

# Postgraduate Certificate Mycobacterial infections in HIV patients





## Postgraduate Certificate Mycobacterial Infections in HIV Patients

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/mycobacterial-infections-hiv-patients](http://www.techtute.com/us/medicine/postgraduate-certificate/mycobacterial-infections-hiv-patients)

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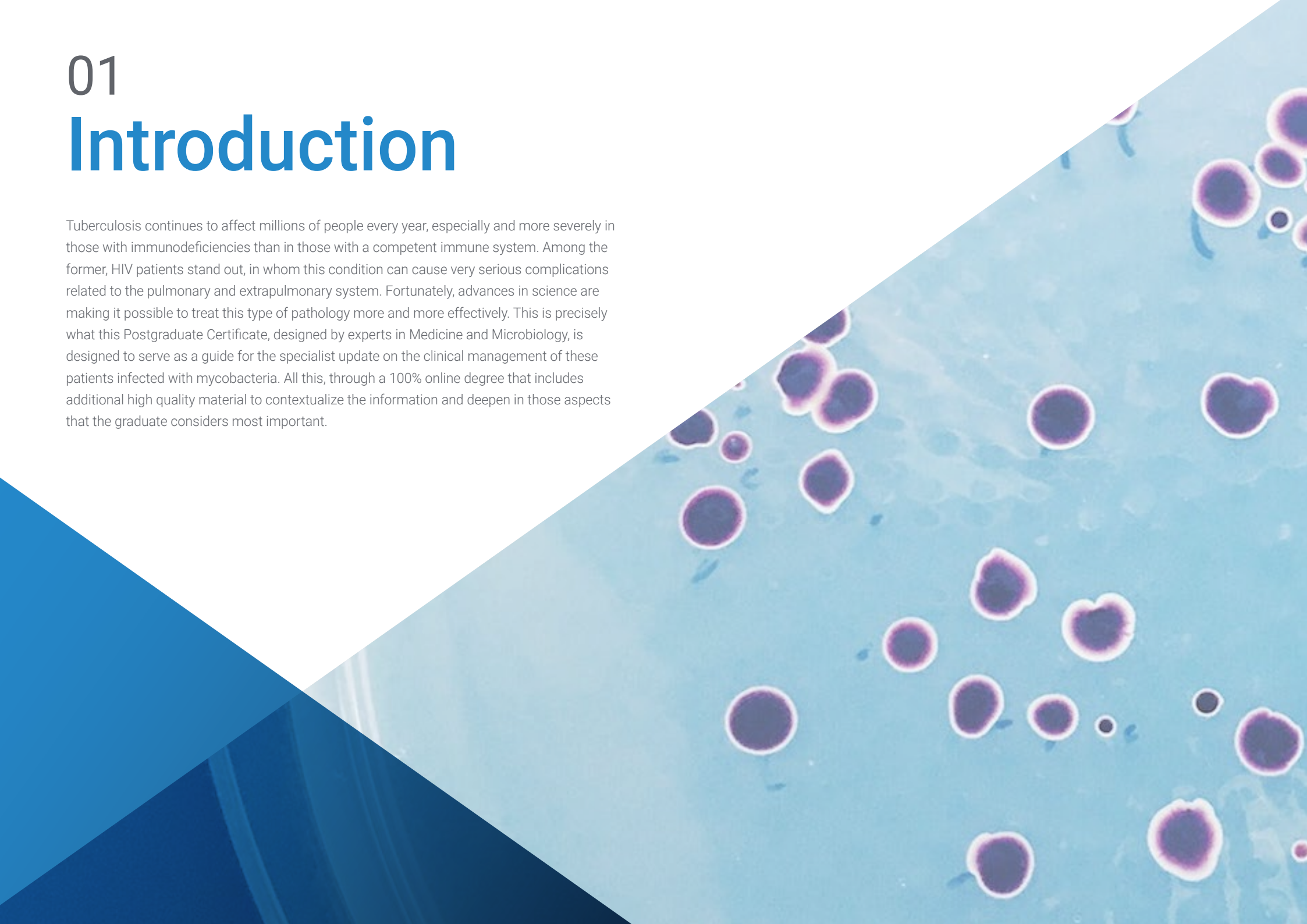
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# 01

