

# Postgraduate Diploma

## Intestinal Microbiota



## Postgraduate Diploma Intestinal Microbiota

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-intestinal-microbiota](http://www.techtute.com/pk/medicine/postgraduate-diploma/postgraduate-diploma-intestinal-microbiota)

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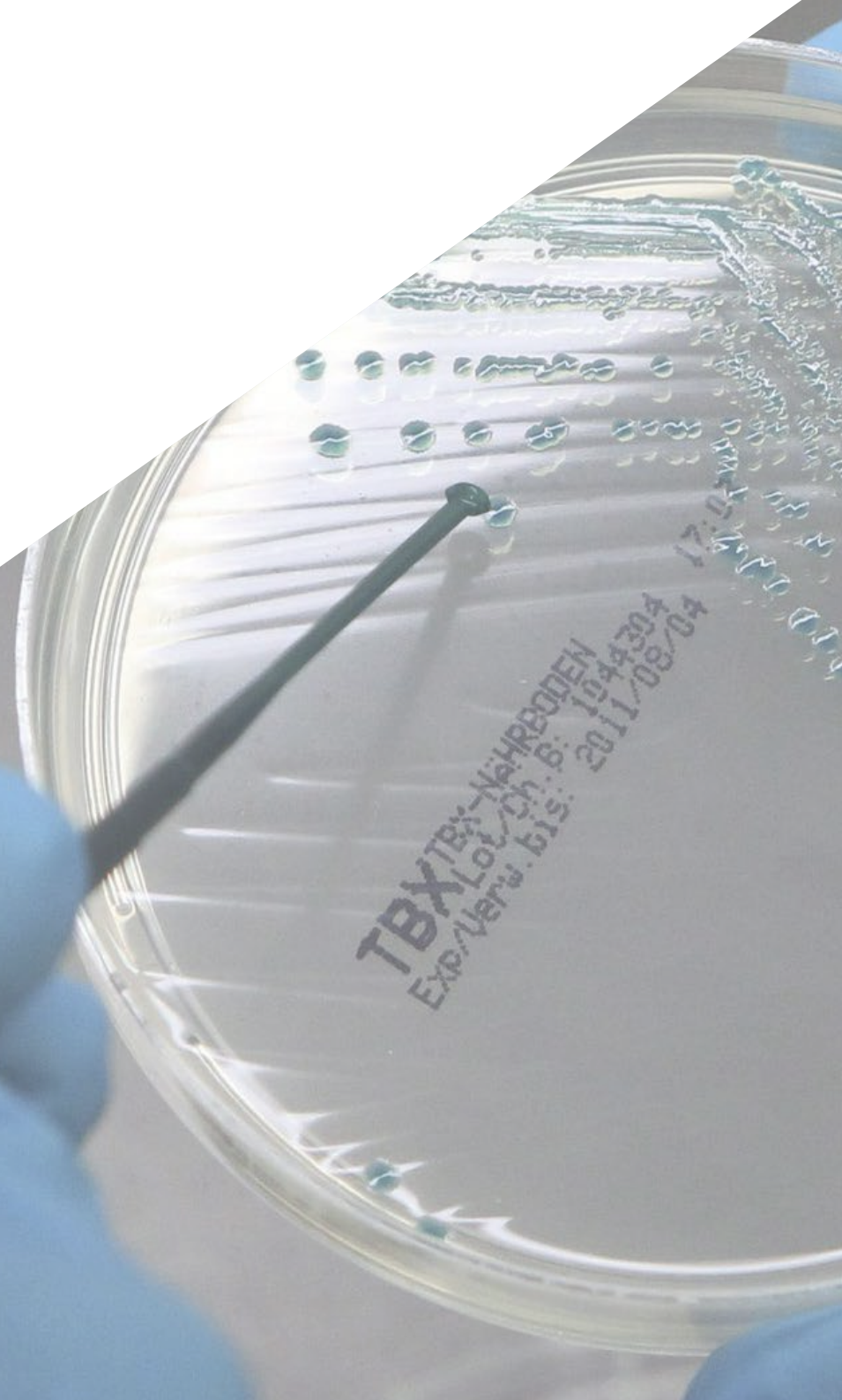
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# 01

# Introduction

The existence of microorganisms on the entire surface of the human body allows different systems to develop immunological protection against certain diseases and infections. Among the most important is the Intestinal Microbiota, responsible for promoting physiological processes to achieve homeostasis and to prevent serious disorders like dysbiosis. It is, therefore, an area that is subject to continuous study, so the advances that have been made in this area are extensive. In order to allow medical professionals to learn about them in detail, TECH and its team of experts have developed a program that includes the latest developments related to the integrity of the intestinal epithelium through Microbiota care.





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*Working from wherever you want and with a schedule that is fully adapted to your availability on the latest news about the Intestinal Microbiota and its clinical importance is now possible thanks to this comprehensive Postgraduate Diploma”*

The microorganisms that constitute the ecosystems of the human gut are key to the immune system. The Intestinal Microbiota acts as a very powerful defensive barrier, and in the antibody production for the identification and neutralization of pathogens that affect people's health. For this reason, achieving homeostasis through the care and production of these bacteria is fundamental for health, as it helps prevent a wide range of diseases, including dysbiosis, which alters the intestinal structure causing weakness and increasing the risk of suffering chronic pathologies such as diabetes, obesity or even different types of cancer.

Based on the importance of caring for these macroorganisms, TECH and its team of experts in Biology and Medicine, have developed a comprehensive program through which clinical specialists will be able to catch up on the latest developments in this field. This is the Postgraduate Diploma in Intestinal Microbiota, a 100% online program that will allow students to delve into the latest scientific advances related to the microbiome and metagenomics. In addition, they will work with the most innovative information related to homeostasis and dysbiosis, as well as the best treatments for each of them.

