

Postgraduate Certificate

Advances in Antibiotic Therapy



Postgraduate Certificate Advances in Antibiotic Therapy

- » Modality: online
- » Duration: 12 months
- » Certificate: TECH Global University
- » Credits: 15 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: www.techtute.com/us/pharmacy/postgraduate-certificate/advances-antibiotic-therapy

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01

Introduction

Infections are a type of pathology with a high incidence and prevalence worldwide. Therefore, there is a need for professionals who understand the effects of these drugs on the body, their mechanism of action, therapeutic uses and, in general, all the aspects involved in their development and research. Thus, the following program will provide students with all the necessary information to specialize in antibiotic therapy, taking into account the latest advances in the area.



“

80 years have passed since the first treatment with penicillin in humans, a drug that changed the course of history".

In the 1940s it was normal to die from a bacterial infection. So much so that a simple cut could become complicated and cause the death of a person. Since the discovery of penicillin, this panorama changed and a process began to develop new antibiotics to combat various pathologies. For this reason, research in antibiotic therapy is very important at present.

Accordingly, this Postgraduate Certificate will focus on the advances made by the scientific community in the study of antibiotics. We will begin, then, with an analysis of the structure of the beta-lactam ring and the drugs that act to break this chain. We will then proceed to evaluate and analyze the development of various drugs, starting with penicillins.

In each class, the student will have an in-depth study of different antimicrobials, such as Glycopeptides or cyclic Lipopeptides. Finally, the use of parenteral antibiotics in outpatients will be addressed, knowing the main recommendations for their consumption and the follow-up to be carried out to avoid abuse.

This **Postgraduate Certificate in Advances in Antibiotic Therapy** contains the most complete and up-to-date educational program on the market. The most important features include:

- ♦ The development of case studies presented by experts focused on advances in antibiotic therapy and antibiotic resistance.
- ♦ 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.
- ♦ Practical exercises where the process of 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



With this Postgraduate Certificate you will gain an in-depth understanding of how the most commonly used antibiotics work today".

“

With this Postgraduate Certificate you will learn how to reduce antibiotic resistance of future drugs”.

Update your knowledge in antibiotic therapy by enrolling in this program.

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

Its multimedia content, developed with the latest educational technology, will allow the professional a situated and contextual learning, that is, a simulated environment that will provide an 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 student will be assisted by an innovative interactive video system created by renowned and experienced experts.

TECH will help you develop professionally in a sector with great international demand.



02 Objectives

The main goal of this Postgraduate Certificate is to provide students with the opportunity to access the latest advances in Antibiotic Therapy. Thanks to the contents and didactic materials, they will be able to learn how antibiotics such as penicillin or betalactamases work. As a result, they will be able to develop independent research to develop new drugs or improve bacterial resistance of circulating drugs.



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Do you want to advance your career? By enrolling in this program you will be able to achieve this in a short period of time”.



General Objectives

- ♦ Guarantee professional improvement by constantly delving deeper and updating what we know.
- ♦ Know the scientific evidence on antibiotic therapy and antimicrobial resistance.
- ♦ Establish the correct use of drugs and the proper treatment of infectious diseases.
- ♦ Use a multidisciplinary and integrative approach to facilitate the control of these pathologies.

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Achieve success, advance in your career, develop your own research. This and more will be possible at the end of the program.”





Specific Objectives

Module 1. Antibiotics I

- ◆ Know the advances in the knowledge of the synthesis and structure of the beta-lactam ring
- ◆ Analyze new drugs and their future role in anti-infective therapeutics, classifying them and understanding their therapeutic uses
- ◆ Acquire the ability to discriminate between different types of penicillin
- ◆ Deepen in the use of Cephalosporins

Module 2. Antibiotics II

- ◆ Know the new drugs used for gram-positive infections
- ◆ Deepen in the mechanism of action of different drugs such as cyclic lipopeptides, macrolides or ketolides
- ◆ Identify the latest scientific recommendations on respiratory quinolones

Module 3: Antibiotics III

- ◆ Know in detail the antimicrobial spectrum of Oxazolinones, Sulfas and Lincosamides
- ◆ Deepen in the practical use in tuberculosis (TB) and other infections at present, using Rifamycins
- ◆ Know the use and recommendations of parenteral antibiotics in ambulatory patients
- ◆ Analyze current antibiotic parameters for multidrug-resistant bacteria

03

Course Management

Due to the importance of the development of new antibiotics for the scientific community, TECH has assembled an excellent teaching staff, certified and qualified in the latest Advances in Antibiotic Therapy. This group of professionals has conducted numerous investigations in countries with a high incidence of bacterial infections, which has allowed them to reach important positions.





