



Postgraduate Diploma

Antivirals, Antimycotics, Antiparasitics, and Antibiotic Resistance Development

Course Modality: **Online** Duration: **6 months**.

Certificate: TECH Technological University

Official No of hours: 500 h.

Website: www.techtitute.com/pk/medicine/postgraduate-diploma-antivirals-antimycotics-antiparasitics-development-antibiotic-resistance

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According to the World Health Organization, "antibiotic resistance is one of the greatest threats to global health today, food security and, in general, development". As has been determined by numerous investigations carried out in the field of Biology and Infectology, microorganisms, by their nature, have an adaptive characteristic that allows them to mutate and develop immunity to the treatments that are used for palliation, decreasing drug efficacy and making it the clinical guideline for their management increasingly difficult. Despite being an intrinsic phenomenon of viruses, bacteria, fungi and parasites, the misuse and exaggeration of antibiotics has led to an acceleration of this consequence, highlighting the urgent need to develop new chemical guidelines to mitigate their effects.

Based on this, medical professionals play a fundamental role, not only because they are the ones who establish the treatments, but because they can act conscientiously in guiding patients to correctly use different drugs. And in order for them to update them on these progress that have been made in this field in relation to super resistance and the most innovative and effective antimicrobial alternatives, TECH has designed a complete and comprehensive curriculum perfect for this. From this, arises this Postgraduate Diploma in Antivirals, Antimycotics, Antiparasitics and Antibiotic Resistance Development, a program through which you can delve into the latest advances of the different treatments, as well as the most effective clinical guidelines for combating microbial defence of viruses, bacteria, fungi and parasites.

For this purpose, it will have 500 hours of the best theoretical, practical and additional content, the latter presented in different formats: in-detail videos, research articles, complementary readings, images, dynamic summaries of each unit, FAQs and more! Everything has been compacted into a 100% online program, accessible from a state-of-the-art Virtual Campus and compatible with any device with internet connection. In this way, students will not have to worry about tight schedules or face-to-face classes, updating their knowledge in a program that adapts not only to their needs, but to the demands of the current medical sector.

This Postgraduate Diploma in Antivirals, Antimycotics, Antiparasitics and Antibiotic Resistance Development contains the most complete and up-to-date scientific program on the market. The most important features include:

- The development of case studies presented by experts in Clinical Infectology
- 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



A program at the forefront of Clinical Infectology, with which you will have the opportunity to update your knowledge regarding the chemical composition of different antibiotic treatments"



Would you like to delve into the latest advances of treatments for the management of diseases such as Leishmaniasis? If the answer is yes, this program is perfect for you"

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.

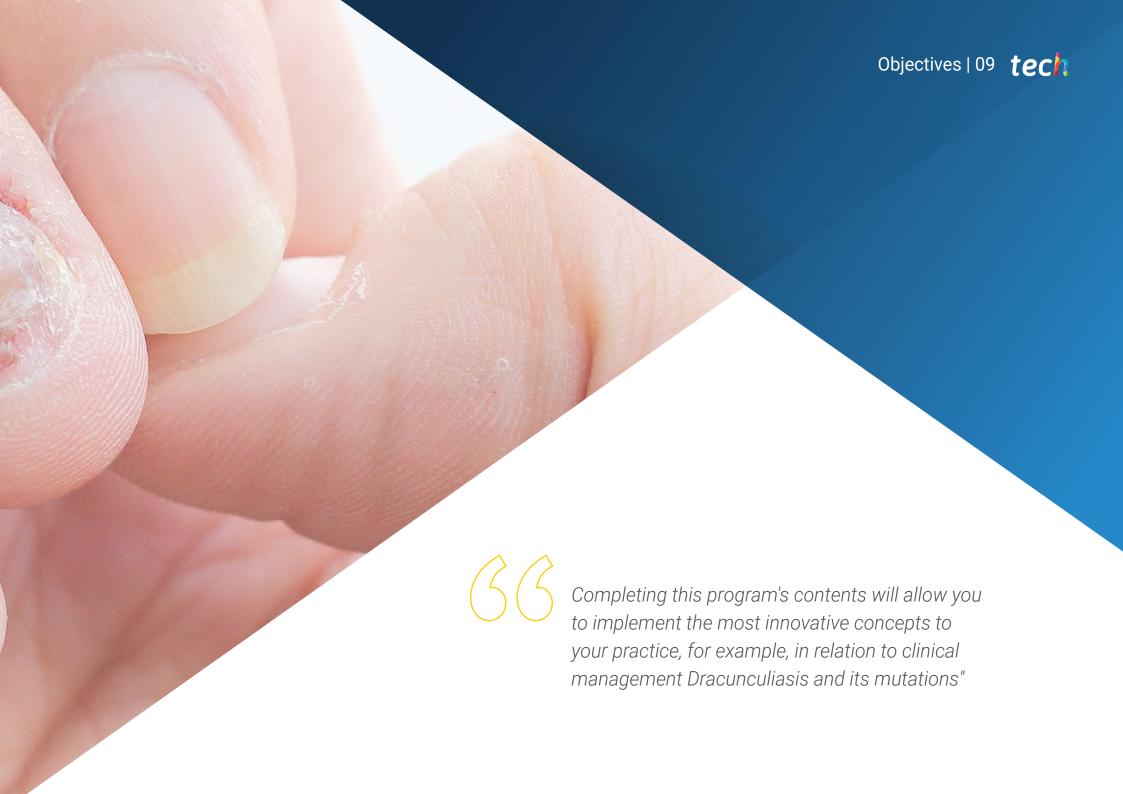
This program is designed around Problem-Based Learning, whereby professionals must try to solve the different professional practice situations that arise during the academic year. For this purpose, the student will be assisted by an innovative interactive video system created by renowned and experienced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