For this purpose, students will have 450 hours of diverse content: the syllabus, designed by a teaching team specialized in the field, clinical cases extracted from their consultations, research articles, complementary readings, self-knowledge exercises, news, dynamic summaries of each unit and much more. All compacted in a convenient and flexible 100% online format, and whose Virtual Campus can be accessed from any device with internet connection. In this way, students will not depend on schedules or on-site classes to update their knowledge, being able to combine the course with their clinical agenda.

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

- ♦ Case studies presented by experts in the Digestive System
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ 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



*You will be able to get up to date on the factors that influence the balance and imbalance of the microbiota, 100% online"*

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*Esophageal, gastric, and gallbladder microbiota, to name a few This Postgraduate Diploma will cover all of them, as well as the clinical and diagnostic innovations to take care of them based on the most effective techniques”*

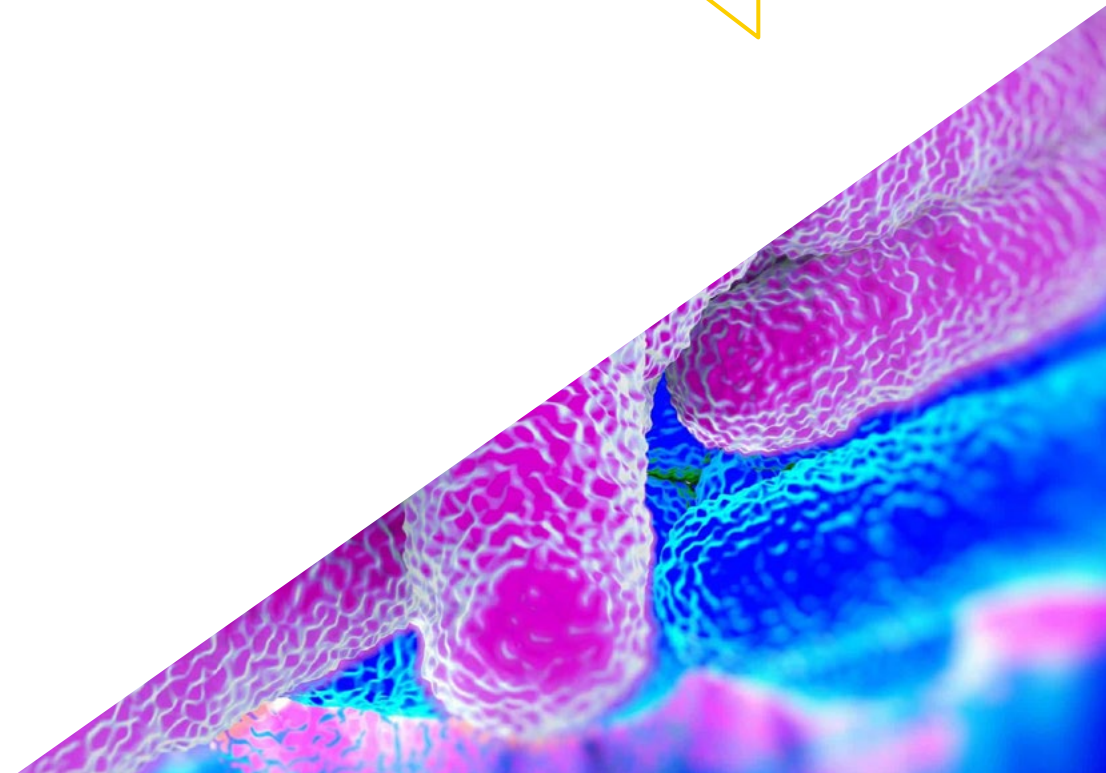
The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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 education programmed to learn in real situations.

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

*You will have unlimited access to the Virtual Campus, being able to use it from any device with internet connection.*

*You will work with the most up-to-date information related to intestinal homeostasis and the most innovative guidelines to achieve it.*



# 02 Objectives

The objective of this Postgraduate Diploma in Intestinal Microbiota is none other than to serve as a guide for students in their update in relation to the clinical and diagnostic innovations that have been developed in this field. This is why TECH will provide students with the most innovative and exhaustive information related to Homeostasis and Dysbiosis, as well as the best therapeutic guidelines to enhance and prevent them. In addition, you will be provided with additional high-quality material that will allow you to delve into the different sections of the syllabus in a personalized way.





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*A program designed for physicians to achieve even their most ambitious and demanding academic goals through the best program in the academic landscape today”*



## General objectives

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- Update specialists on the clinical and diagnostic innovations that have been developed with respect to the Intestinal Microbiota, its care and the prevention of diseases related to its microorganisms
- Provide medical professionals with the most comprehensive and up-to-date information related to dysbiosis and intestinal homeostasis



*Whatever your goals are,  
TECH will provide you with  
the best academic material  
for you to achieve them"*





## Specific objectives

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### Module 1. Microbiota. Microbiome. Metagenomics

- ♦ Update and clarify general and key terms for a full understanding of the subject such as Microbiome, Metagenomics, Microbiota, Symbiosis, Dysbiosis
- ♦ Delve into how drugs designed for humans can have a negative impact on the gut microbiota, in addition to the known impact of antibiotics

### Module 2. Gut Microbiota I. Intestinal homeostasis

- ♦ Study the microbial communities that coexist in symbiosis with humans, learning more about their structure and functions and how these communities can be altered due to factors such as diet, lifestyle, etc
- ♦ Understand the relationship between intestinal pathologies: Small intestinal bacterial overgrowth (SIBO), irritable bowel syndrome (IBS), Crohn's disease and intestinal dysbiosis

### Module 3. Gut Microbiota II. Intestinal Dysbiosis

- ♦ Examine the Intestinal Microbiota as a significant influence on the Human Microbiota and the rest of the body, how to study it, and its importance in clinical practice to maintain a good state of health
- ♦ Learn how to manage the different intestinal infections caused by viruses, bacteria, parasites, fungi affecting the intestinal microbiota

# 03

## Course Management

In its aim to offer the most comprehensive and beneficial program for updating students, TECH has selected a specialized faculty in the fields of Microbiology and Medicine, whose members have worked extensively with the Intestinal Microbiota, for this Postgraduate Diploma. It is a group of professionals backed by a long and extensive work experience in the sector, who will make use of their experience to provide specialists with the most effective techniques for the care of this important part of the body.



