

# Postgraduate Diploma

## Skin Microbiota for Nutritionists



## Postgraduate Diploma

### Skin Microbiota for Nutritionists

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 16 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/nutrition/postgraduate-diploma/postgraduate-diploma-skin-microbiota-nutritionists](http://www.techtute.com/us/nutrition/postgraduate-diploma/postgraduate-diploma-skin-microbiota-nutritionists)

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# 01

# Introduction

Scientific research in the field of microbiota has been booming in recent decades, aimed both at the study of its characteristics and its impact on our health. In each of the different locations of our body, such as the skin, mucous membranes, respiratory tract, vagina or digestive tract, we can find complex microbial ecosystems adapted to the particularities of each niche. Of all of them, one of those that requires a deeper knowledge is the one found in the skin, that is why TECH professionals have designed this training title that aims to help nutritionists to know all aspects of the skin microbiome. Thus, these professionals will be able to understand the reasons for the appearance of certain skin pathologies and to guide and design nutritional plans that will yield positive results for their patients.



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*Study with this Postgraduate Diploma the relationship between certain skin pathologies and nutrition and become a successful nutritionist"*

Numerous scientific evidences have demonstrated the implication of the skin microbiome in the appearance of various skin pathologies, giving rise to new therapeutic strategies to control and regulate these environments. The study of this ecosystem is a field of rapid scientific progress, and it is universally accepted that to achieve an adequate state of health it is also necessary to have a "healthy" Microbiota.

The human microbiota undergoes changes as a consequence of the influence of multiple factors, diet, lifestyle, pharmacological treatments.... generating alterations in this bacterial ecosystem and the abnormal interaction that the organism could have with it, is related to certain processes: allergic, acute and chronic intestinal diseases, obesity and metabolic syndrome, neurological diseases, dermatitis and other alterations in the dermis, and even some types of cancer.

This Postgraduate Diploma in Skin Microbiota focuses on providing nutritionists with the necessary information on issues related to Skin Microbiota, its Eubiosis and Dysbiosis and related problems. This will enable you to serve patients with such problems, offering them a better quality food plan, having a much clearer idea of the state of their health.

In the same way, the use of Probiotics and Prebiotics and the growing market launch of new products with very specific strains for skin problems and diseases will also be addressed. All this content will enable nutrition professionals to be prepared to offer effective solutions to patients with this type of pathology, knowing how to guide them so that they can recover and maintain their Skin Microbiota and, consequently, a good state of health.

This **Postgraduate Diploma in Skin Microbiota for Nutritionists** contains the most complete and up-to-date scientific program on the market. The most important features include:

- Development of case studies presented by experts in Skin Microbiota. The graphic, schematic, and eminently practical contents with which they are created provide scientific and practical information on the disciplines that are essential for professional practice
- Skin Microbiota Developments
- It contains practical exercises where the self-evaluation process can be carried out to improve learning
- With special emphasis on innovative methodologies in Skin Microbiota.
- All of this will be complemented by theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- Content that is accessible from any fixed or portable device with an Internet connection



*TECH provides you with the latest knowledge on Skin Microbiota so that you can become a successful Nutritionist"*

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*This Postgraduate Diploma is the best investment you can make in the selection of a refresher program for two reasons: in addition to updating your knowledge in Skin Microbiota, you will obtain a degree from one of the most reputable educational institutions: TECH”*

The program includes, in its teaching staff, professionals belonging to the field of medicine and nutrition, who bring to this training the experience of their work, in addition to recognized specialists from prestigious reference societies and universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive training programmed to train in real situations.

The design of this program focuses on problem-based learning, by means of which the professional must try to solve the different professional practice situations that arise throughout the academic expert. The professional will be assisted by an innovative interactive video system created by renowned and experienced experts in sports nutrition.

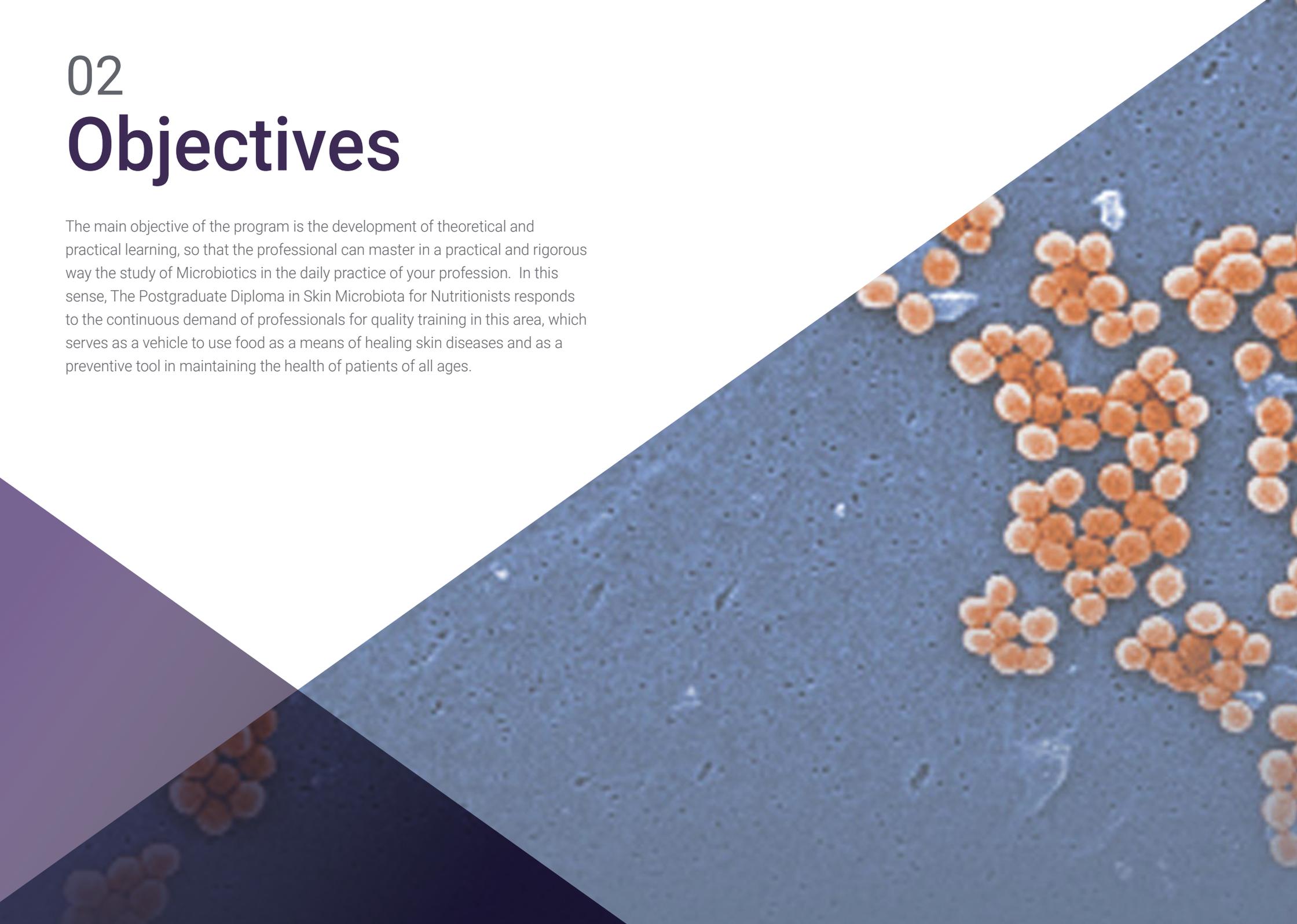
*The Postgraduate Diploma allows you to exercise through simulated environments, which provide immersive learning programmed to train for real situations.*