“

Do you want to lead a country's infectious disease service? This teaching group will help train you to achieve it."

International Guest Director

Dr. Dominique Franco is a specialist in liver surgery and treatment of hepatocellular carcinoma, with an extensive background in the field of **regenerative medicine**. Throughout his career, he has focused his research on **cell therapy** for liver diseases and **organ bioconstruction**, areas in which he has made innovative contributions. His work focuses on developing new treatment techniques that not only seek to improve the effectiveness of surgical interventions, but also to optimize the quality of life of patients.

He has held leadership roles in several prestigious institutions. He was **Head of the Department of Liver Surgery and Transplantation at the Hôpital Antoine-Béclère**, where he participated in medical milestones such as the first liver transplant performed in Europe. His extensive experience in advanced surgery and transplantation has allowed him to acquire a deep knowledge in the management of complex liver pathologies, becoming a reference in the medical field both nationally and internationally. In addition, he has been **Director Emeritus of Digestive Surgery at the University Paris-Sud**, where he has contributed to the training of new generations of surgeons.

Internationally, he is recognized for his contributions to the development of Regenerative Medicine. In 2014, he founded CellSpace, an association dedicated to promoting **tissue and organ bioengineering** in France, with the aim of bringing together researchers from different disciplines to advance this field.

He has published more than 280 scientific articles in international journals, addressing topics such as Liver Surgery, **hepatocellular carcinoma** and Regenerative Medicine. In addition, he is a member of the U-1193 research unit at Inserm and a consultant at the Institut Pasteur, where he continues his work as a consultant on cutting-edge projects, contributing to expand the **boundaries of medical knowledge** in his area of expertise.



Dr. Franco, Dominique

- Academic Director of the Institut Pasteur, Paris, France
- Vice President Health Cluster for Physician Competitiveness
- Head of the Digestive Surgery Department at Antoine-Béclère Hospital (APHP)
- Director Emeritus of Digestive Surgery at the University Paris-Sud
- Founder of CellSpace
- Member of the research unit U-1193 of Inserm
- President of the French National Academy of Surgery

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

Management



Dr. Quintero Casanova, Jesús

- ♦ Degree in Medicine and Surgery from the Medical University of Havana. Cuba
- ♦ Specialist in Internal Medicine. "Héroes del Baire" Hospital
- ♦ Professional Master's Degree in Tropical Diseases and Clinical Infectious Diseases from the Pedro Kuori Institute, Havana. Cuba
- ♦ Head of the Infectious Diseases Department of the Héroes del Baire Hospital
- ♦ Member of the Cuban Society of Internal Medicine
- ♦ Member of the Cuban Society of Paediatricians
- ♦ Medical specialist in Africa (TChad) and Venezuela
- ♦ Professor on the Medicine Degree and Internal Medicine Speciality at the Faculty of Medical Sciences of Isla de la Juventud
- ♦ Main professor of the Professional Master's Degree in infectious diseases of the Faculty of Medical Sciences of the Isle of Youth.
- ♦ Member of state examining boards for the medicine degree and internal medicine
- ♦ National Research Award in Cuba
- ♦ Medical Science Teaching Award. Cuba

Professors

Dr. Valle Vargas, Mariano

- ♦ Head of the Internal Medicine Department of the Héroes del Baire Hospital
- ♦ Member of the Cuban Society of Internal Medicine
- ♦ Member of the Cuban Society of Paediatricians
- ♦ Medical specialist in Venezuela
- ♦ Professor on the Medicine Degree and Internal Medicine Speciality at the Faculty of Medical Sciences of Isla de la Juventud
- ♦ Professor of the Professional Master's Degree in Infectious Diseases in the Faculty of Medical Sciences in Isla de la Juventud
- ♦ Member of state examining boards for the medicine degree and internal medicine
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba
- ♦ Specialist in Internal Medicine. "Héroes del Baire" Hospital
- ♦ Master's Degree in Health Biostatistics
- ♦ Diploma in Epidemiology
- ♦ Medical Science Teaching Award. Cuba