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*What happens if you have any questions during the course of the program? Well, you will have the possibility of contacting the teaching team members through the Virtual Campus to answer them”*

## Guest Directors



### Dr. Sánchez Romero, María Isabel

- Medical Specialist in Clinical Microbiology and Parasitology
- Area Specialist in the Microbiology Department of the Puerta de Hierro University Hospital, Madrid
- Member of the Spanish Society of Infectious Diseases and Clinical Microbiology
- Technical Secretary of the Madrid Society of Clinical Microbiology
- Doctor in Medicine and Surgery from the University of Salamanca (2003) with the qualification of outstanding cum laude
- Degree in Medicine and Surgery from the University of Salamanca



### Dr. Portero, María Francisca

- Acting Head of the Microbiology Department of the Puerta de Hierro University Hospital, Madrid
- Specialist in Clinical Microbiology and Parasitology, Puerta de Hierro University Hospital, Madrid
- Postgraduate in Clinical Management by Gaspar Casal Foundation
- Doctorate in Medicine from the Autonomous University Madrid
- Degree in Medicine and Surgery from the Autonomous University of Madrid



### **Dr. Alarcón Caveró, Teresa**

- Specialist in the Microbiology Department at the La Princesa University Hospital
- Head of Group 52 of the Research Institute of the La Princesa Hospital
- Degree in Biological Sciences with a major in Fundamental Biology from the Complutense University of Madrid
- Master's Degree in Medical Microbiology from the Complutense University of Madrid



### **Dr. Muñoz Algarra, María**

- Area Specialist in the Microbiology Department of the Puerta de Hierro Majadahonda University Hospital, Madrid
- Head of Patient Safety of the Microbiology Service in the H.U. Puerto de Hierro Hospital Majadahonda
- Teaching collaborator at the School of Medicine in the subject of Microbiology at the Autonomous University of Madrid
- Doctorate in Pharmacy from the Complutense University of Madrid
- Degree in Pharmacy from the University of Valencia



### **Dr. López Dosil, Marcos**

- Specialist Physician of the Microbiology and Parasitology Department of the Hospital de Móstoles
- Degree in Medicine from the University of Santiago de Compostela
- Master's Degree in Infectious Diseases and Antimicrobial Treatment from CEU Cardenal Herrera University
- Master's Degree in Tropical and Health Medicine from the Autonomous University of Madrid
- Expert in Tropical Medicine from the Autonomous University Madrid



### **Dr. Anel Pedroche, Jorge**

- Facultative Area Specialist. Microbiology Department, Puerta de Hierro University Hospital, Majadahonda, Spain
- Degree in Pharmacy from the Complutense University of Madrid

## Management



### Ms. Fernández Montalvo, María Ángeles

- Parapharmacy Manager and Nutrition and Natural Medicine Professor
- Specialist in Food Intolerances and the Study of Intestinal Microbiota
- Member of the Spanish Society of Probiotics and Prebiotics (SEPyP)
- Diploma in Natural and Orthomolecular Medicine
- 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
- Expert in the current use of Nutricosmetics and Nutraceuticals in general
- Expert in point-of-sale management in Pharmacies and Parapharmacies

## Professors

### Dr. Álvarez García, Verónica

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

### Dr. Lombó Burgos, Felipe

- ♦ Associate Professor at University of Oviedo
- ♦ PhD in Biology and head Professor from the University of Oviedo

### Dr. Gonzalez Rodríguez, Silvia Pilar

- ♦ Deputy medical director and research coordinator
- ♦ Clinical Chief of the Menopause and Osteoporosis Unit at the Velázquez Medical Cabinet (Madrid)
- ♦ PhD in Medicine and Surgery from the University of Alcalá de Henares. Gynecology Specialist

### Dr. Uberos, José

- ♦ Neonatal Intensive Care Unit Clinical Assistant, San Cecilio Clinical Hospital
- ♦ Associate Professor of Pediatrics, University of Granada
- ♦ Associate Professor at the Faculty of Medicine at the University of Granada
- ♦ Vocal Bioethics Research Committee of the Province of Granada (Spain)
- ♦ Member of the Organizing Committee of the XIV Congress of the Spanish Society of Adolescent Medicine

### Dr. Fernández Madera, Juan

- ♦ Allergist
- ♦ Allergy Specialist
- ♦ Degree in Medicine

### Dr. López Martínez, Rocío

- ♦ Resident Internal Biologist of Clinical Immunology at the Central University Hospital of Asturias
- ♦ Degree in Biochemistry from the University of Murcia
- ♦ Professional Master's Degree in Bioinformatics and Biostatistics from the Catalan Open University (UOC) and the University of Barcelona

### Dr. Bueno García, Eva

- ♦ Pre-doctoral researcher in the research group of Immunosenescence of the Immunology Service of the Central University Hospital of Asturias (HUCA)
- ♦ Degree in Biology from the University of Oviedo
- ♦ Master's Degree in Biomedicine and Molecular Oncology from the University of Oviedo

### Dr. Verdú López, Patricia

- ♦ Degree in Medicine from the University of Oviedo
- ♦ Specialty of Allergology at the University Hospital Dr. Negrín in Las Palmas of Gran Canaria
- ♦ Professional Master's Degree in Esthetic and Anti-Aging Medicine at the Complutense University of Madrid

### Dr. Rodríguez Fernández, Carolina

- ♦ Biologist
- ♦ Degree in Biology from the University of Oviedo

### 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. Rioseras de Bustos, Beatriz**

- ♦ Biologist
- ♦ Doctorate from the University of Oviedo. "Streptomyces development: regulation and industrial applications."
- ♦ Bachelor's Degree in Biology. University of Oviedo
- ♦ Immunology Resident at HUCA
- ♦ Master's Degree in Research in Neuroscience by the University of Oviedo