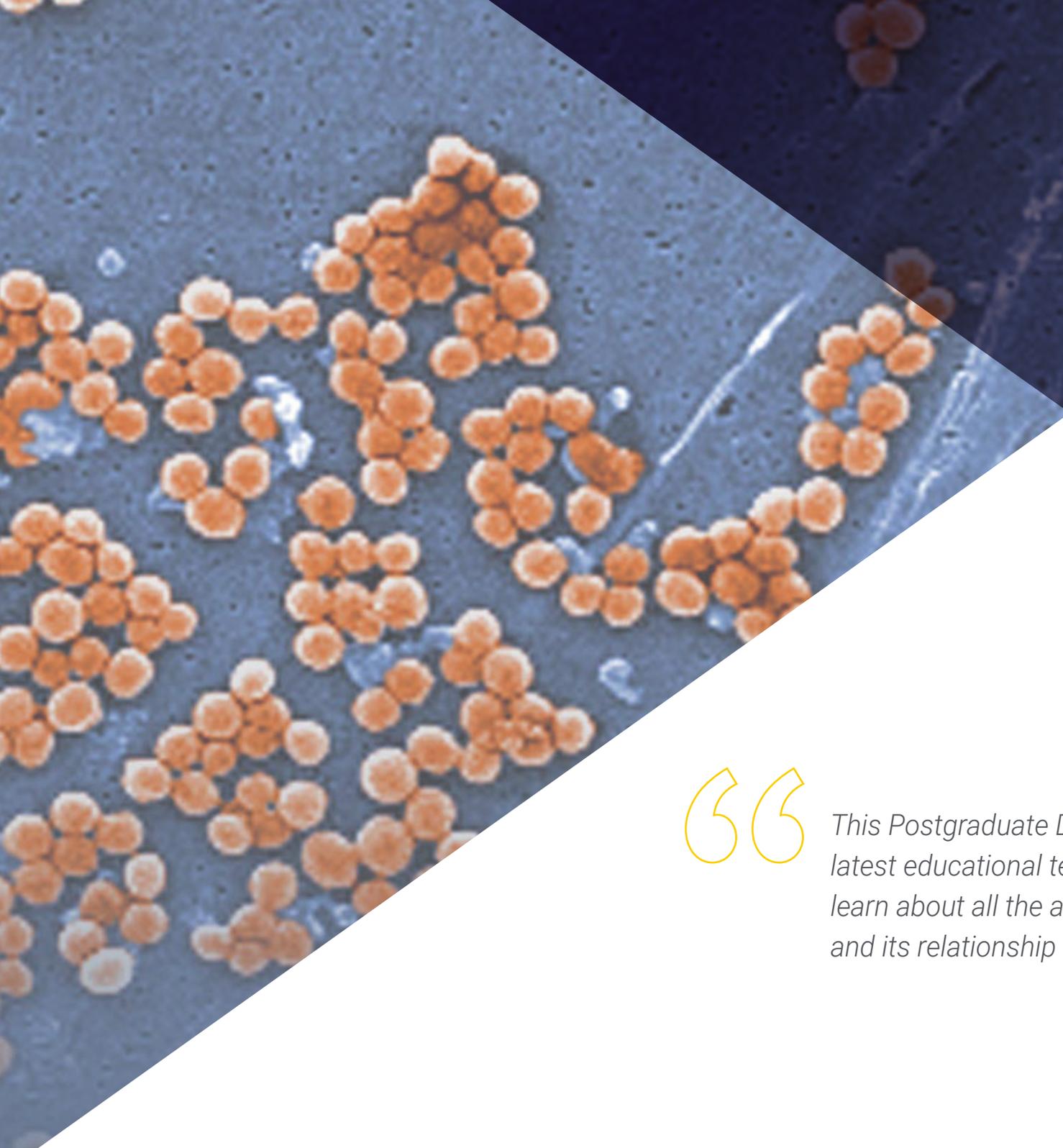
*This 100% online Specialist Diploma will allow you to combine your studies with your professional work while increasing your knowledge in this field.*



# 02 Objectives

The main objective of the program is the development of theoretical and practical learning, so that the professional can master in a practical and rigorous way the study of Microbiotics in the daily practice of your profession. In this sense, The Postgraduate Diploma in Skin Microbiota for Nutritionists responds to the continuous demand of professionals for quality training in this area, which serves as a vehicle to use food as a means of healing skin diseases and as a preventive tool in maintaining the health of patients of all ages.