You will work intensively on the concept of antibiotic resistance, knowing, in-detail, the most innovative guidelines for its prevention and management.

TECH will provide you with 500 hours of the best theoretical, practical and additional content to delve into the curriculum in a personalized way and expand each section according to your needs.







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General objectives

- Compact the most innovative and effective information related to the fight against antibiotic resistance in a single program
- Make all the necessary resources available to students, in-detail and with the latest the innovations related to antiviral, antifungal and antiparasitic treatments



A unique opportunity to update your handbook based on the latest in infectious epidemiology in the current medical landscape"







Specific objectives

Module 1. Antivirals

- Describe the main mechanisms of antimicrobial resistance
- Highlight the importance of rational therapeutics in the rational use of antimicrobials

Module 2. Antimycotics

- Justify the importance of controlling the use of antimicrobials as a means of reducing antibiotic resistance
- Emphasize the role of immunity and new alternatives for the treatment of infections

Module 3. Antiparasitics II

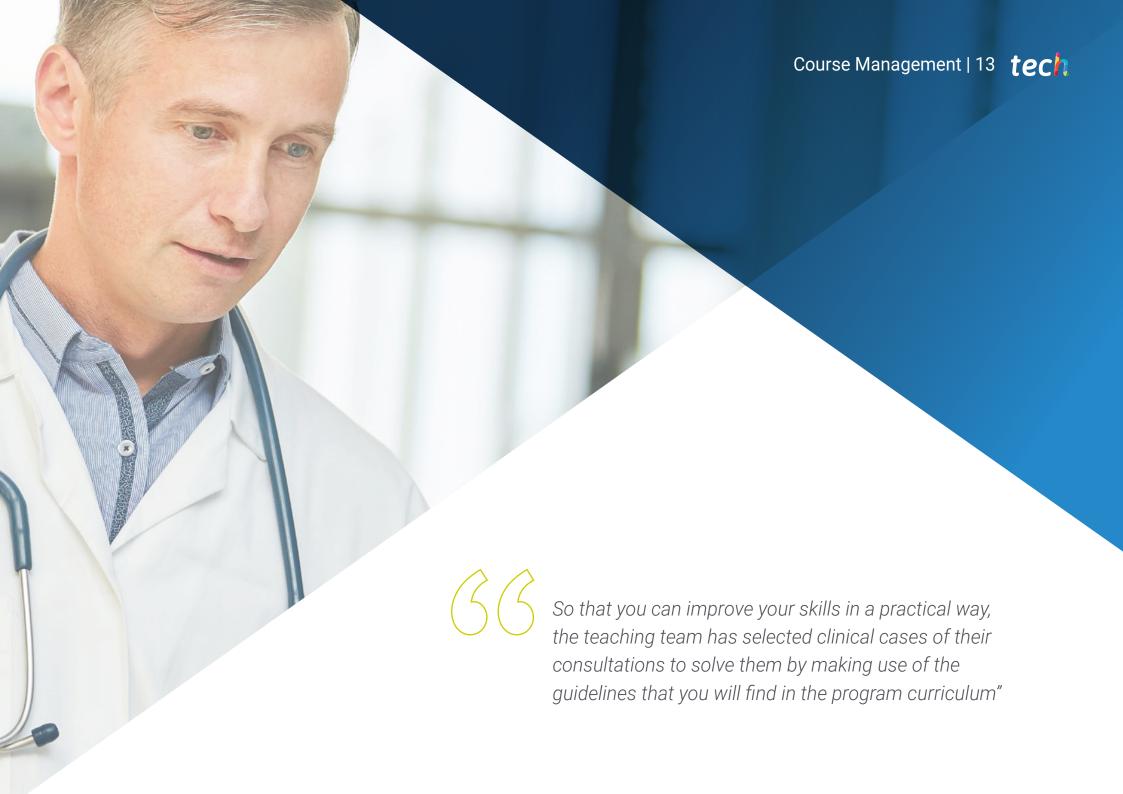
- Explain the production process of new antibiotics
- Delve into the treatment of the most significant infectious diseases with the latest advances in scientific medical knowledge

