmaceutical Ingredients) strains, supported by the appropriate DMF (Drug Master File) documentation.

# From R&D to raw materials and finished products MICRO-ENCAPSULATION

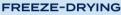
Proprietary technology

Probiotical manages a complete allergen free manufacturing process from strain isolation to raw materials and finished product.



STRAINS ISOLATION

**FERMENTATION** 







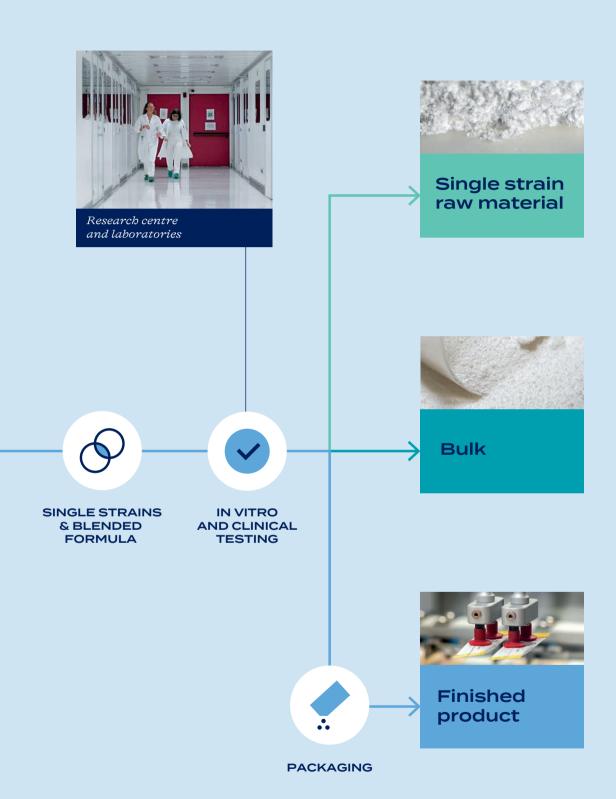




Industrial fermentation area



Pharmaceutical freeze-dryig area



We turn insights from our customers into product ideas to develop together, yielding food supplements and medical devices, also on a private label basis.

## WE WORK WITH OUR CUSTOMERS TO EXPLORE NEW MARKET OPPORTUNITIES

Alongside our customers, who become true business partners of ours in the process, we create tailor-made products, developed through a process that is fully devised and shared with our partners, from product design to manufacturing strategies and identifying the ideal packaging.

We offer a broad range of active ingredients, freeze-dried probiotics at various concentrations for applications in the food, nutraceutical, pharmaceutical and cosmetic industries.

#### The following are among the services we can provide:

- production and supply of probiotic raw materials for the food and pharmaceutical markets
- production and supply of finished products based on probiotics for the food and pharmaceutical markets



Our expertise has allowed us to develop a broad range of formulations

#### **Clinically Tested**

Certified, market-ready products.

#### Developed Formulas

Products made through state-of-theart technology and supported by scientific studies.

#### **Tailor Made**

Customised solutions, from product design to packaging.





# EXPLORING A BORDERLESS WORLD THROUGH THE MICROSCOPE

Founded in Italy, we proudly like to represent the best values of our country, yet we are naturally driven to the take on the world: more than 70% of our current output goes to foreign markets. Our expertise enables us to provide safe and effective products for a number of therapeutic areas, which are also scientifically proven and come with a guaranteed stability. These results are possible thanks to strong research work and the use of innovative technologies, which we have developed and patented to offer the highest possible quality to our partners.

Our technology allows us to provide effective products to anywhere in the world.



**MICROBAC** 

Our probiotic microorganisms can be produced in a microencapsulated form, thanks to a special technology that covers every single cell and gives it gastroprotection. It allows the microorganism to reach the gut viable to perform its beneficial function.

Studies carried out on our microencapsulated strains demonstrate a colonisation capacity 5 times greater than that of standard strains.



ALLERGEN FREE

Probiotical has developed a special patented technology that ensures that all the allergens indicated in the current European legislation are excluded from laboratory and production processes.