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*This Postgraduate Diploma, designed with the latest educational technology, will allow you to learn about all the advances in Skin Microbiotics and its relationship with Nutrition”*



## General Objectives

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- This Postgraduate Diploma meets a need of today's society, a quality and up-to-date training that allows the use of microbiological therapy as a preventive or therapeutic tool for the maintenance of health
- Offer a complete and wide vision of the current situation in the area of skin microbiota, in its widest sense, the importance of the balance of this microbiota as a direct effect on our health, with the multiple factors that influence it positively and negatively
- Argue with scientific evidence how the microbiota and its interaction with many non-digestive pathologies, of autoimmune nature or its relationship with the dysregulation of the immune system, disease prevention and as support to other medical treatments, is currently being given a privileged position
- Promote work strategies based on the integral approach of the patient as a reference model, not only focusing on the symptomatology of the specific pathology, but also looking at its interaction with the microbiota and how it may be influencing it
- Encourage professional stimulation through continuing education and research





## Specific Objectives

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- ♦ Know the physiology of the skin and its microbial composition
- ♦ Understand the factors that regulate the type of bacterial flora in the skin: sweat glands, sebaceous glands, desquamation
- ♦ Delve into the factors that alter the ecology of the skin and the Microbiota.
- ♦ Know the cutaneous immune system
- ♦ Understand the factors that produce an alteration of the normal cutaneous microbiota (dysbiosis) and alteration of the barrier function
- ♦ Know the triggered cutaneous pathologies: Psoriasis (*Streptococcus pyogenes*), Acne vulgaris, Atopic dermatitis, Rosacea
- ♦ Delve into the influence of the use of Probiotics in the prevention and treatment of different skin diseases
- ♦ Delve into the current lines of research