Dr. Cantalapedra Torres, Alejandro

- ♦ Member of the Cuban Society of Pediatrics
- ♦ Professor in the Medicine Degree and Pediatrics Specialty in the Faculty of Medical Sciences in Isla de la Juventud
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Medical specialist in Haiti
- ♦ Medical specialist in Antigua and Barbuda year 2008
- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba
- ♦ Pediatrician. "Héroes del Baire" Hospital
- ♦ Master's Degree in infectious diseases
- ♦ Certificate in Medical Teaching
- ♦ Certificate in Health Management

Dr. Laurence Carmenaty, Araelis

- ♦ Professor on the Medicine Degree in the Faculty of Medical Sciences in Isla de la Juventud
- ♦ Member of the Cuban Society of Microbiology
- ♦ Member of the Association of Pedagogues
- ♦ Degree in Microbiology University of Havana
- ♦ Master's Degree in infectious diseases
- ♦ She has participated in national and international microbiology events in Cuba and Venezuela.

Dr. Dranguet Bouly, José Ismael

- ♦ Head of the Internal Medicine Department of the Héroes del Baire Hospital
- ♦ Member of the Cuban Society of Internal medicine and the Cuban Society of Intensive Therapy
- ♦ Member of the Cuban Society of Paediatricians
- ♦ Medical specialist in Mozambique
- ♦ Professor on the Medicine Degree and Internal Medicine Speciality at the Faculty of Medical Sciences of Isla de la Juventud
- ♦ Professor of the Professional Master's Degree in Infectious Diseases in the Faculty of Medical Sciences in Isla de la Juventud
- ♦ Member of state examining boards for the medicine degree and internal medicine
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Professor at the Catholic University of Santiago de Guayaquil, Ecuador.
- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba
- ♦ Specialist in Internal Medicine and Intensive Therapy. "Héroes del Baire" Hospital
- ♦ Master's Degree in Infectious Diseases from the Pedro Kouri Institute of Cuba
- ♦ Medical Science Teaching Award. Cuba

Dr. González Fiallo, Sayli

- ♦ Professor of the Faculty of Medical Sciences in Isla de la Juventud
- ♦ Director of the Health Analysis, Biostatistics, and Surveillance Unit of the Municipal Health Directorate. Isle of Youth
- ♦ Degree in Hygiene and Epidemiology
- ♦ Master's Degree in Epidemiology

Dr. Dávila, Henry Luis

- ♦ Member of the Cuban Society of Gynecology and Obstetrics
- ♦ Member of the Cuban Society of Paediatricians
- ♦ Medical specialist in Guatemala
- ♦ Professor on the Medicine Degree in the Faculty of Medical Sciences in Isla de la Juventud
- ♦ Member of state examination boards in the field of medicine
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ National research award. Cuba
- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba
- ♦ Specialist in Gynecology and Obstetrics at Héroes del Baire Hospital. Cuba
- ♦ Master's Degree in comprehensive care for women
- ♦ Head of the Neck Pathology Service at Héroes del Baire Hospital
- ♦ Medical Science Teaching Award. Cuba

Dr. Jiménez Valdés, Erlivan

- ♦ Member of the Cuban Society of Pediatrics
- ♦ Professor in the Medicine Degree and Pediatrics Specialty in the Faculty of Medical Sciences in Isla de la Juventud
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Medical specialist in Venezuela
- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba
- ♦ Pediatrician. "Héroes del Baire" Hospital
- ♦ Master's Degree in comprehensive childcare



Dr. Batista Valladares, Adrián

- ◆ Head of Senior Citizen Services in Isla de la Juventud. Cuba
- ◆ Member of the Cuban Society of Family Medicine
- ◆ Professor of the career of medicine and specialty of family medicine at the Isle of Youth Faculty of Medical Sciences.
- ◆ Professor of the Professional Master's Degree in Infectious Diseases in the Faculty of Medical Sciences in Isla de la Juventud
- ◆ Member of state examining boards for the medicine degree and speciality of family medicine
- ◆ Member of tribunals for national scientific events. Cuba
- ◆ Degree in Medicine and Surgery from the University of Havana. Cuba
- ◆ Specialist in Family and Community Medicine
- ◆ Master's Degree in Clinical Infectology
- ◆ Certificate in Diagnostic Ultrasound
- ◆ Diploma in healthcare management