Module 4. Antibiotic Resistance

- Address the crucial issue of super-resistant microbes and their relation to antimicrobial use based on the most up-to-date concepts
- Emphasise the development of future antibiotics and other therapeutic modalities for infectious diseases







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Management



Dr. Quintero Casanova, Jesús

- · Head of the Infectious Diseases Department, Héroes del Baire Hospital
- Medical specialist in Africa (Chad) and Venezuela
- Master's Degree in Tropical Diseases and Clinical Infectious Diseases, Pedro Kuori Institute, Havana, Cuba
- · Professor of medicine and internal medicine speciality at the Isle of Youth Faculty of Medical Sciences
- Professor in the Master's Degree in Infectious Diseases Master's Degree at the Faculty of Medical Sciences of Isla de la Juventud
- · Member of the Cuban Society of Internal Medicine
- Degree in Medicine and Surgery, Medical University of Havana

Professors

Ms. Lawrence Carmenate, Araelis

- Microbiology Specialist
- Professor of Biological Agents in the Faculty of Medical Sciences on the Isle of Youth
- 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

Ms. González Fiallo, Sayli

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

Dr. Valle Vargas, Mariano

- Head of the Internal Medicine Department of the Héroes del Baire Hospital
- Specialist in in Internal Medicine at "Héroes del Baire Hospital"
- Medical specialist in Venezuela
- Professor of medicine and internal medicine speciality at the Isle of Youth Faculty of Medical Sciences
- Professor of the Master's Degree in Infectious Diseases in the Faculty of Medical Sciences in Isla de la Juventud
- Degree in Medicine and Surgery, University of Havana
- Diploma in Epidemiology
- Master's Degree in Health Biostatistics
- Member of the Cuban Society of Internal Medicine
- Member of the Cuban Society of Paediatricians

Dr. Cantalapiedra Torres, Alejandro

- Specialist in Pediatrics, Héroes del Baire Hospital
- Professor in the Medicine Degree and Pediatrics Specialty in the Faculty of Medical Sciences in Isla de la Juventud
- Member of the Cuban Society of Pediatrics
- Medical specialist in Haiti
- Medical Specialist in Antigua and Barbuda
- Degree in Medicine and Surgery, University of Havana
- Certificate in Medical Teaching
- Certificate in Health Management
- Master's Degree in infectious diseases

Dr. Dranguet Bouly, José Ismael

- * Specialist in Internal Medicine and Intensive Therapy, Héroes del Baire Hospital
- Medical specialist in Mozambique
- Professor of medicine and internal medicine speciality at the Isle of Youth Faculty of Medical Sciences
- Professor of the Master's Degree in Infectious Diseases in the Faculty of Medical Sciences in Isla de la Juventud
- Professor at the Catholic University of Santiago de Guayaquil, Ecuador.
- Member of the Cuban Society of Paediatricians
- Member of the Cuban Society of Internal medicine and the Cuban Society of Intensive Therapy
- Degree in Medicine and Surgery, University of Havana
- * Master's Degree in Infectious Diseases from the Pedro Kouri Institute of Cuba