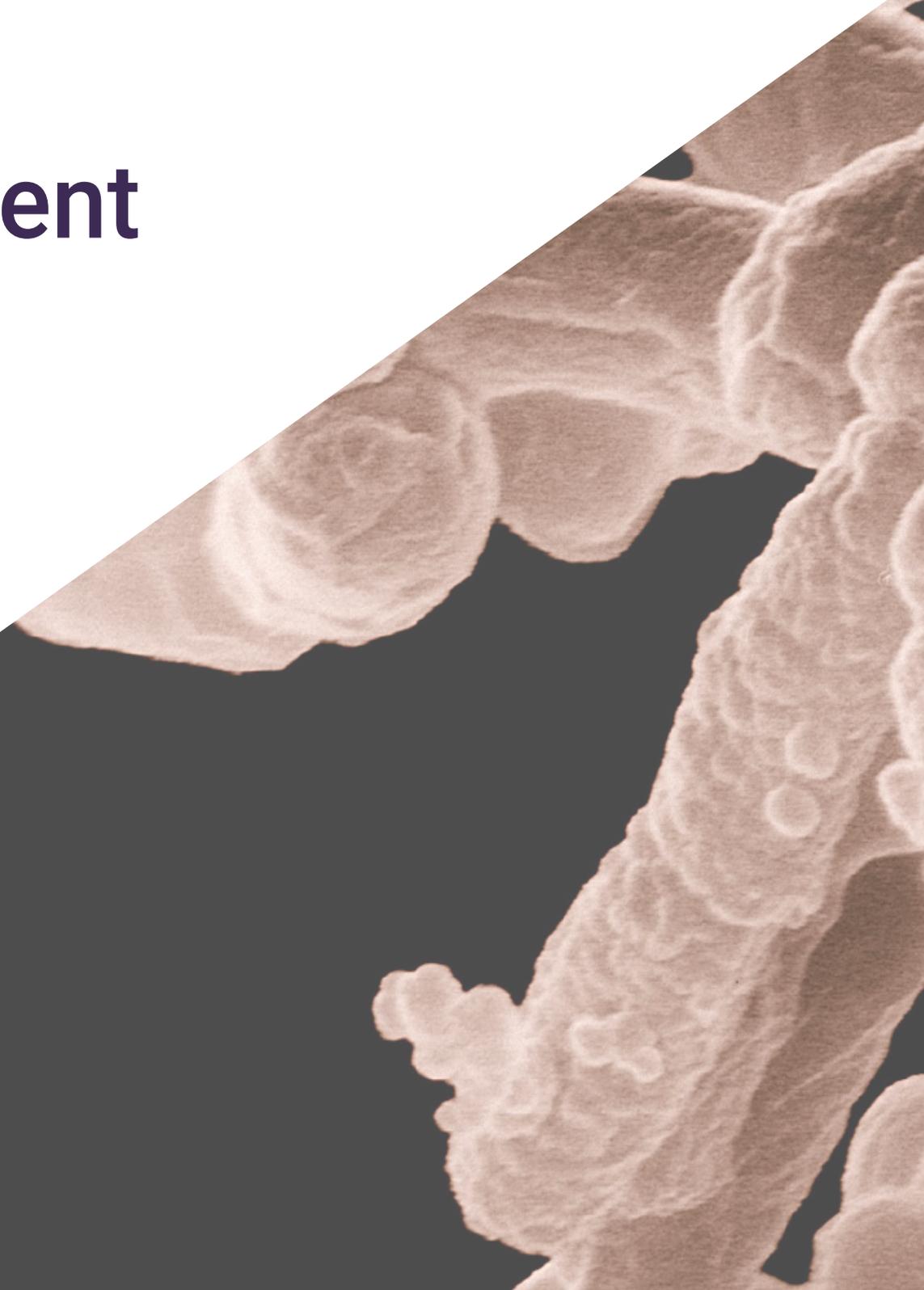


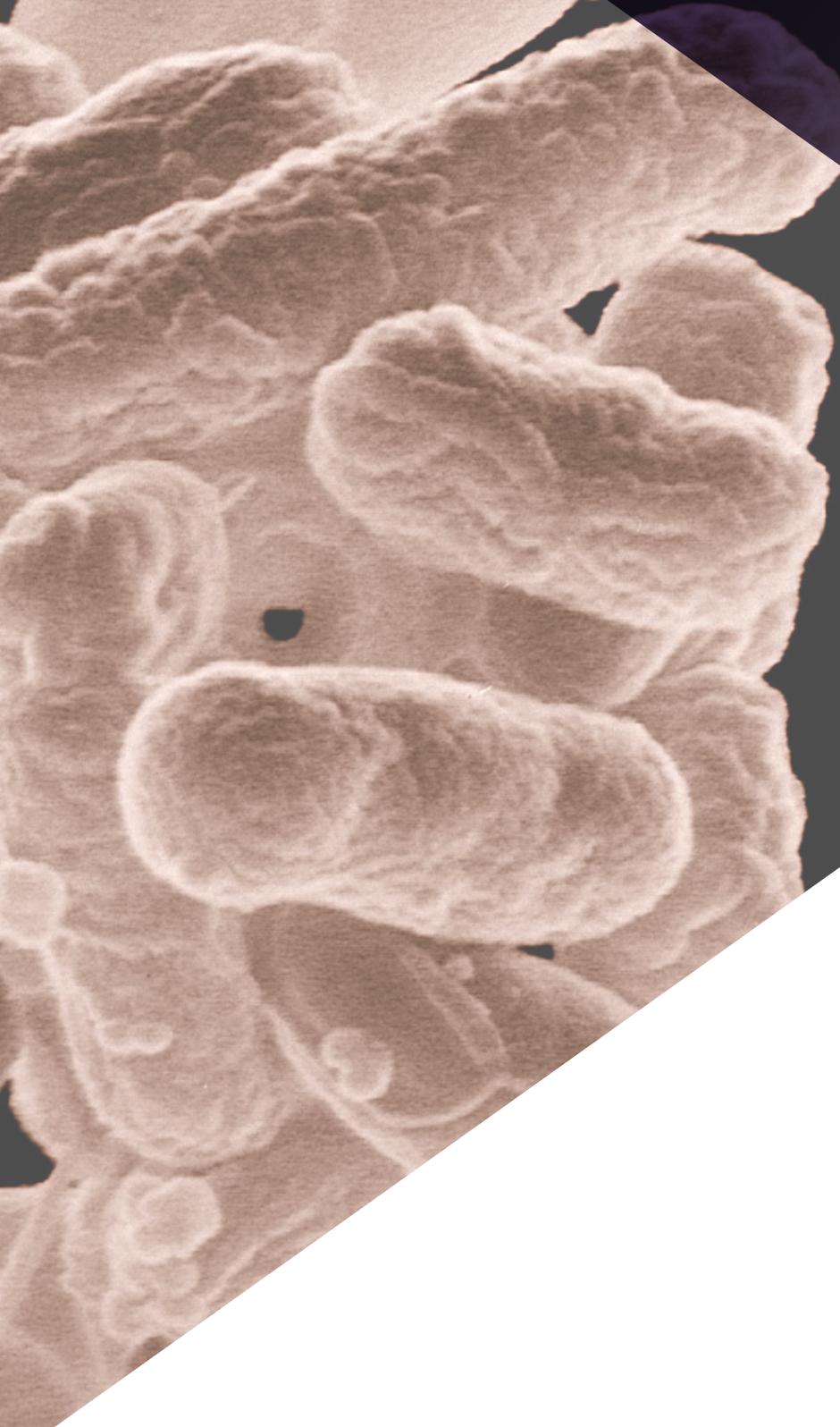
*Make the most of this opportunity and take the step to get up-to-date on the latest developments in Skin Microbiota for Nutritionists”*

04

# Course Management

The program's teaching staff includes leading specialists in Human Microbiota and other related areas, who bring their years of work experience to this training program. In addition, other specialists of recognized prestige participate in its design and elaboration, completing the program in an interdisciplinary manner. All this, with the aim of providing nutritionists with the most complete information and contents of the educational panorama so that they can practice their profession with greater guarantees of success and care for patients with skin problems, having a deeper knowledge of the functioning of their Microbiota.





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*Learn from leading professionals the connection between skin problems and nutrition and become a top professional"*

## International Guest Director

Dr. Harry Sokol is internationally recognized in the field of Gastroenterology for his research on the gut microbiota. With more than 2 decades of experience, he has established himself as a true scientific authority thanks to his numerous studies on the role of microorganisms in the human body and their impact on chronic inflammatory bowel diseases. In particular, his work has revolutionized medical understanding of this organ, often referred to as the “second brain.”

Among Dr. Sokol’s contributions, he and his team have opened a new line of advances on the bacterium *Faecalibacterium prausnitzii*. In turn, these studies have led to crucial discoveries about its anti-inflammatory effects, opening the door to revolutionary treatments.

In addition, the expert is distinguished by his commitment to the dissemination of knowledge, whether by teaching academic programs at the Sorbonne University or by publishing works such as the comic book *The Extraordinary Powers of the Belly*. His scientific publications appear continuously in world-renowned journals and he is invited to specialized congresses. At the same time, he carries out his clinical work at the Saint-Antoine Hospital (AP-HP/University Hospital Federation IMPEC/Sorbonne University), one of the most renowned hospitals in Europe.

On the other hand, Dr. Sokol began his medical studies at Paris Cité University, showing early on a strong interest in health research. A chance meeting with the eminent Professor Philippe Marteau led him to Gastroenterology and the enigmas of the Intestinal Microbiota. Throughout his career, he also broadened his horizons by training in the United States, at Harvard University, where he shared experiences with leading scientists. Upon his return to France, he founded his own team where he researches on Fecal Transplantation, offering state-of-the-art therapeutic innovations.