04

Structure and Content

The program of this Postgraduate Certificate in Advances in Antibiotic Therapy has been designed to provide students with the necessary tools to improve their professional performance in this field. For this purpose, three modules will explain in detail the evolution and development of today's most important antibiotics. This will define the empirical basis for improving students' professional performance, allowing them to access new opportunities in the pharmaceutical area.



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This Postgraduate Certificate offers the latest contents in antibiotic therapy. Don't miss the opportunity and access the virtual classroom now".

Module 1. Antibiotics I

- 1.1. Advances in the Knowledge of the Synthesis and Structure the Beta-Lactam Ring.
 - 1.1.1. Structure of the Beta-Lactam Ring
 - 1.1.2. Drugs that Act on the Synthesis of the Beta-Lactam Ring
- 1.2. Penicillins: New Drugs and their Future Role in Anti-Infection Treatments
 - 1.2.1. Classification
 - 1.2.2. Mechanism of Action
 - 1.2.3. Antimicrobial Spectrum
 - 1.2.4. Pharmacokinetics and Pharmacodynamics
 - 1.2.5. Therapeutic Uses
 - 1.2.6. Adverse Effects
 - 1.2.7. Presentation and Dosage
- 1.3. Antistaphylococcal Penicillins: From Old to New and their Practical Implications.
 - 1.3.1. Classification
 - 1.3.2. Mechanism of Action
 - 1.3.3. Antimicrobial Spectrum
 - 1.3.4. Pharmacokinetics and Pharmacodynamics
 - 1.3.5. Therapeutic Uses
 - 1.3.6. Adverse Effects
 - 1.3.7. Presentation and Dosage
- 1.4. Antipseudomonal Penicillins: Current Resistance Challenge
 - 1.4.1. Classification
 - 1.4.2. Mechanism of Action
 - 1.4.3. Antimicrobial Spectrum
 - 1.4.4. Pharmacokinetics and Pharmacodynamics
 - 1.4.5. Therapeutic Uses
 - 1.4.6. Adverse Effects
 - 1.4.7. Presentation and Dosage
- 1.5. Cephalosporins: Present and Future
 - 1.5.1. Classification
 - 1.5.2. Mechanism of Action
 - 1.5.3. Antimicrobial Spectrum
 - 1.5.4. Pharmacokinetics and Pharmacodynamics
 - 1.5.5. Therapeutic Uses
 - 1.5.6. Adverse Effects
 - 1.5.7. Presentation and Dosage
- 1.6. Oral Cephalosporins: New Developments in their Outpatient Use
 - 1.6.1. Classification
 - 1.6.2. Mechanism of Action
 - 1.6.3. Antimicrobial Spectrum
 - 1.6.4. Pharmacokinetics and Pharmacodynamics
 - 1.6.5. Therapeutic Uses
 - 1.6.6. Adverse Effects
 - 1.6.7. Presentation and Dosage
- 1.7. Monobactams.
 - 1.7.1. Classification
 - 1.7.2. Mechanism of Action
 - 1.7.3. Antimicrobial Spectrum
 - 1.7.4. Pharmacokinetics and Pharmacodynamics
 - 1.7.5. Therapeutic Uses
 - 1.7.6. Adverse Effects
 - 1.7.7. Presentation and Dosage
- 1.8. Carbapenems
 - 1.8.1. Classification
 - 1.8.2. Mechanism of Action
 - 1.8.3. Antimicrobial Spectrum
 - 1.8.4. Pharmacokinetics and Pharmacodynamics
 - 1.8.5. Therapeutic Uses
 - 1.8.6. Adverse Effects
 - 1.8.7. Presentation and Dosage
- 1.9. Bataclatamases: The Recent Discovery of Strains and their Role in Resistance
 - 1.9.1. Classification
 - 1.9.2. Action on Beta-Lactams.