**Dr. Alonso Arias, Rebeca**

- ♦ Specialist Immunology Physician at the Central University Hospital of Asturias
- ♦ Heads the Immunosenescence research group of the Central University Hospital of Asturias Immunology Service
- ♦ 1st National Award for Research in Sports Medicine
- ♦ Doctorate in Biological Sciences from the Complutense University of Madrid
- ♦ Degree in Biology from the University of Oviedo

**Dr. Gabaldon Estevani, Toni**

- ♦ Biologist
- ♦ Co-Founder and Scientific Advisor (CSO) Microomics SL
- ♦ ICREA Research Professor and Group Leader of the Comparative Genomics Laboratory
- ♦ PhD in Biology, researcher at Centre for Genomic Regulation | CRG - Bioinformatics and Genomics

**Dr. López López, Aranzazu**

- ♦ Researcher in oral microbiology at FISABIO foundation
- ♦ Ph.D. in Biological Sciences

**Dr. Narbona López, Eduardo**

- ♦ Professor of Pediatrics, University of Granada, Spain
- ♦ Speciality Neonatal Unit, San Cecilio University Hospital

**Dr. López Vázquez, Antonio**

- ♦ Specialist in Immunology in Central University Hospital of Asturias (HUCA)

**Dr. Losa Domínguez, Fernando**

- ♦ Obstetrician-Gynecologist and Maternologist
- ♦ Expert in Menopause certified by the AEEM (Spanish Association for the Study of Menopause)
- ♦ Expert in Gynecoesthetics from the University of Barcelona

**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**

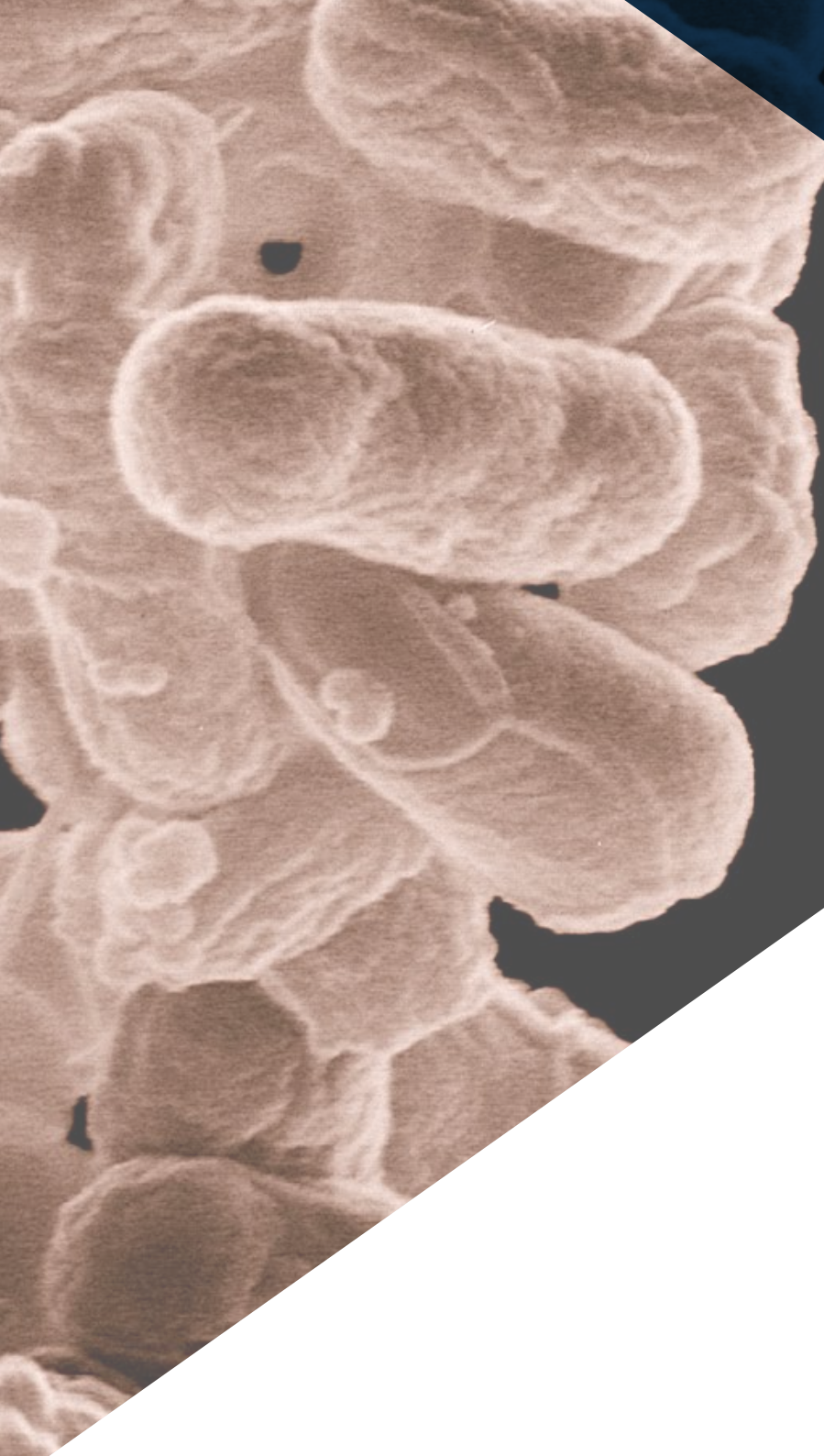
- ♦ Neonatologist of the Central University Hospital of Asturias (HUCA)
- ♦ Researcher and Professor of the Master's Degree in Early Care and the Master's Degree in Critical Care Nursing at the University of Oviedo and other training courses

# 04

## Structure and Content

This Postgraduate Diploma's content has been developed following the teaching team's guidelines, as well as the requirements of the effective and prestigious Relearning methodology. As a result, students will not have to spend extra hours memorizing, but will see a natural and progressive updating of their knowledge thanks to the continuous reiteration of the most important concepts throughout the syllabus. In addition, this teaching strategy is also based on clinical case studies, so students can improve their skills based on the practical resolution of day-to-day practice contexts.