## Dr. Sokol, Harry

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- Director of Microbiota, Gut and Inflammation at Sorbonne University, Paris, France
- Specialist Physician at the Gastroenterology Department of the Saint-Antoine Hospital (AP-HP), Paris, France
- Group Leader at the Institut Micalis (INRA)
- Coordinator of the Center of Microbiome Medicine of Paris FHU
- Founder of the pharmaceutical company Exeliom Biosciences (Nextbiotix)
- President of the Fecal Microbiota Transplantation Group
- Medical Specialist in different hospitals in Paris
- Doctorate in Microbiology at the Université Paris-Sud
- Postdoctoral Fellowship at the Massachusetts General Hospital, Harvard University Medical School
- Degree in Medicine, Hepatology and Gastroenterology at Université Paris Cité

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*Thanks to TECH, you will be able to learn with the best professionals in the world”*

## Management



### **Dr. Fernández Montalvo, María Ángeles**

- Degree in Biochemistry from the University of Valencia
- Specialist Degree in Nutrition, Dietetics and Diet Therapy
- Expert in Microbiological Food Analysis
- Expert in Nutrition, Food, and Cancer. Prevention and Treatment.
- Expert in Vegetarian, Clinical, and Sports Nutrition
- Specialist in food intolerances and the study of the intestinal microbiota.
- Numerous courses on Intestinal microbiota, methods of analysis, and applications
- Diploma in Natural and Orthomolecular Medicine
- Expert in the current use of Nutricosmetics and Nutraceuticals in general.
- Expert in point-of-sale management in Pharmacies and Parapharmacies.
- Member of the Spanish Society of Probiotics and Prebiotics (SEPyP).
- Member of the Spanish Society of Dietetics (SEDCA)
- Member of the Spanish Society of Nutrition (SEÑ)

## Professors

### Dr. Álvarez García, Verónica

- ♦ Degree in Medicine
- ♦ Digestive system specialist at the Central Hospital of Asturias (HUCA)

### Dr. Díaz Martín, Juan José

- ♦ Pediatric gastroenterologist at the Central Hospital of Asturias (HUCA)
- ♦ Member of the Spanish Society of Pediatric Gastroenterology, Hepatology, and Nutrition
- ♦ Associate Professor of Pediatrics at the University of Oviedo

### Dr. Fernández Madera, Juan José

- ♦ Degree in Medicine
- ♦ Specialist in Allergology and Clinical Immunology
- ♦ Specialist in Sports Medicine

### Dr. Gonzalez Rodríguez, Silvia P

- ♦ PhD in Medicine and Surgery from the University of Alcalá de Henares. Gynecology Specialist
- ♦ Medical Subdirector, Research Coordinator and Clinical Chief of the Menopause and Osteoporosis Unit at the Velázquez Medical Cabinet (Madrid)

### Dr. Lombó Burgos, Felipe

- ♦ Doctorate in Biology from the University of Oviedo and full professor at the University of Oviedo

### Dr. López López, Aranzazu

- ♦ PhD in Biological Sciences. Researcher in oral microbiology at FISABIO foundation
- ♦ Public Health Research Center of Valencia

### Dr. Méndez García, Celia

- ♦ PhD in Microbiology from the University of Oviedo Research at Novartis Laboratories (Boston)

### Dr. Solís Sánchez, Gonzalo

- ♦ Neonatologist at the Hospital Universitario Central de Asturias (HUCA)
- ♦ Researcher, Associate Professor of the University of Oviedo

### Dr. Suárez Rodríguez, Marta

- ♦ Neonatologist of the Central University Hospital of Asturias (HUCA)
- ♦ Researcher and Professor of the Professional Master's Degree in Early Care and the Professional Master's Degree in Critical Care Nursing at the University of Oviedo and other training courses

05

# Structure and Content

The structure of the contents has been designed by a team of professionals from the best hospitals and universities in the national territory, aware of the relevance of current training to prevent, detect and intervene in those pathologies related to alterations of the skin microbiota, and committed to quality teaching through new educational technologies. All this, with the aim of training nutritionists much more competent and prepared to design food plans that help and support the skin microbiome of patients.