- 1.10. Beta-Lactamase Inhibitors
 - 1.10.1. Classification
 - 1.10.2. Mechanism of Action
 - 1.10.3. Antimicrobial Spectrum
 - 1.10.4. Pharmacokinetics and Pharmacodynamics
 - 1.10.5. Therapeutic Uses
 - 1.10.6. Adverse Effects
 - 1.10.7. Presentation and Dosage

Module 2. Antibiotics II

- 2.1. Glycopeptides: The New Drugs for GramPositive Germs
 - 2.1.1. Classification
 - 2.1.2. Mechanism of Action
 - 2.1.3. Antimicrobial Spectrum
 - 2.1.4. Pharmacokinetics and Pharmacodynamics
 - 2.1.5. Therapeutic Uses
 - 2.1.6. Adverse Effects
 - 2.1.7. Presentation and Dosage
- 2.2. Cyclic Lipopeptides: Recent Advances and its Future Role
 - 2.2.1. Classification
 - 2.2.2. Mechanism of Action
 - 2.2.3. Antimicrobial Spectrum
 - 2.2.4. Pharmacokinetics and Pharmacodynamics
 - 2.2.5. Therapeutic Uses
 - 2.2.6. Adverse Effects
 - 2.2.7. Presentation and Dosage
- 2.3. Macrolides: Their Role as an Immunomodulator in the Respiratory System
 - 2.3.1. Classification
 - 2.3.2. Mechanism of Action
 - 2.3.3. Antimicrobial Spectrum
 - 2.3.4. Pharmacokinetics and Pharmacodynamics
 - 2.3.5. Therapeutic Uses
 - 2.3.6. Adverse Effects
 - 2.3.7. Presentation and Dosage

- 2.4. Ketolides
 - 2.4.1. Classification
 - 2.4.2. Mechanism of Action
 - 2.4.3. Antimicrobial Spectrum
 - 2.4.4. Pharmacokinetics and Pharmacodynamics
 - 2.4.5. Therapeutic Uses
 - 2.4.6. Adverse Effects
 - 2.4.7. Presentation and Dosage
- 2.5. Tetracyclines: Old and New Indications According to the Most Recent Advances in Emerging Diseases
 - 2.5.1. Classification
 - 2.5.2. Mechanism of Action
 - 2.5.3. Antimicrobial Spectrum
 - 2.5.4. Pharmacokinetics and Pharmacodynamics
 - 2.5.5. Therapeutic Uses
 - 2.5.6. Adverse Effects
 - 2.5.7. Presentation and Dosage
- 2.6. Aminoglycosides: Facts and Realities of their Current and Future Utilization
 - 2.6.1. Classification
 - 2.6.2. Mechanism of Action
 - 2.6.3. Antimicrobial Spectrum
 - 2.6.4. Pharmacokinetics and Pharmacodynamics
 - 2.6.5. Current Therapeutic Uses and Future Trends
 - 2.6.6. Adverse Effects
 - 2.6.7. Presentation and Dosage
- 2.7. Quinolones: All Generations and Practical Use
 - 2.7.1. Classification
 - 2.7.2. Mechanism of Action.
 - 2.7.3. Antimicrobial Spectrum
 - 2.7.4. Pharmacokinetics and Pharmacodynamics
 - 2.7.5. Therapeutic Uses
 - 2.7.6. Adverse Effects
 - 2.7.7. Presentation and Dosage

- 2.8. Respiratory Quinolones: Latest Recommendations on their Use
 - 2.8.1. Classification
 - 2.8.2. Mechanism of Action
 - 2.8.3. Antimicrobial Spectrum
 - 2.8.4. Pharmacokinetics and Pharmacodynamics
 - 2.8.5. Therapeutic Uses
 - 2.8.6. Adverse Effects
 - 2.8.7. Presentation and Dosage
- 2.9. Streptogramins
 - 2.9.1. Classification
 - 2.9.2. Mechanism of Action
 - 2.9.3. Antimicrobial Spectrum
 - 2.9.4. Pharmacokinetics and Pharmacodynamics
 - 2.9.5. Therapeutic Uses
 - 2.9.6. Adverse Effects
 - 2.9.7. Presentation and Dosage