A scanning electron micrograph (SEM) showing a cluster of biological cells, possibly bacteria or fungi, with a textured, elongated appearance. The cells are light brown/tan against a dark background.

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*In the Virtual Campus, you will find real clinical cases to work on their resolution in a practical way, as well as complementary readings, research articles and self-knowledge exercises”*

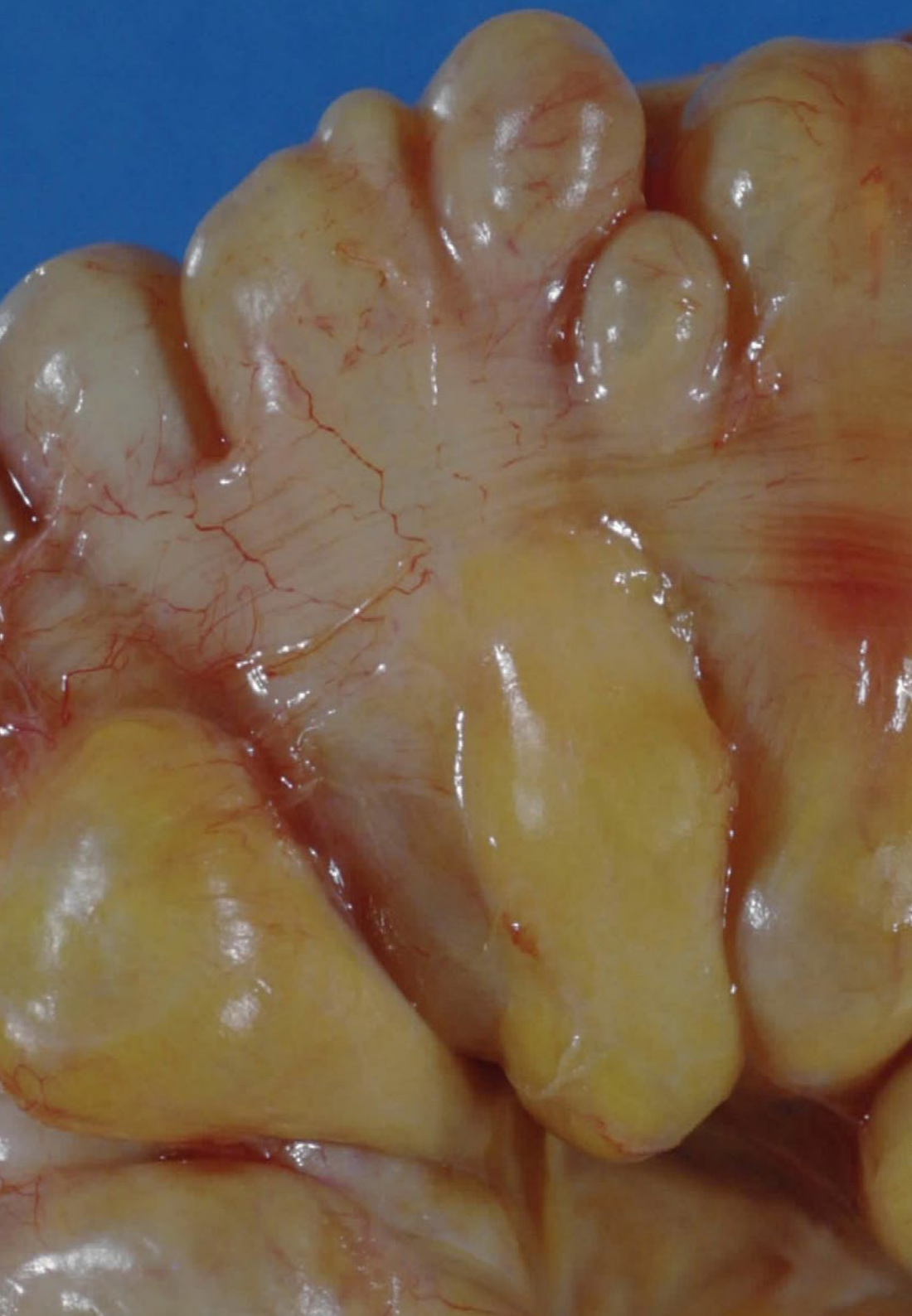
## Module 1. Microbiota. Microbiome. Metagenomics

- 1.1. Definition and Relationship Between Them
- 1.2. Composition of the Microbiota: Types, Species and Strains
- 1.3. Different Human Microbiota. General Overview of Eubiosis and Dysbiosis
  - 1.3.1. Gastrointestinal Microbiota
  - 1.3.2. Oral Microbiota
  - 1.3.3. Skin Microbiota
  - 1.3.4. Respiratory Tract Microbiota
  - 1.3.5. Urinary Tract Microbiota
  - 1.3.6. Reproductive System Microbiota
- 1.4. Factors that Influence Microbiota Balance and Imbalance
  - 1.4.1. Diet and Lifestyle. Gut-Brain Axis
  - 1.4.2. Antibiotic Therapy
  - 1.4.3. Epigenetic-Microbiota Interaction. Endocrine Disruptors
  - 1.4.4. Probiotics, Prebiotics, Symbiotics. Concepts and Overviews
  - 1.4.5. Fecal Transplant, Latest Advances