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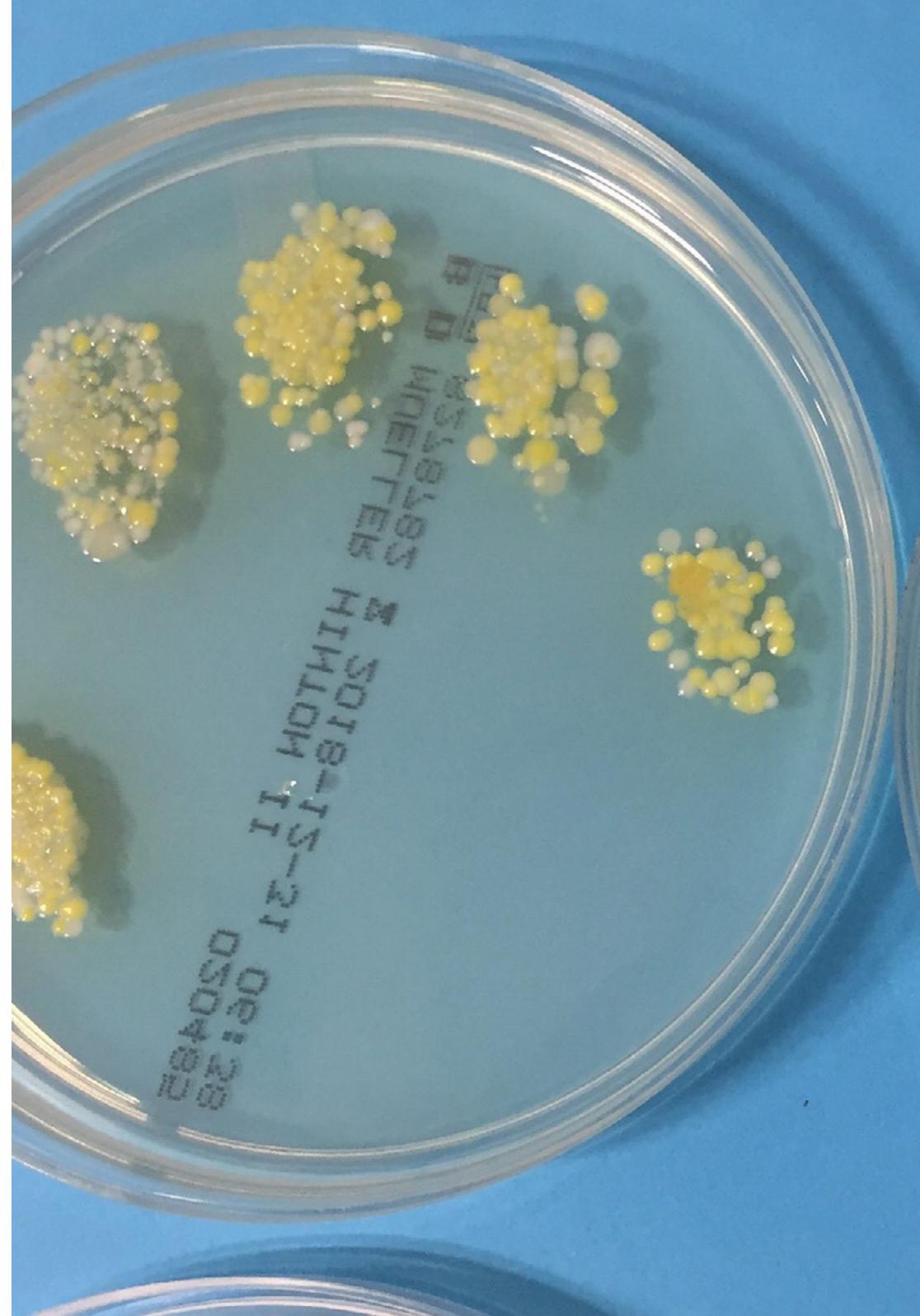
*The best contents are at the best university. Don't miss the opportunity to train in Skin Microbiotics with greater guarantees of success”*

## Module 1. Skin Microbiota

- 1.1. Skin Physiology. Microbial Composition of the Skin
- 1.2. Factors Regulating the Type of Bacterial Flora on the Skin: Sweat Glands, Sebaceous Glands, Desquamation
  - 1.2.1. Factors that Alter the Ecology of the Skin and the Microbiota
- 1.3. Skin Immune System. Epidermis; Essential Element of our Defences
  - 1.3.1. Elements of the Skin Immune System: Cytokines, Keratinocytes, Dendritic Cells, Lymphocytes, Antimicrobial Peptides
  - 1.3.2. Influence of the Skin Microbiota on the Skin Immune System  
Staphylococcus Epidermidis, Staphylococcus Aureus
- 1.4. Alteration of the Normal Cutaneous Microbiota (dysbiosis) and Alteration of the Barrier Function
- 1.5. Triggered Skin Diseases: Psoriasis (Streptococcus pyogenes), Acne vulgaris, Atopic dermatitis, Rosacea
- 1.6. Influence of the use of Probiotics in the Prevention and Treatment of Different Skin Diseases.
- 1.7. Current Lines of Research

## Module 2. Microbiota. Microbiome. Metagenomics

- 2.1. Definition and Relationship Between Them
- 2.2. Composition of the Microbiota: Types, Species and Strains
  - 2.2.1. Characteristics and Main Functions
  - 2.2.2. Groups of Microorganisms that Interact with Humans: Bacteria, Fungi, Viruses, and Protozoa
  - 2.2.3. Key Concepts; Symbiosis, Commensalism, Mutualism, Parasitism
  - 2.2.4. Autochthonous Microbiota
- 2.3. Different Human Microbiota. General Overview of Eubiosis and Dysbiosis
  - 2.3.1. Gastrointestinal Microbiota
  - 2.3.2. Oral Microbiota
  - 2.3.3. Skin Microbiota
  - 2.3.4. Respiratory Tract Microbiota
  - 2.3.5. Urinary Tract Microbiota
  - 2.3.6. Reproductive System Microbiota



- 2.4. Factors that Influence Microbiota Balance and Imbalance
  - 2.4.1. Diet and Lifestyle. Intestine-Brain Axis
  - 2.4.2. Antibiotic Therapy
  - 2.4.3. Epigenetic-Microbiota Interaction. Endocrine Disruptors
  - 2.4.4. Probiotics, Prebiotics, Symbiotics. Concepts and Overviews
  - 2.4.5. Fecal Transplant, Latest Advances

### Module 3. Microbiota and Immune System

- 3.1. Immune System Physiology
- 3.2. Nutrition and Lifestyle: Interaction with the Immune System and the Microbiota
- 3.3. Functional Foods (Probiotics and Prebiotics), Nutraceuticals, and Immune System
- 3.4. Bidirectional Relationship between Microbiota and Neuroimmunoendocrine System
- 3.5. Microbiota, Immunity, and Nervous System Disorders: Anxiety, Depression, Autism, Schizophrenia, or Alzheimers disease
- 3.6. The Gut-Microbiota-Brain Axis
- 3.7. Current Lines of Research