Module 3. Antibiotics III

- 3.1. Oxazolinones
 - 3.1.1. Classification
 - 3.1.2. Mechanism of Action
 - 3.1.3. Antimicrobial Spectrum
 - 3.1.4. Pharmacokinetics and Pharmacodynamics
 - 3.1.5. Therapeutic Uses
 - 3.1.6. Adverse Effects
 - 3.1.7. Presentation and Dosage
- 3.2. Sulfas
 - 3.2.1. Classification
 - 3.2.2. Mechanism of Action
 - 3.2.3. Antimicrobial Spectrum
 - 3.2.4. Pharmacokinetics and Pharmacodynamics
 - 3.2.5. Therapeutic Uses
 - 3.2.6. Adverse Effects
 - 3.2.7. Presentation and Dosage

- 3.3. Lincosamides
 - 3.3.1. Classification
 - 3.3.2. Mechanism of Action
 - 3.3.3. Antimicrobial Spectrum
 - 3.3.4. Pharmacokinetics and Pharmacodynamics
 - 3.3.5. Therapeutic Uses
 - 3.3.6. Adverse Effects
 - 3.3.7. Presentation and Dosage
- 3.4. Rifamycins: Practical Use in TB and Other Infections Today
 - 3.4.1. Classification
 - 3.4.2. Mechanism of Action
 - 3.4.3. Antimicrobial Spectrum
 - 3.4.4. Pharmacokinetics and Pharmacodynamics
 - 3.4.5. Therapeutic Uses
 - 3.4.6. Adverse Effects
 - 3.4.7. Presentation and Dosage
- 3.5. Antifolates
 - 3.5.1. Classification
 - 3.5.2. Mechanism of Action
 - 3.5.3. Antimicrobial Spectrum
 - 3.5.4. Pharmacokinetics and Pharmacodynamics
 - 3.5.5. Therapeutic Uses
 - 3.5.6. Adverse Effects
 - 3.5.7. Presentation and Dosage
- 3.6. Antibiotics for Leprosy: Recent Advances
 - 3.6.1. Classification
 - 3.6.2. Mechanism of Action
 - 3.6.3. Antimicrobial Spectrum
 - 3.6.4. Pharmacokinetics and Pharmacodynamics
 - 3.6.5. Therapeutic Uses
 - 3.6.6. Adverse Effects
 - 3.6.7. Presentation and Dosage



- 3.7. Antituberculosis Drugs: Latest Recommendations for their Use
 - 3.7.1. Classification
 - 3.7.2. Mechanism of Action
 - 3.7.3. Antimicrobial Spectrum
 - 3.7.4. Pharmacokinetics and Pharmacodynamics
 - 3.7.5. Therapeutic Uses
 - 3.7.6. Adverse Effects
 - 3.7.7. Presentation and Dosage
- 3.8. Parenteral Antibiotic Use in Outpatients: Latest Recommendations
 - 3.8.1. Main Indications for Parenteral Antibiotics in Outpatients
 - 3.8.2. Monitoring Outpatients Receiving Parenteral Antibiotic Treatment
- 3.9. The Latest on Antibiotics for Multidrug Resistant Bacteria:
 - 3.9.1. Antibiotics for Multidrug-Resistant GramPositive Bacteria
 - 3.9.2. Antibiotics for Multidrug-Resistant GramNegative Bacteria



Be part of an exclusive group of professional TECH graduates and get the professional improvement you want for your career".

05

Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

This teaching system is used 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.