## Module 2. Gut Microbiota I. Intestinal homeostasis

- 2.1. Gut Microbiota Studies
  - 2.1.1. Projects MetaHIT, Meta-Biomed, MyNewGut, Human Microbiome Project
- 2.2. Microbiota Composition
  - 2.2.1. Protective Microbiota (*Lactobacillus*, *Bifidobacterium*, *Bacteroides*)
  - 2.2.2. Immunomodulatory Microbiota (*Enterococcus faecalis* and *Escherichia coli*)
  - 2.2.3. Mucoprotective or Muconutritive Microbiota (*Faecalibacterium prausnitzii* and *Akkermansia muciniphila*)
  - 2.2.4. Microbiota with Proteolytic or Proinflammatory Activities (*E. coli* BioVare, *Clostridium*, *Proteus*, *Pseudomonas*, *Enterobacter*, *Citrobacter*, *Klebsiella*, *Desulfovibrio*, *Bilophila*)
  - 2.2.5. Fungal Microbiota (*Candida*, *Geotrichum*)

- 2.3. Digestive System Physiology. Composition of the Microbiota in the Different Parts of the Digestive Tract. Resident Flora and Transient or Colonizing Flora. Sterile Areas in the Digestive Tract
  - 2.3.1. Esophageal Microbiota
    - 2.3.1.1. Healthy Individuals
    - 2.3.1.2. Patients (Gastric Reflux, Barrett's Esophagus, etc.)
  - 2.3.2. Gastric Microbiota
    - 2.3.2.1. Healthy Individuals
    - 2.3.2.2. Patients (Gastric Ulcer, Gastric Cancer, MALT, etc.)
  - 2.3.3. Gallbladder Microbiota
    - 2.3.3.1. Healthy Individuals
    - 2.3.3.2. Patients (Cholecystitis, Cholelithiasis, etc.)
  - 2.3.4. Small Intestine Microbiota
    - 2.3.4.1. Healthy Individuals
    - 2.3.4.2. Patients (Inflammatory Bowel Disease, Irritable Bowel Syndrome, etc.)
  - 2.3.5. Colon Microbiota
    - 2.3.5.1. Healthy Individuals. Enterotypes
    - 2.3.5.2. Patients (Inflammatory Bowel Disease, Crohn's Disease, Colon Carcinoma, Appendicitis, etc)
- 2.4. Gut Microbiota Functions: Metabolic. Nutritional and Trophic. Protective and Barrier. Immunological
  - 2.4.1. Interrelationships Between the Intestinal Microbiota and Distant Organs (Brain, Lung, Heart, Liver, Pancreas, etc.)
- 2.5. Intestinal Mucosa and Mucosal Immune System
  - 2.5.1. Anatomy, Characteristics, and Functions (MALT, GALT, and BALT System)
- 2.6. What is Intestinal Homeostasis? Role of Bacteria in Intestinal Homeostasis
  - 2.6.1. Effects on Digestion and Nutrition
  - 2.6.2. Defence Stimulation, Hindering Colonization by Pathogenic Microorganisms
  - 2.6.3. Production of Vitamin B and K
  - 2.6.4. Production of Short Chain Fatty Acids (Butyric, Propionic, Acetic, etc.)
  - 2.6.5. Production of Gases (Methane, Carbon Dioxide, Molecular Hydrogen). Properties and Functions
  - 2.6.6. Lactic Acid



### Module 3. Gut Microbiota II. Intestinal Dysbiosis

- 3.1. What is Intestinal Dysbiosis? Consequences
- 3.2. Intestinal Barrier. Physiology. Function. Intestinal Permeability and Hyperpermeability. Relationship between Intestinal Dysbiosis and Intestinal Hyperpermeability
- 3.3. Relationship of Intestinal Dysbiosis and Other Types of Disorders: Immunological, Metabolic, Neurological and Gastric (*Helicobacter Pylori*)
- 3.4. Consequences of the Alteration of the Intestinal Ecosystem and its Relationship to Functional Digestive Disorders
  - 3.4.1. Inflammatory Bowel Disease IBD
  - 3.4.2. Chronic Inflammatory Bowel Diseases: Crohn's Disease. Ulcerative Colitis
  - 3.4.3. Irritable Bowel Syndrome (IBS) and Diverticulosis
  - 3.4.4. Intestinal Motility Disorders. Diarrhea. Diarrhea Caused by *Clostridium Difficile*. Constipation
  - 3.4.5. Digestive Disorders and Nutrient Malabsorption Problems: Carbohydrates, Proteins, and Fats
  - 3.4.6. Markers of Intestinal Inflammation: Calprotectin. Eosinophil Cationic Protein (ECP). Lactoferrin. Lysozyme
  - 3.4.7. Leaky Gut Syndrome. Permeability Markers: Alpha-1 Antitrypsin. Zonulin. Tight Junctions and their Main Function
- 3.5. Alteration of the Intestinal Ecosystem and its Relationship with Intestinal Infections
  - 3.5.1. Viral Intestinal Infections
  - 3.5.2. Bacterial Intestinal Infections
  - 3.5.3. Intestinal Infections due to Parasites
  - 3.5.4. Fungal Intestinal Infections. Intestinal Candidiasis
- 3.6. Composition of the Intestinal Microbiota in the Different Stages of Life
  - 3.6.1. Composition of the Intestinal Microbiota in Adulthood. "Stable Period"
  - 3.6.2. Gut Microbiota Composition in the Elderly "Unstable Stage". Aging and Microbiota
  - 3.6.3. Variation in Gut Microbiota Composition from the Neonatal-Early Childhood Stage to Adolescence. "Unstable Period"
- 3.7. Nutritional Modulation of Intestinal Dysbiosis and Hyperpermeability: Glutamine, Zinc, Vitamins, Probiotics, Prebiotics
- 3.8. Techniques for Quantitative Analysis of Microorganisms in Feces
- 3.9. Current Lines of Research