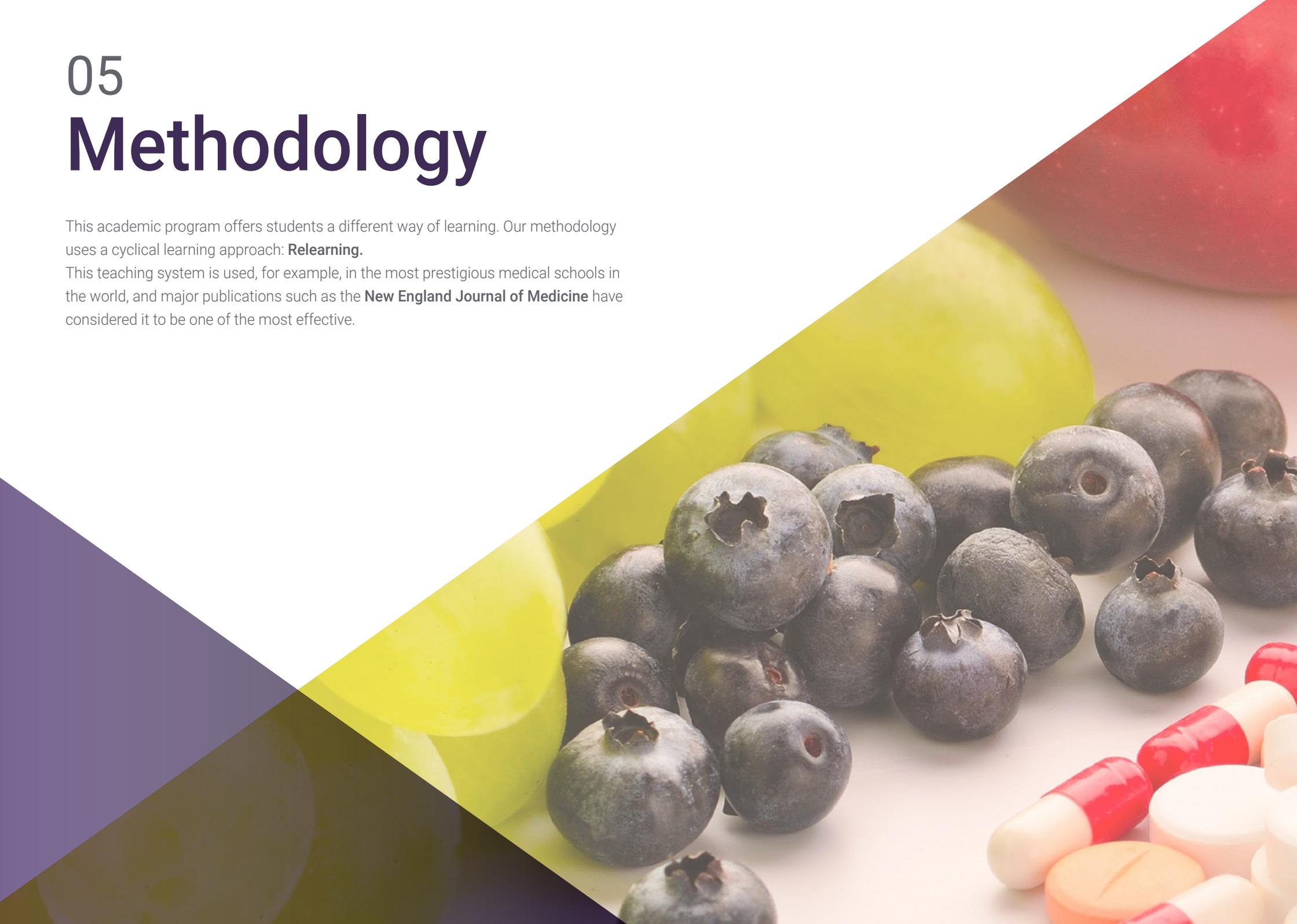
*A unique, key and decisive training experience to boost your professional development”*



# 05 Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





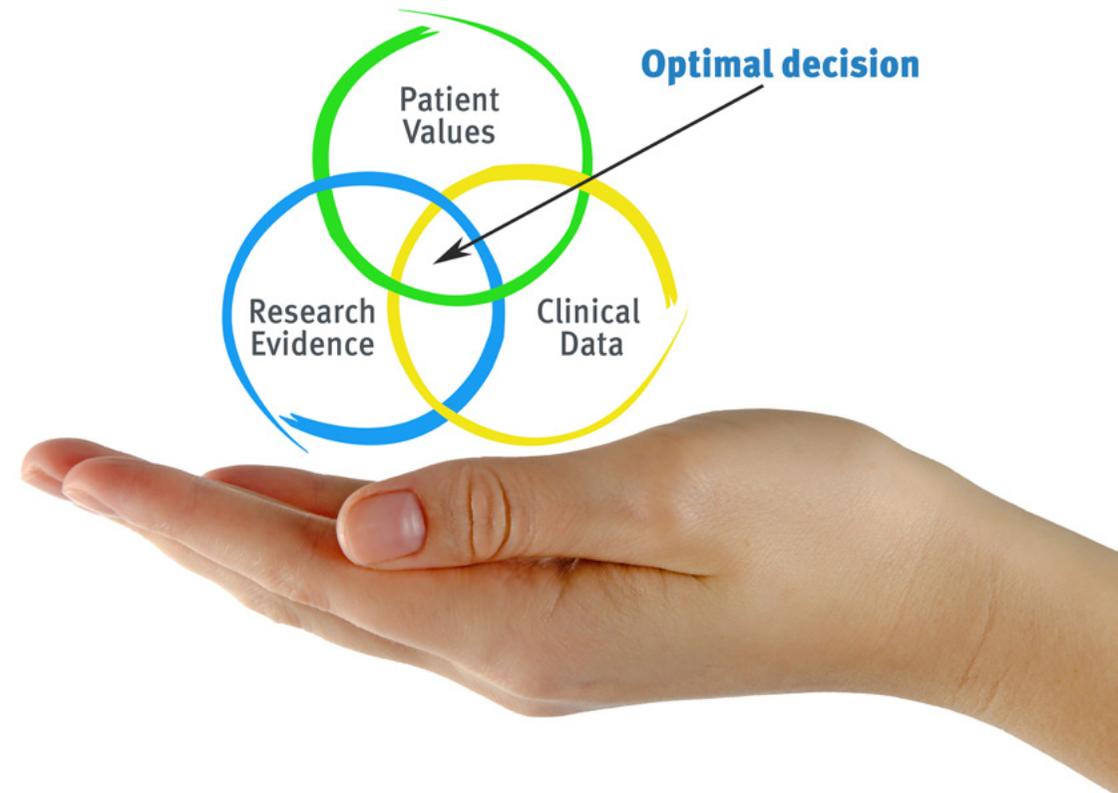
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

In a given situation, what should a professional do? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

*With TECH, nutritionists can experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions of professional nutritional practice.