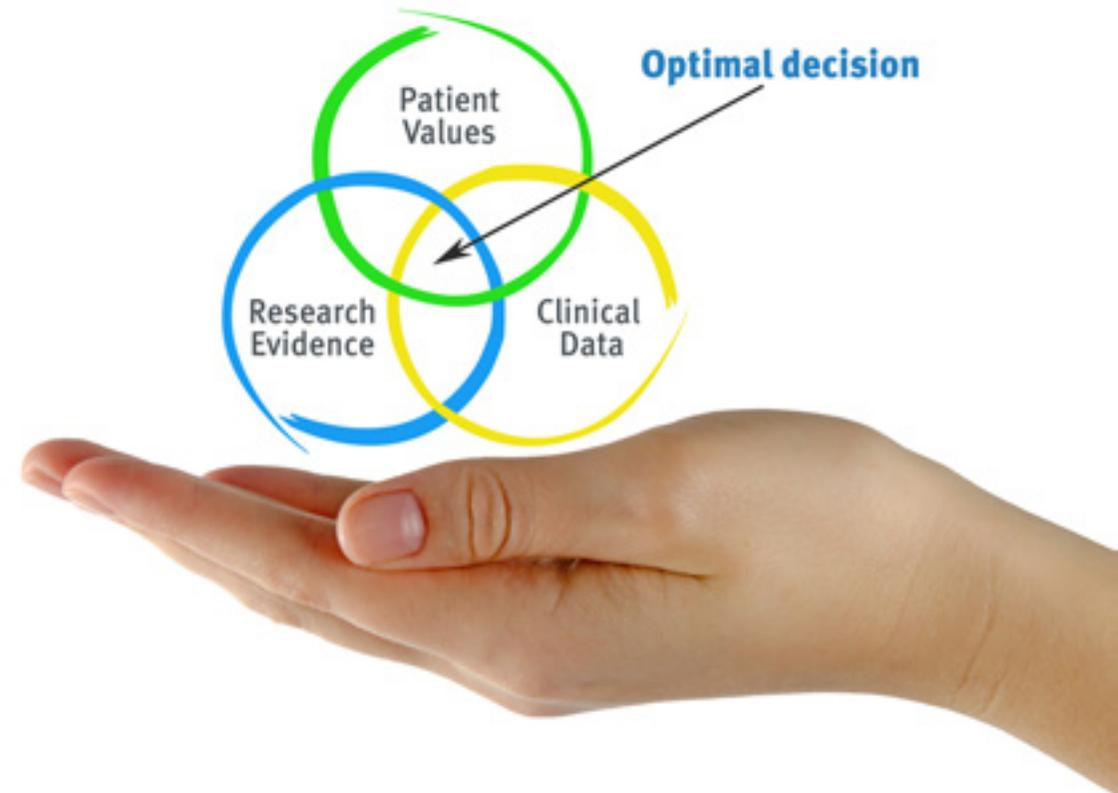
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Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization".

At TECH we use the Case Method

In a given 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 abundant scientific evidence on the effectiveness of the method. Pharmacists learn better, more quickly and more sustainably over time.

With TECH you can 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 potential or because of its uniqueness or rarity. It is essential that the case is based on current professional life, attempting to recreate the actual conditions in a pharmacist'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. Pharmacists who follow this method not only achieve the assimilation of concepts, but also develop their mental capacity through exercises to evaluate real situations and apply their knowledge.
2. The learning process has a clear focus on 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.



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.

Pharmacists 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 115,000 pharmacists with unprecedented success, in all clinical specialties. Our pedagogical methodology is developed in a highly demanding environment, with a university student body with a high socioeconomic profile and an average age of 43.5 years old.

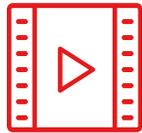
Re-learning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

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 created specifically for the course by specialist pharmacists who will be teaching the course, so that the didactic development is highly specific and accurate.

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.



Video Techniques and Procedures

We bring you closer to the latest techniques, to the newest educational advances, to the forefront of current pharmaceutical care procedures. 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