# 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.



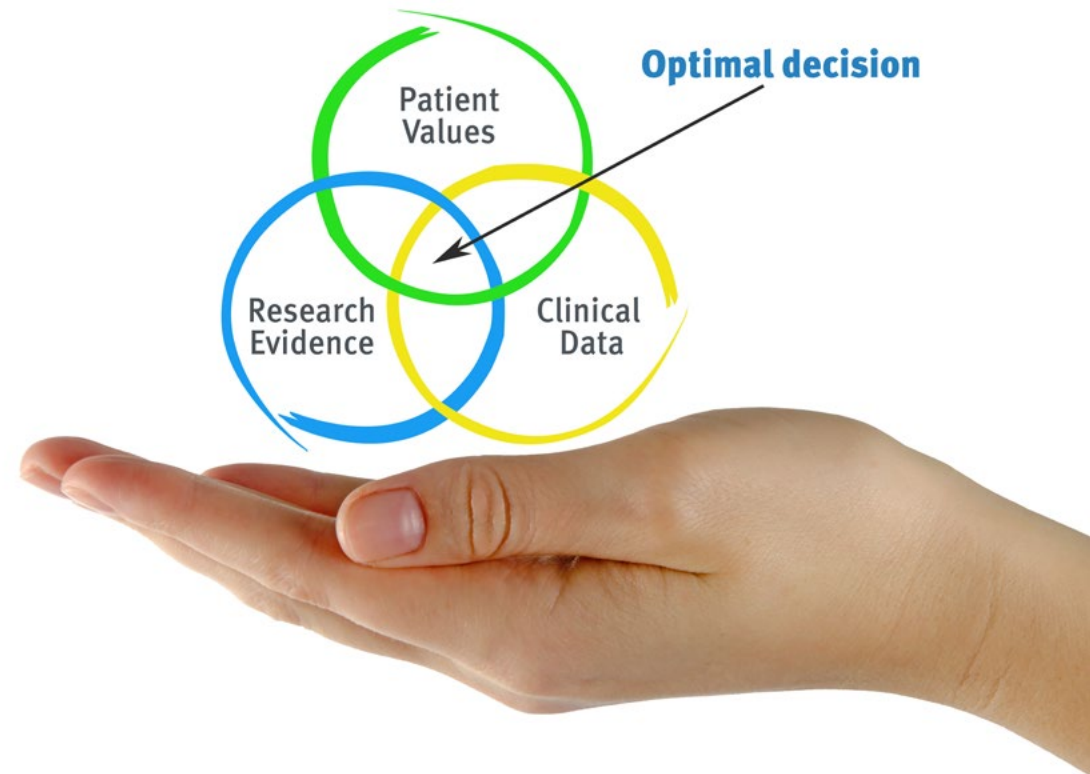
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*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH we use the Case Method

What should a professional do in a given situation? 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 you will experience a way of learning that is shaking the foundations of traditional universities around the world.*



According to Dr. Gervas, 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 in the physician's professional 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. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
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.

*Professionals will learn through real cases and by resolving 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 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

*Relearning 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 (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.



#### Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. 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

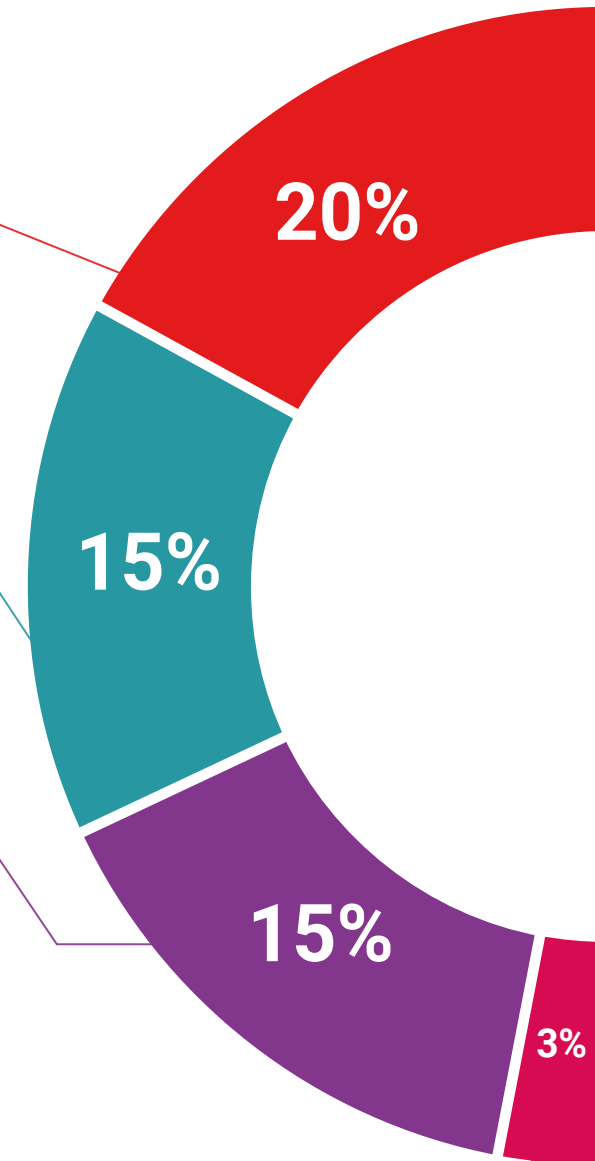
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