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*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

The effectiveness of the method is justified by four fundamental achievements:

1. Nutritionists who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity through exercises to evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the nutritionist to better integrate knowledge into clinical practice.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

*The nutritionist will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 45,000 nutritionists have been trained with unprecedented success in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



This program offers the best educational material, prepared with professionals in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Nutrition Techniques and Procedures on Video

TECH brings students closer to the latest techniques, the latest educational advances and to the forefront of current nutritional counselling techniques and procedures. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



#### Interactive Summaries

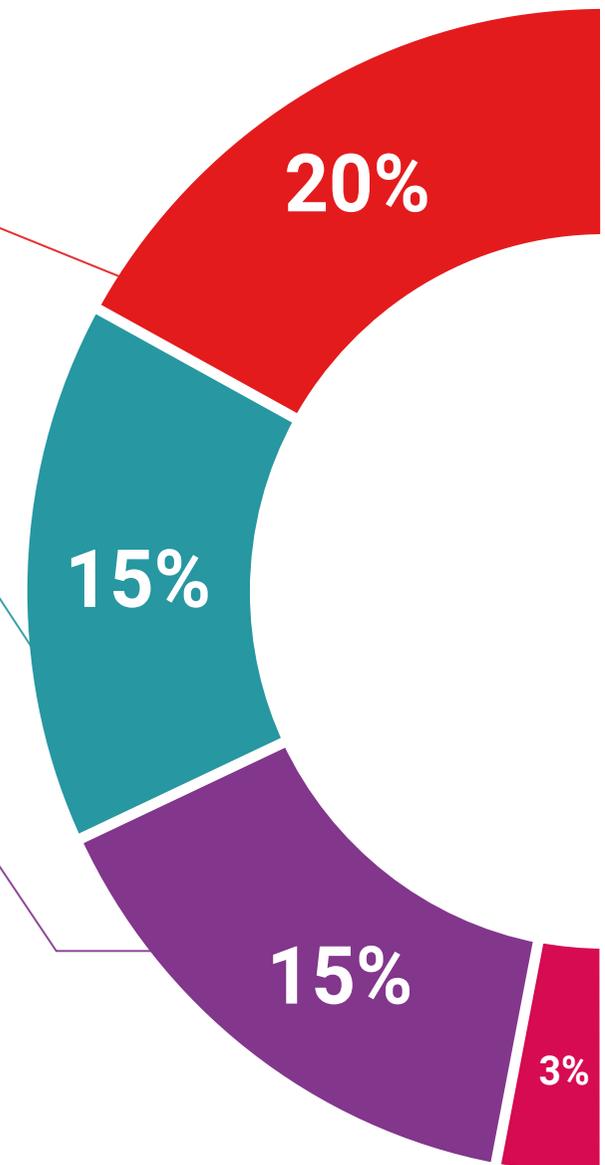
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

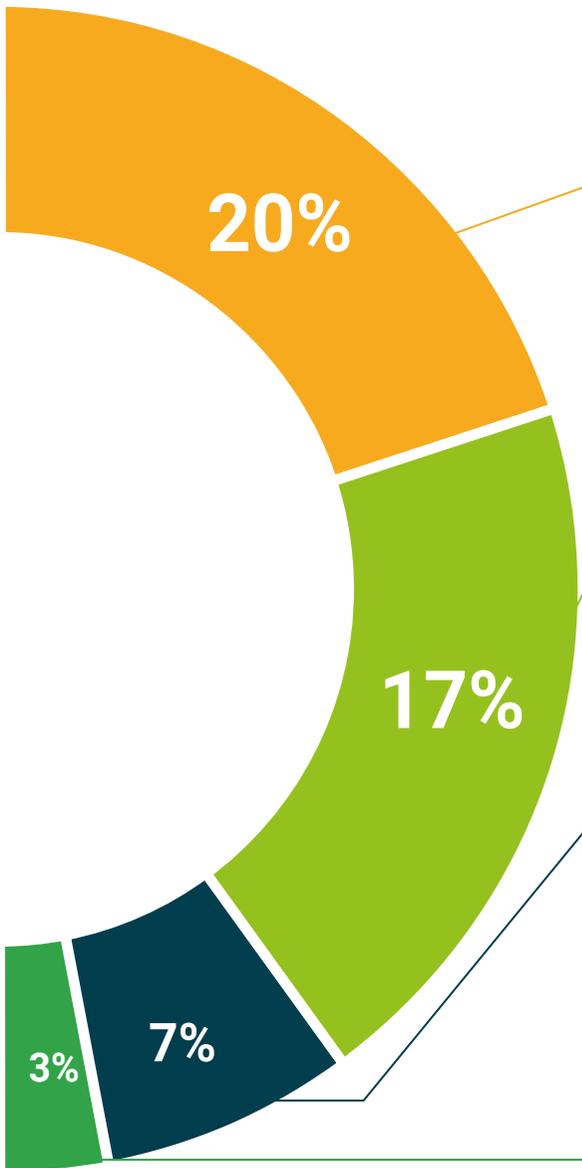
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.  
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



06

# Certificate

The Postgraduate Diploma in Skin Microbiota for Nutritionists guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.



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*Successfully complete this training and receive your certificate without travel or laborious paperwork”*

This program will allow you to obtain your **Postgraduate Diploma in Skin Microbiota for Nutritionists** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Skin Microbiota for Nutritionists**

Modality: **online**

Duration: **6 months**

Accreditation: **16 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

future

health confidence people

education information tutors

guarantee accreditation teaching

institutions technology learning

community commitment

personalized service innovation

knowledge present online training

development languages

virtual classroom

**tech** global  
university

**Postgraduate Diploma**  
Skin Microbiota for  
Nutritionists

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 16 ECTS
- » Schedule: at your own pace
- » Exams: online

# Specialist Diploma

## Skin Microbiota for Nutritionists