Dr. Luís Dávila, Heenry

- Specialist in Gynecology and Obstetrics at Héroes del Baire Hospital
- Head of the Neck Pathology Service, Heroes del Baire Hospital
- Medical specialist in Guatemala
- Member of the Cuban Society of Gynecology and Obstetrics
- Member of the Cuban Society of Paediatricians
- Professor of Medicine, Faculty of Medical Sciences, Isla de la Juventud
- * Degree in Medicine and Surgery, University of Havana
- Master's Degree in comprehensive care for women

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Dr. Jiménez Valdés, Erlivan

- Specialist in Pediatrics, Héroes del Baire Hospital
- 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
- Degree in Medicine and Surgery, University of Havana
- Master's Degree in comprehensive childcare

Dr. Batista Valladares, Adrián

- Head of Senior Citizen Services in Isla de la Juventud
- Professor of the career of medicine and specialty of family medicine at the Isle of Youth Faculty of Medical Sciences.
- Professor of the Master's Degree in Infectious Diseases in the Faculty of Medical Sciences in Isla de la Juventud
- Degree in Medicine and Surgery, University of Havana
- Certificate in Diagnostic Ultrasound
- Diploma in healthcare management
- Master's Degree in Clinical Infectology
- Member of the Cuban Society of Family Medicine

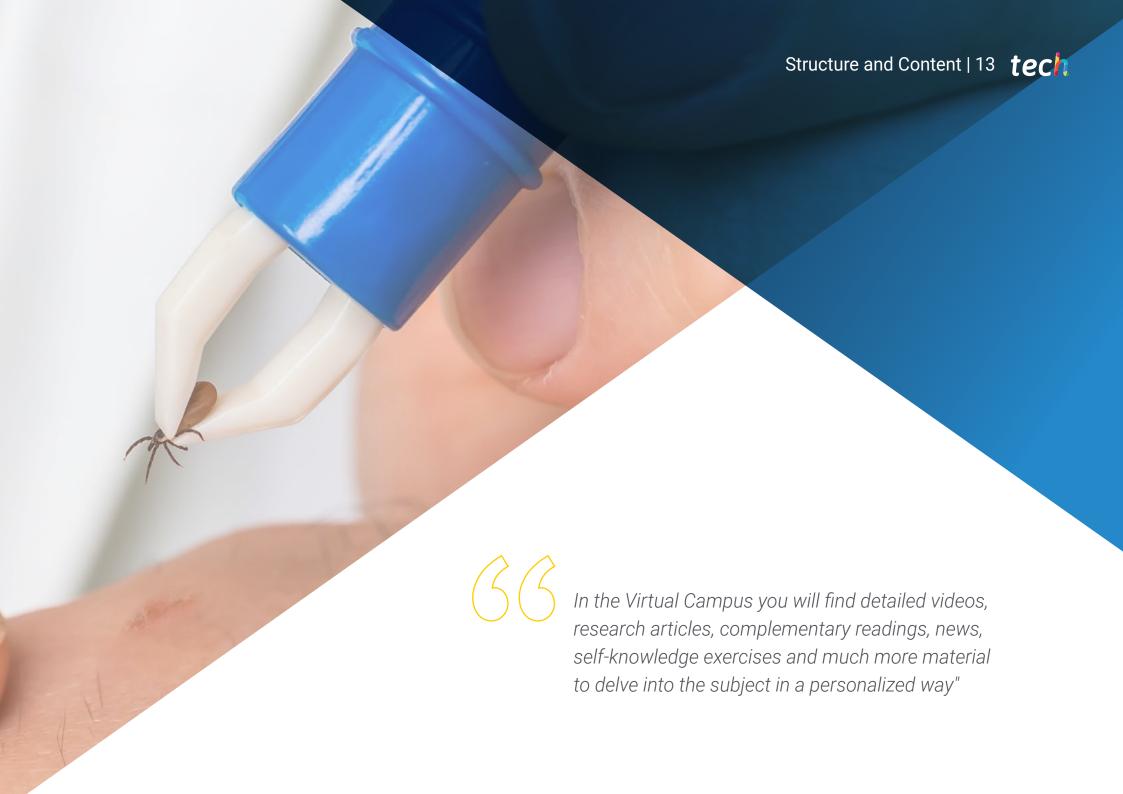






Make the most of this opportunity to learn about the latest advances in this subject to apply it to your daily practice"