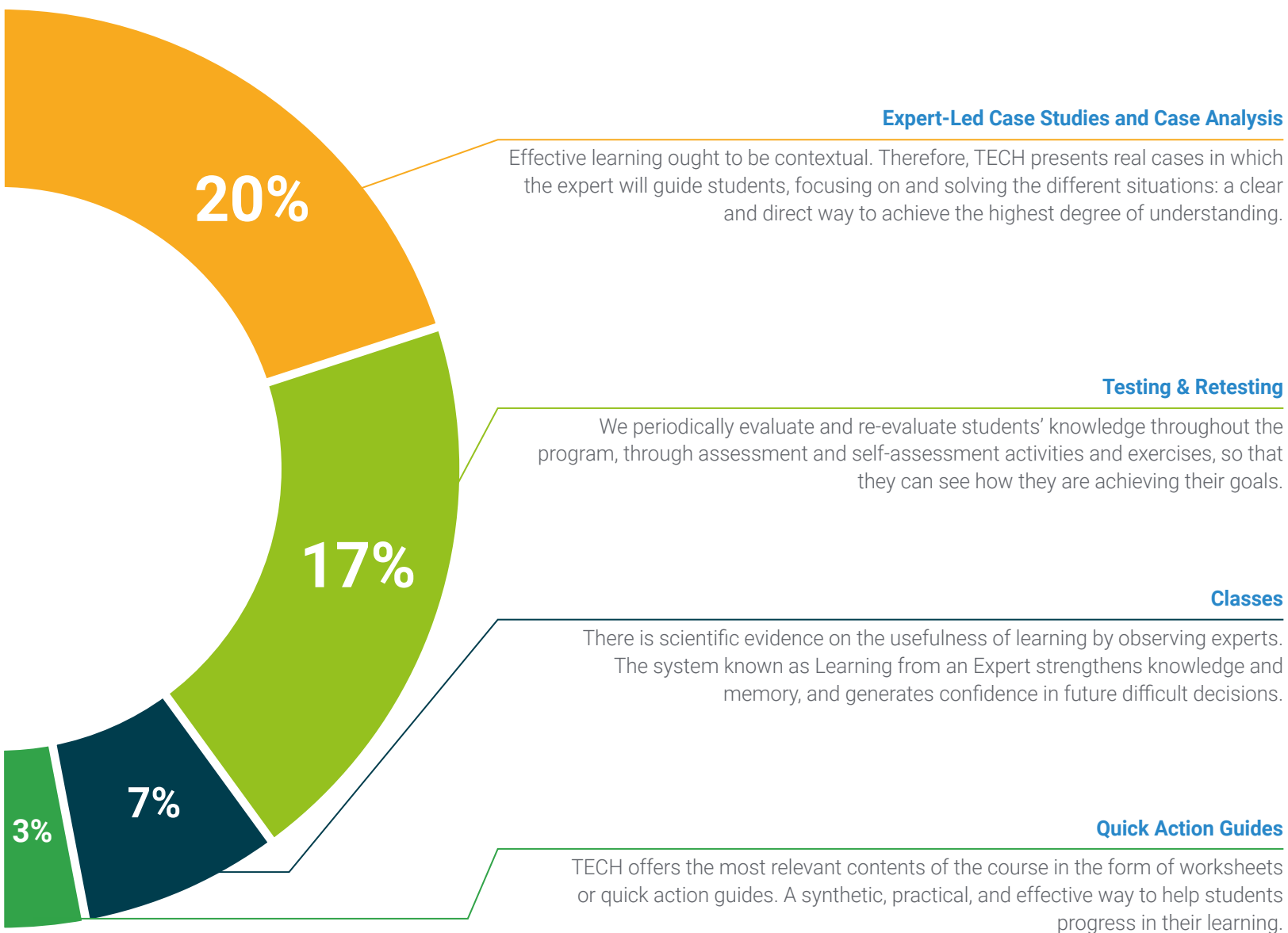
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### 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.





# 06 Certificate

The Postgraduate Diploma in Intestinal Microbiota guarantees you, in addition to the most rigorous and up-to-date training, access to a Postgraduate Diploma Degree issued by TECH Technological University.



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*Successfully complete this program and  
receive your university degree without  
travel or laborious paperwork”*

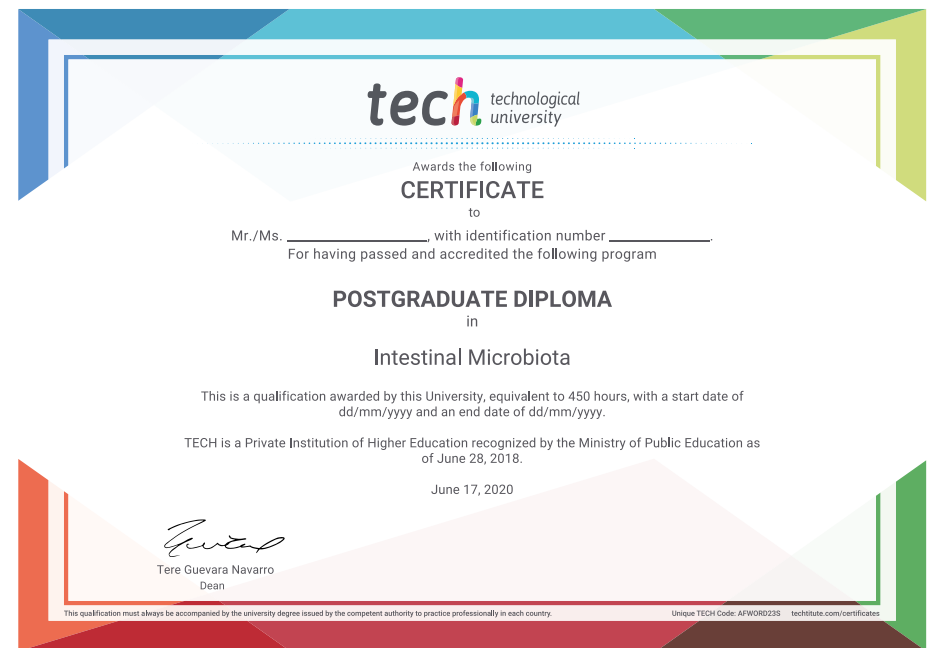
This **Postgraduate Diploma in Intestinal Microbiota** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery\*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Diploma, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in Intestinal Microbiota**

Official N° of hours: **450 h.**



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health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present quality  
development languages  
virtual classroom



## Postgraduate Diploma Intestinal Microbiota

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Diploma

## Intestinal Microbiota