

# Postgraduate Certificate

## Microbiota and Immune System for Nutritionists





## Postgraduate Certificate Microbiota and Immune System for Nutritionists

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

Website: [www.techtute.com/us/nutrition/postgraduate-certificate/microbiota-immune-system-nutritionists](http://www.techtute.com/us/nutrition/postgraduate-certificate/microbiota-immune-system-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. The study of human microbiota opens the door to the knowledge of multiple diseases, especially the so-called functional diseases, with the microbiome being researchers' main workhorse. Aware of this, TECH professionals have designed this course that aims to train nutritionists to be able to understand what are the Microbiota, their involvement in our immune system and in our health. All this will make them much more competent professionals, prepared to design nutritional plans that favor the patient's defenses, working in various areas with greater guarantees of success.





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*Scientific evidence has demonstrated the importance of the Microbiota in our Immune System. Dive into this course and learn all aspects of this topic and add value to your resume as a Nutritionist"*

Numerous scientific evidences have implicated the respiratory microbiome and its potential impact on various disease states in recent years. All this has given rise to new therapeutic strategies aimed at controlling and regulating this ecosystem. The study of this ecosystem is a field that is rapidly advancing scientifically, and it is universally accepted that to achieve an adequate state of health it is also necessary to have a "healthy" Microbiota.

Our 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.

In this sense, this Postgraduate Certificate in Microbiota and Immune System for Nutritionists focuses on providing Nutritionists with the necessary information to understand the implication of our diet in the maintenance of our Immune System and to know, at a general level, our Microbiota, its Eubiosis and Dysbiosis and the problems related to it.

Also, during the course of the training, the aspects that trigger the balance and imbalance of the Microbiota and the use of Probiotics and Prebiotics as a means of healing from these imbalances will be discussed in depth. In the same way, we will study the launching on the market of various products with very specific strains for very specific problems and diseases related to problems in the microbial system.

This Postgraduate Certificate includes cutting-edge contents, gathering the latest advances in the study of the microbiota, nutrition and its relationship with the immune system. This will allow nutrition professionals to be up to date with all the advances in this regard, to offer the patient more accurate information on the subject, guiding them to recover and maintain this bacterial Eubiosis from a certain diet and as a means to achieve a good state of health.

This **Postgraduate Certificate in Microbiota and Immune System for Nutritionists** contains the most complete and up-to-date scientific program on the market. The most important features of the course are:

- Development of case studies presented by experts in 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.
- New developments on Microbiota.
- It contains practical exercises where the self-evaluation process can be carried out to improve learning.
- With special emphasis on innovative methodologies in Microbiota.
- All 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.



*Improve your knowledge in Microbiota and Immune System through this program, where you will find the best didactic material, as well as real cases"*

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*You will receive a certificate from one of the most important Spanish-speaking institutions, TECH”*

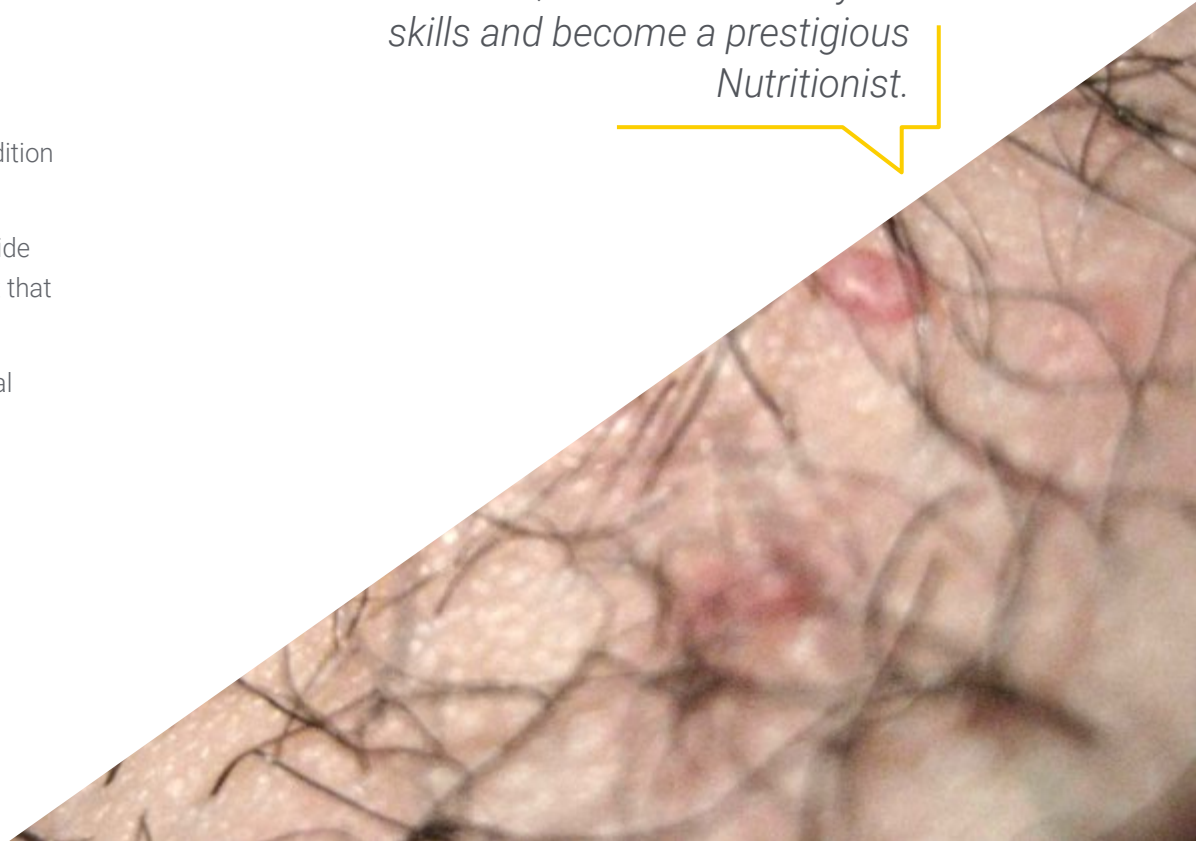
The program includes, in its teaching staff, professionals belonging to the field of medicine and nutrition, who bring to this training the experience of their work, in addition to recognized specialists from prestigious reference societies and universities.