# Introduction

Tuberculosis continues to affect millions of people every year, especially and more severely in those with immunodeficiencies than in those with a competent immune system. Among the former, HIV patients stand out, in whom this condition can cause very serious complications related to the pulmonary and extrapulmonary system. Fortunately, advances in science are making it possible to treat this type of pathology more and more effectively. This is precisely what this Postgraduate Certificate, designed by experts in Medicine and Microbiology, is designed to serve as a guide for the specialist update on the clinical management of these patients infected with mycobacteria. All this, through a 100% online degree that includes additional high quality material to contextualize the information and deepen in those aspects that the graduate considers most important.



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*Keep up to date on pulmonary and extrapulmonary comorbidities in HIV patients with tuberculosis with this Postgraduate Certificate"*

The Human Immunodeficiency Virus (HIV) is a pathology that seriously affects the immune system, weakening it and making it more vulnerable to other diseases. An example of this is infection by tuberculous mycobacteria, which occurs more frequently and severely in this type of patient, affecting, above all and drastically, their pulmonary and extra pulmonary system. However, both infections have been studied for decades, so that the advances that modern medicine has made in their diagnosis and treatment allow, more and more frequently and effectively, to manage this type of clinical cases, significantly improving their quality of life.

That is why TECH has considered it necessary to compile in the Postgraduate Certificate all the information that allows the specialist to get up to date on everything related to the HIV-tuberculosis binomial from the epidemiological point of view. This is a degree in which they will be able to delve into the latest scientific evidence related to the characteristics of patients according to CD4 cell count, as well as the peculiarities of tuberculous meningitis and infections by other mycobacteria. In addition, the course will also provide an in-depth study of the latest diagnostic techniques and the most effective treatment guidelines.

All this, in only 150 hours distributed in 6 weeks and whose content has been compacted in a comfortable and accessible 100% online format, perfect to combine it with any other professional or personal activity. But that's not all, since the Postgraduate Certificate also includes additional high quality material with which the specialist will be able to deepen in the sections they consider, attending a personalized update and adapted to their requirements.

This **Postgraduate Certificate in Mycobacterial infections in HIV patients** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ The development of practical cases presented by experts in Medicine and Microbiology
- ◆ 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 self-assessment can be used 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



*Delve into the HIV-tuberculosis binomial from the epidemiological point of view and its recently discovered peculiarities"*

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*A 100% online option to review the characteristics of pulmonary and extrapulmonary tuberculosis in HIV patients based on CD4 cell count"*

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

Its 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 an immersive education programmed to learn 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 are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

*You will be able to expand your knowledge about tuberculous meningitis in these patients and infections caused by other mycobacteria.*

*You choose when and from where to connect, without face-to-face classes or restricted schedules.*



# 02 Objectives

HIV latency in today's society, as well as the seriousness of the tuberculosis condition in this type of patients, forces TECH, in order to fulfill its commitment to specialists, to create degrees such as this one. Therefore, the objective of this Postgraduate Certificate is to serve as a guide to the graduate in its update on everything related to the clinical management of such patients according to the latest advances that have been made in Medicine and Microbiology. For this purpose, it will provide the most modern academic tools that will facilitate this task and allow you to obtain a broad and updated knowledge in just 6 weeks.



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*TECH's commitment to keeping you up to date is what motivates this university to shape comprehensive and accessible degrees so that you can update yourself without difficulty”*