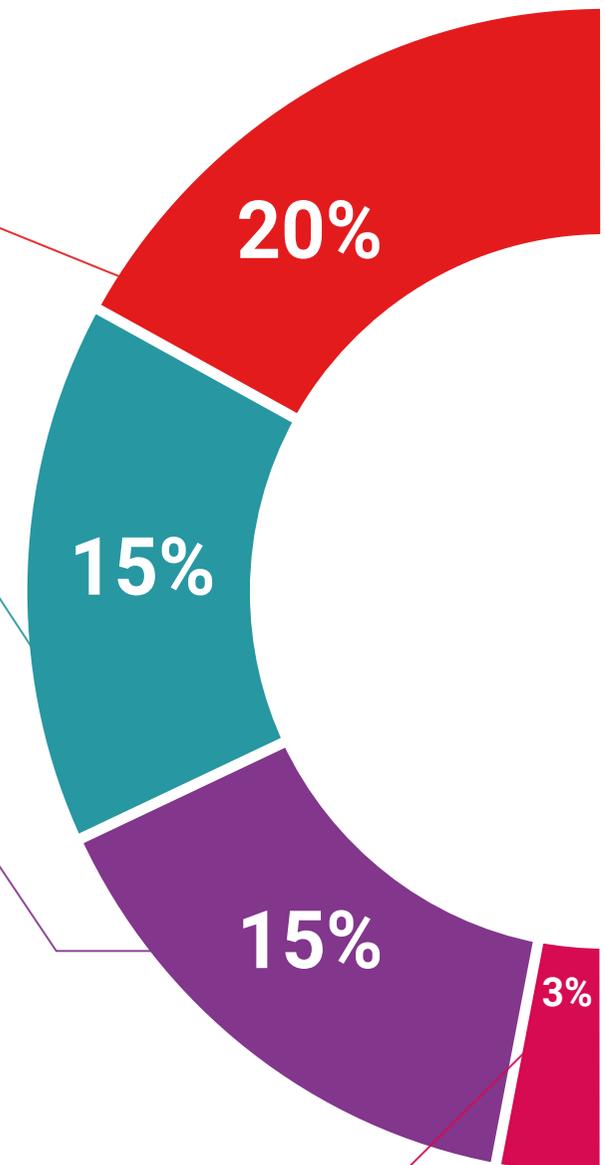
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

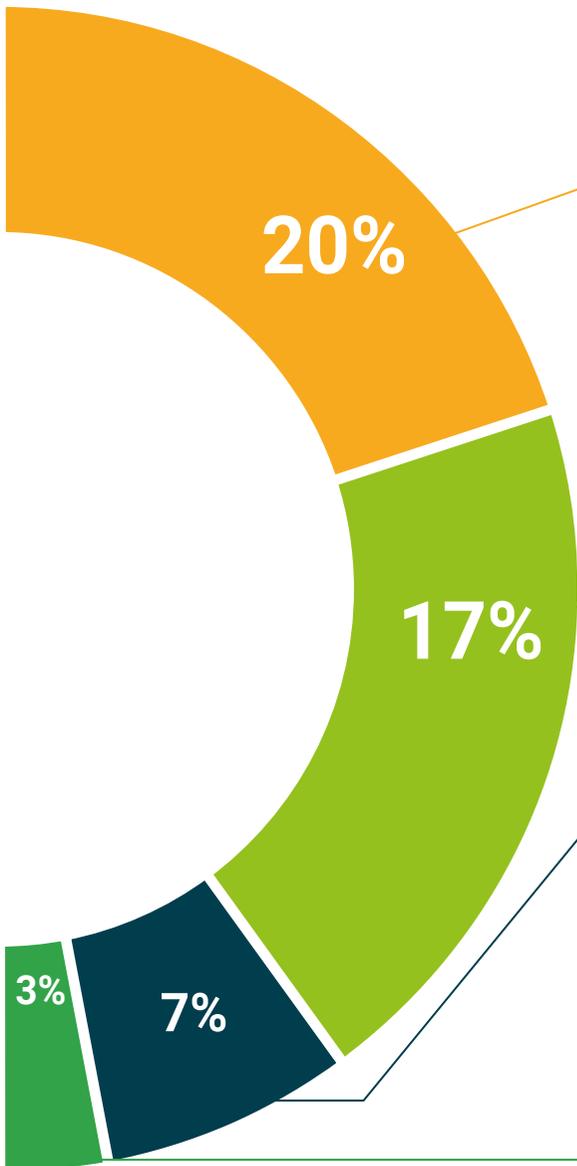
This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



Additional Reading

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





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 future difficult 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

This Postgraduate Certificate in Advances in Antibiotic Therapy guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Certificate issued by TECH - Technological University.





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Successfully complete this training and receive your university degree without travel or laborious paperwork”.

This program will allow you to obtain your **Postgraduate Certificate in Antibiotic Therapy** 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 Antibiotic Therapy**

Modality: **online**

Duration: **12 months**

Accreditation: **15 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.



Postgraduate Certificate Advances in Antibiotic Therapy

- » Modality: online
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Postgraduate Certificate

Advances in Antibiotic Therapy