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.

This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned experts in Microbiotics.

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

*We train you through a 100% online education, ideal to enhance your skills and become a prestigious Nutritionist.*



# 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 Certificate in Microbiota and Immune System for Nutritionists responds to the continuous demand of professionals for quality training in this regard, which serves as a means to design food plans that favor the microbiota of patients.







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*TECH employs the latest educational technology with the aim of providing you with in-depth training in Microbiota, nutrition and the Immune System”*



## General Objectives

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- This course fulfills 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 comprehensive and broad view of the current state of the field of human Microbiota, in its broadest 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 relation with the dysregulation of the immune system, the prevention of diseases and as a support to other medical treatments, are 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 disease, but also looking at its interaction with the microbiota and how it may be influencing it.
- Encourage professional stimulation through ongoing education and research.

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## Specific Objectives

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- Know the physiology of the Immune System.
- Understand the implication of nutrition and lifestyle and their interaction with the immune system and the Microbiota.
- Know the bidirectional relationship between Microbiota and the neuroimmunoendocrine system.
- Understand the involvement of the Microbiota in the triggering of nervous system diseases such as anxiety, depression, schizophrenia and others.
- Understand the functioning of the gut-brain Microbiota.
- Delve into the current lines of research on the subject.

# 03

# 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 serve patients with full knowledge of the functioning of their microbiota and the involvement of their diet with the immune system, offering them solutions much more adapted to their characteristics.



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*The best professionals are at the best university.  
Don't miss the opportunity to train with the best"*

## 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, Mª 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. Lombó Burgos, Felipe

- ♦ Doctor in Biology from the University of Oviedo.
- ♦ Professor at the university.

### Dr. López López, Aranzazu

- ♦ Ph.D. 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. 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. Álvarez García, Verónica

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

### Dr. Solís Sánchez, Gonzalo

- ♦ Neonatologist of the Central University Hospital of 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 Master's Degree in Early Care and the Master's Degree in Critical Care Nutrition at the University of Oviedo and other training courses.

### 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.

# 04

# Structure and Content

The structure of the contents has been designed by a team of professionals from the best hospitals and universities in the country, aware of the relevance of current training to prevent, detect and intervene in those pathologies related to alterations in the human 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 diets that help and promote both the microbiome and the immune system of patients.



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*TECH experts have designed the most complete and up-to-date educational program on the market with the objective of training successful Nutritionists”*

## Module 1. Microbiota and Immune System

- 1.1. Immune System Physiology.
- 1.2. Nutrition and Lifestyle: Interaction with the Immune System and the Microbiota.
- 1.3. Functional Foods (Probiotics and Prebiotics), Nutraceuticals and Immune System.
- 1.4. Bidirectional Relationship between Microbiota and Neuroimmunoendocrine System.
- 1.5. Microbiota, Immunity and Nervous System Disorders: Anxiety, Depression, Autism, Schizophrenia, or Alzheimer's disease.
- 1.6. The Gut-Microbiota-Brain Axis.
- 1.7. Current Lines of Research.





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

05

# Methodology

Our Postgraduate Certificate in Microbiota and Immune System for Nutritionists offers you an innovative method to strengthen your clinical skills based on the study of clinical cases and content in a cyclical manner. This method has been the most widely used learning system by the most prestigious medicine schools in the world and by relevant publications such as the New England Journal of Medicine.



A microscopic view of several elongated, rod-shaped biological cells, possibly bacteria or fungi, with a textured, slightly wrinkled surface. The cells are arranged in various orientations, some overlapping. The background is a soft, out-of-focus gradient of light brown and beige. The image is partially obscured by a dark purple diagonal shape in the top right corner and a white diagonal shape in the bottom right corner.

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*This type of teaching-learning encourages curiosity and skill development, as well as allowing the doctor to feel like an active part of the process"*

## At TECH we use the Case Method

In a given clinical situation, what would you do? Throughout the program, you will be presented with multiple simulated clinical cases based on real patients, where you will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Nutritionists 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 potential 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 grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning is solidly focused on practical skills that allow the nutritionist to better integrate the 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.



## Re-learning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Re-learning.

Our 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, which represent a real revolution with respect to simply studying and analyzing 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 Re-learning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best Spanish-speaking online university (Columbia University).

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

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

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

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



In this program you will have access to the best educational material, prepared with you 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 really specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



### Nutrition Techniques and Procedures on Video

We introduce you to the latest techniques, the latest educational advances, and the forefront of current nutritional procedures and techniques. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



### Interactive Summaries

We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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



### Additional Reading

Recent articles, consensus documents, international guides... in our virtual library you will have access to everything you need to complete your specialization.





**Expert-Led Case Studies and Case Analysis**

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



**Testing & Re-Testing**

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your 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 our difficult future decisions.



**Quick Action Guides**

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



06

# Certificate

The Postgraduate Certificate in Microbiota and Immune System for Nutritionists guarantees you, in addition to the most rigorous and up-to-date training, access to a certificate issued 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 Certificate in Microbiota and Immune System 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 Certificate in Microbiota and Immune System for Nutritionists**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 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  
development languages  
virtual classroom



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