Thereby Probiotical obtains allergen-free probiotic cultures and products.

Probiotical Skin Tech is the business unit of Probiotical dedicated to the cosmetic and personal care industry, for topic applications.

Our diverse expertise in the field of probiotics has yielded **Skinbac**™

Supported by evidence from rigorous scientific testing, we see the future of cosmetics as being brighter by using precision heat-treated probiotics to preserve the health of skin and hair and enhance their beauty.

Probiotical Skin Tech is your partner in developing innovative cosmetic products for skin well-being, offering Skinbac<sup>TM</sup> raw materials as single strains or blends, as well as finished products.



### **Probiotical Skin Tech**

Skinbac<sup>TM</sup> strains are a selection of proprietary heat-treated probiotic strains.

Our proprietary heat treatment of the cells renders them non-viable and highly suited for inclusion in cosmetic formulations without any incompatibilities, including preservative systems.

The **Skinbac™** products range displays stability in aqueous formulations and with the most common preservative systems.



Anti-Inflammatory / Soothing (as cytokines modulation)

Hydration (as aquaporin expression)

Antioxidant Activity (reduction of reactive oxygen species)

Tight Junctions / Barrier function (induction of tight junction proteins)

Activity Against *Staphylococcus aureus* (SA) Wound Healing

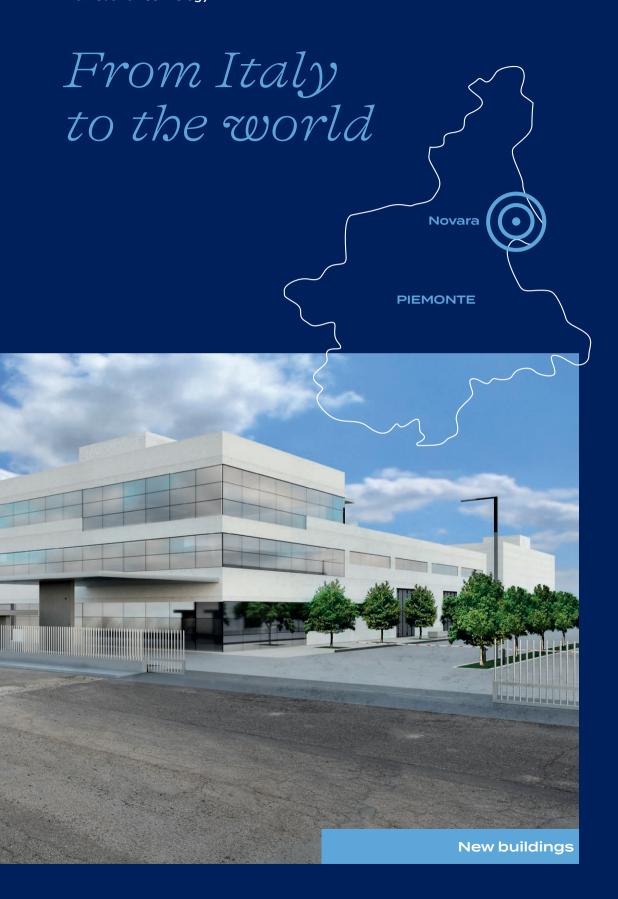
Hair Growth (as stimulation of dermal papilla cells)

# Microbiota equilibrium means skin equilibrium

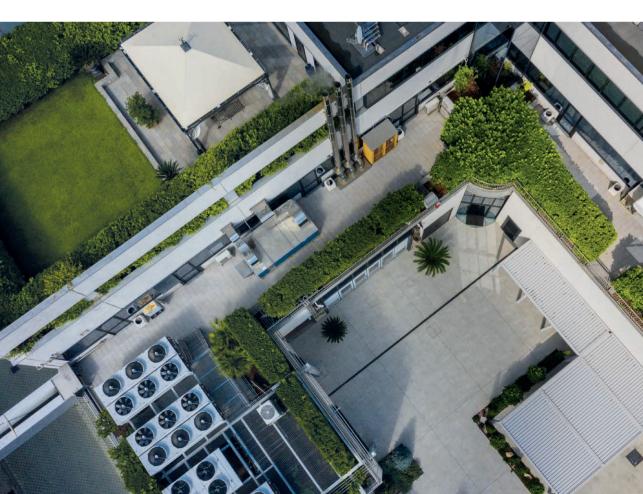
Rationally selected and validated postbiotic bacterial strains can be used to maintain the balance and health of all mucous membranes and the epidermis. The skin microbiota is key to supporting the function of immune and barrier systems and must be nourished and maintained in an optimal balance, to endure environmental insults with resilience.