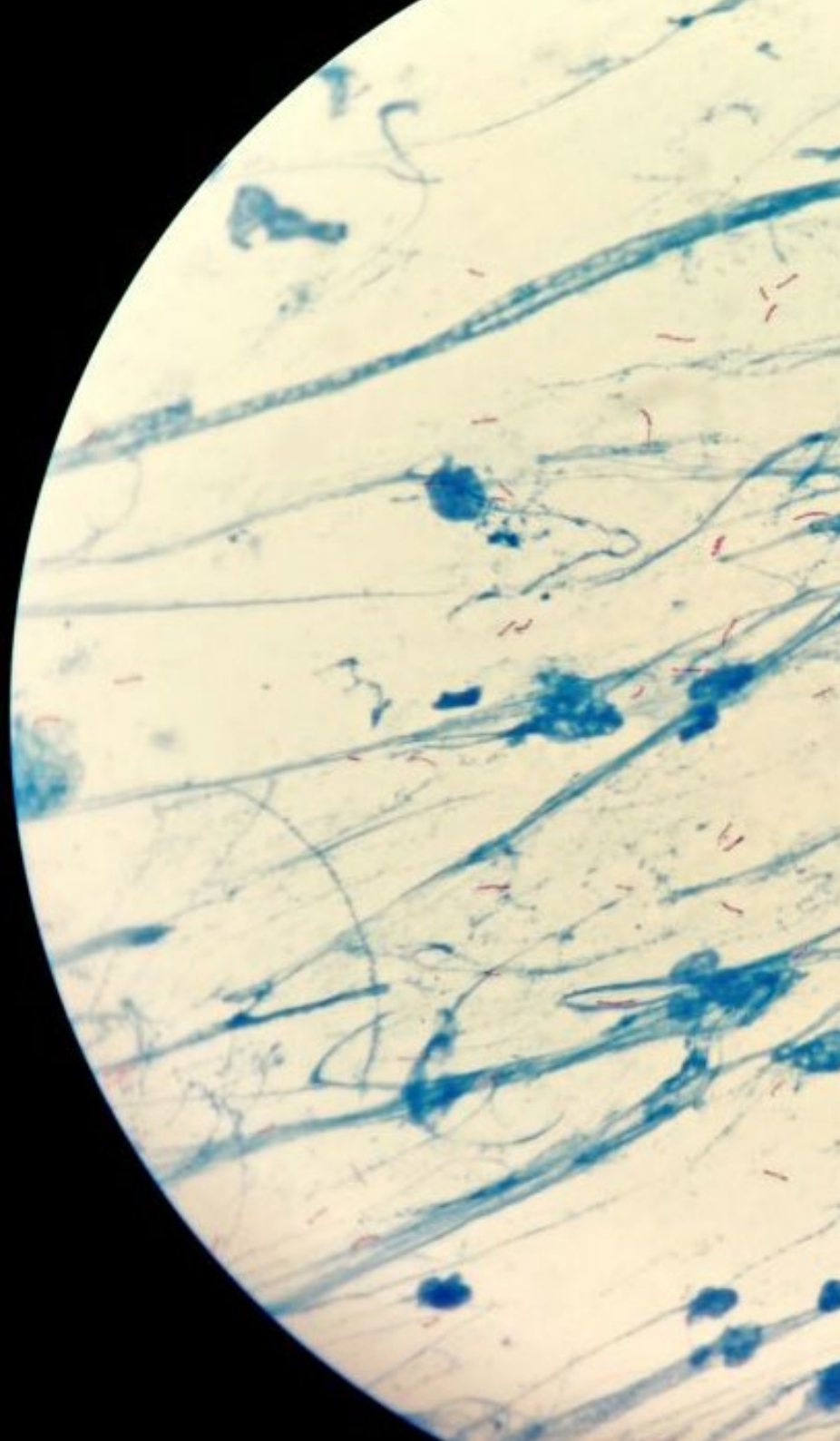
## General Objectives

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- ◆ Study in depth the most novel aspects of mycobacterial infections in HIV patients
- ◆ Delve into the latest evidence of Microbiology related to the early diagnosis and treatment of this type of infectious pathologies

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*You will achieve your most ambitious objectives with total guarantee, thanks to the exhaustiveness with which each module of this Postgraduate Certificate has been designed"*





## Specific Objectives

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- ◆ Study the Epidemiology of TB/HIV coinfection in depth
- ◆ Gain detailed knowledge of the manifestations of pulmonary and extrapulmonary tuberculosis in HIV-infected patients according to the number of LTCD4
- ◆ Delve into the available diagnostic methods and peculiarities to optimize diagnoses in this special type of patients
- ◆ Have broad knowledge of the treatment of tuberculosis and non-tuberculous mycobacterial infections in HIV patients
- ◆ Manage and treat latent tuberculosis infection in this type of patients

03

# Course Management

TECH considers that having a teaching team specialized in the area in which the degree is developed is not only necessary to ensure a more complete academic experience, but also motivating for graduates, since they will be able to improve their medical skills with professionals versed, in this case, in Microbiology. That is why the faculty of this Postgraduate Certificate is made up of specialists with a broad and extensive work experience, which includes the clinical management of patients affected by the HIV-tuberculosis binomial.