# Effectiveness you count on

Our proprietary heat treatment process, which retains the structure of the cell, allows for guaranteed and validated enumeration, unattainable with typical "ferment" and "lysate" ingredients.









- Australia
- Austria
- Belgium
- Bosnia and Herzegovina
- Brazil
- Canada
- Central America
- Chile
- China
- Colombia
- Croatia
- Czech Republic
- Denmark
- Ecuador

- Egypt
- Estonia
- Finland
- France
- Germany
- Greece
- Holland
- Hungary
- . ranga
- India
- Ireland
- Israel
- Italy
- Japan
- Kuwait
- Latvia

- Lebanon
- Lithuania
- Macedonia
- Malaysia
- Mexico
- Montenegro
- New Zeland
- Norway
- Peru
- Poland
- Portugal
- Romania
- Russia
- Saudi Arabia
- Serbia

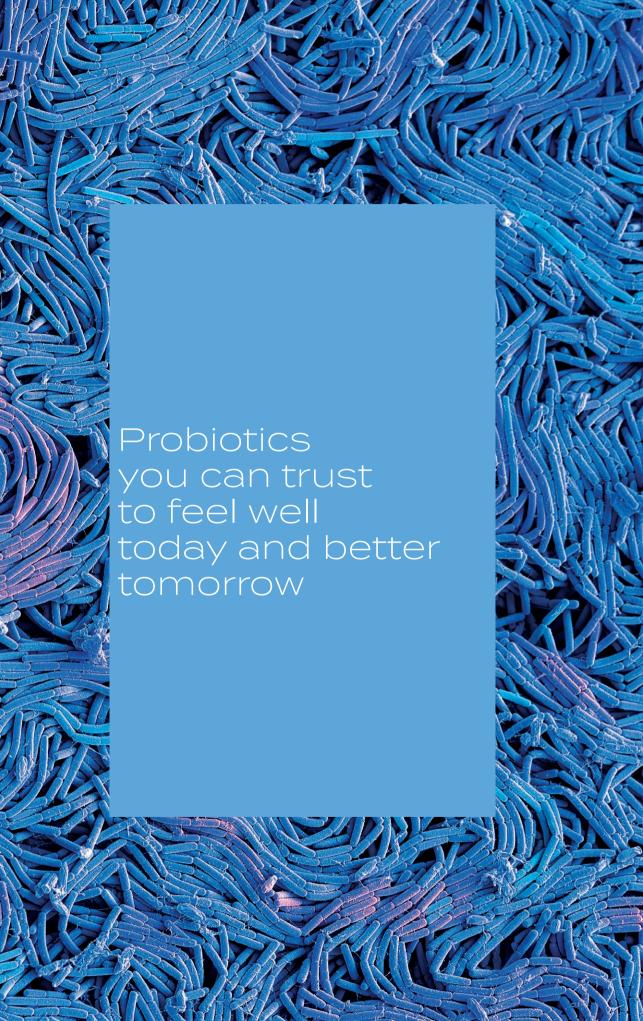
- Singapore
- Slovakia
- Slovenia
- South Corea
- Spain
- Sweden
- Switzerland
- Taiwan
- Thailand
- Turkey
- UAE
- UK
- Ukraine
- USA
- Vietnam

# Our global presence



70% in foreign markets

30% in Italian market





Surfing together the Probiotic Galaxy

probiotical.com support@probiotical.com