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*A degree that includes a teaching team specialized in Microbiology, so you can get up to date with experts in the field"*

## Management



### Dr. Sánchez Romero, María Isabel

- ♦ Area Specialist in the Microbiology Department of the Puerta de Hierro Majadahonda University Hospital, Madrid
- ♦ PhD in Medicine and Surgery from the University of Salamanca
- ♦ Medical Specialist in Clinical Microbiology and Parasitology
- ♦ Member of the Spanish Society of Infectious Diseases and Clinical Microbiology
- ♦ Technical Secretary of the Madrid Society of Clinical Microbiology

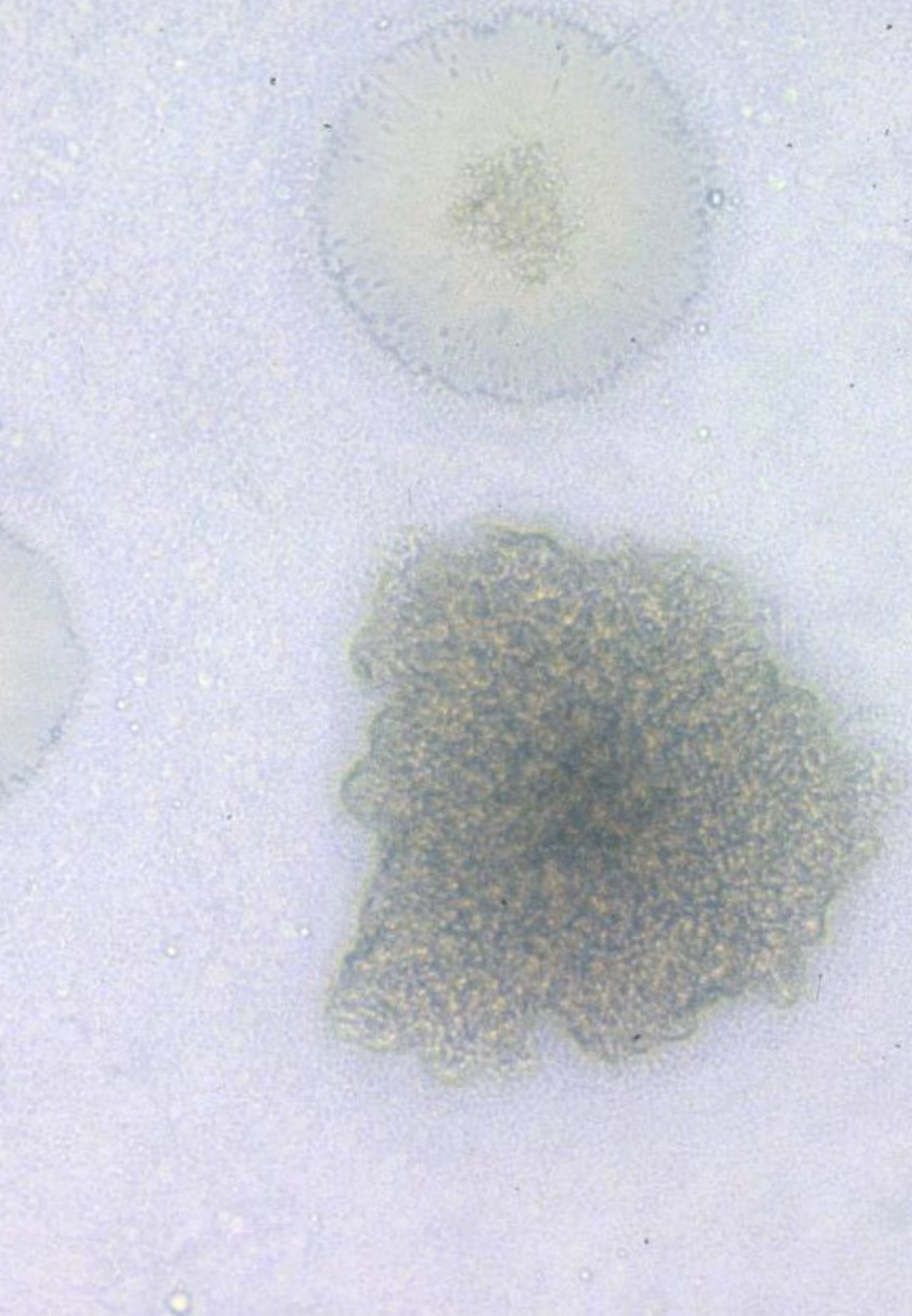
## Professors

### Dr. Díaz de Santiago, Alberto

- ♦ Attending physician at the HIV Unit of the University Hospital Puerta de Hierro Majadahonda
- ♦ Attending physician for infectious diseases at the Ramón y Cajal Hospital
- ♦ Master's Degree in Human Immunodeficiency Virus Infection, Rey Juan Carlos I University
- ♦ Degree in Medicine and Surgery, Autonomous University of Madrid
- ♦ Doctor of Medicine, HIV-Hepatitis Coinfection. Autonomous University of Madrid

### Dr. de la Fuente Moral, Sara

- ♦ Area Specialist in Internal Medicine at the Puerta de Hierro University Hospital
- ♦ Area Specialist in the Internal Medicine Department of the Santa Cristina University Hospital
- ♦ Area Specialist in the Emergency Department of the Puerta de Hierro University Hospital
- ♦ Area Specialist in the Internal Medicine Department of the Infanta Cristina University Hospital
- ♦ Researcher at the Biomedical Research Foundation of the Puerta de Hierro University Hospital
- ♦ Author and co-author of numerous scientific publications
- ♦ PhD from the Autonomous University of Madrid
- ♦ Proprietary Master's Degree in Infectious Diseases and Antimicrobial Treatment, CEU Cardenal Herrera University



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

# 04

## Structure and Content

For the design of the structure, as well as for the composition of the content of this Postgraduate Certificate, the teaching team has selected the most comprehensive and innovative information related to the latest advances that have been made in the field of Microbiology and its application to the clinical management of HIV patients with tuberculosis. This has allowed them to create a dynamic and current syllabus, which will be accompanied by hours of additional high quality material presented in different formats, all compacted in a comfortable and accessible 100% online program.





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*All the content will be available from the very beginning and can be downloaded to any device with an Internet connection”*

## Module 1. Mycobacterial Infections in VIH Patients

- 1.1. Epidemiology of TB/HIV Co-Infection
- 1.2. Pulmonary Tuberculosis in HIV-Infected Patients with  $>200$  LTCD4
- 1.3. Extrapulmonary Tuberculosis in HIV-Infected Patients with  $>200$  LTCD4
- 1.4. Tuberculosis in HIV-Infected Patients with  $<200$  LTCD4
- 1.5. Tuberculous Meningitis
- 1.6. Atypical Mycobacterial Infections in VIH Patients
- 1.7. Diagnosis of Mycobacterial Infection in HIV Patients
- 1.8. Treatment of Tuberculosis in HIV Patients
- 1.9. Treatment of Atypical Mycobacterium Infection in HIV Patients
- 1.10. Latent Tuberculosis Infection in HIV Patients Treatment





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*A degree designed by and for specialists who seek to continuously update their knowledge in order to offer an even more effective and personalized medical service”*

# 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. 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 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.





#### 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 on the usefulness of learning by observing experts. The system known as 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 Certificate in Mycobacterial infections in HIV patients guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.





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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”*

This **Postgraduate Certificate in Mycobacterial infections in HIV patients** 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 Certificate** issued by **TECH Technological University** via tracked delivery\*.

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

Title: **Postgraduate Certificate in Mycobacterial infections in HIV patients**

Official N° of Hours: **150 h.**



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



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### Mycobacterial Infections in HIV Patients

- » Modality: online
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- » Dedication: 16h/week
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- » Exams: online

# Postgraduate Certificate

## Mycobacterial infections in HIV patients