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Module 1. Antivirals

- 1.1. General Features of Antivirals
 - 1.1.1. Classification
 - 1.1.2. Main Indications of Antivirals
- 1.2. Mechanisms of action
 - 1.2.1. Mechanisms of Action of Antivirals
- 1.3. Antivirals for Hepatitis: New Recommendations and Future Research Projections
 - 1.3.1. Specific Viral Hepatitis
 - 1.3.2. Hepatitis B Treatment
 - 1.3.3. Hepatitis C Treatment
- 1.4. Antivirals for Respiratory Infections: Current Scientific Evidence
 - 1.4.1. Main Respiratory Viruses
 - 1.4.2. Influenza Treatment
 - 1.4.3. Other Respiratory System Virus Treatments
- 1.5. Antivirals for Herpes Viruses: Recent Changes in Management
 - 1.5.1. Main Herpes Virus Infections
 - 1.5.2. Herpes Simplex Infection Treatment
 - 1.5.3. Treatment of Varicella Zoster Virus Infections
- 1.6. Antiretrovirals for HIV: Certainties and Controversies. Future Challenges
 - 1.6.1. Classification of Antiretrovirals
 - 1.6.2 Mechanisms of Action of Antiretrovirals
 - 1.6.3. Antiretroviral Treatment of HIV Infection
 - 164 Adverse Reactions
 - 1.6.5. Antiretroviral Treatment Failure
- 1.7. Topical Antivirals
 - 1.7.1. Main Viral Infections of the Skin and Mucous Membranes
 - 1.7.2. Topical Antivirals
- 1.8. Update on Interferons: Their Use in Viral and Non-Infectious Diseases
 - 1.8.1. Classification and Action of Interferons
 - 1.8.2. Uses of Interferons
 - 1.8.3. Adverse Reactions of Interferons

- 1.9. New Areas of Antiviral Development
 - 1.9.1. Antibiotics in Viral Hemorrhagic Diseases
 - 1.9.2. Future Prospects for Antiviral Chemotherapy

Module 2. Antimycotics

- 2.1. General Elements
 - 2.1.1. Concept
 - 2.1.2. Origins and Development
- 2.2. Classification
 - 2.2.1. Classification According to Chemical Structure
 - 2.2.2. Classification According to Action: Local and Systemic
- 2.3. Mechanisms of action
 - 2.3.1. Mechanisms of Action of Antifungal Agents
- 2.4. Systemic Antifungal Agents: News on their Toxicity and their Present and Future Indications
 - 2.4.1. Antimicrobial Spectrum
 - 2.4.2. Pharmacokinetics and Pharmacodynamics
 - 2.4.3. Therapeutic Uses
 - 2.4.4. Adverse Effects
 - 2.4.5. Presentation and Dosage
- 2.5. Amphotericin B: Novel Concepts in its Use
 - 2.5.1. Mechanism of Action
 - 2.5.2. Antimicrobial Spectrum
 - 2.5.3. Pharmacokinetics and Pharmacodynamics
 - 2.5.4. Therapeutic Uses
 - 2.5.5. Adverse Effects
 - 2.5.6. Presentation and Dosage
- 2.6. Deep Mycosis Treatment: Current Events and Future Perspectives
 - 2.6.1. Aspergillosis
 - 2.6.2. Coccidioidomycosis
 - 2.6.3. Cryptococcosis
 - 2.6.4. Histoplasmosis

Structure and Content | 15 tech

- 2.7. Local Antifungals
 - 2.7.1. Antimicrobial Spectrum
 - 2.7.2. Pharmacokinetics and Pharmacodynamics
 - 2.7.3. Therapeutic Uses
 - 2.7.4. Adverse Effects
 - 2.7.5. Presentation and Dosage
- 2.8. Treatment of Skin and Mucous Mycosis
 - 2.8.1. Tinea Capitis
 - 2.8.2. Skin Tinea
 - 2.8.3. Onychomycosis
- 2.9. Liver Toxicity of Systemic Antifungal Agents: Future Challenges
 - 2.9.1. Liver Metabolism of Antifungal Agents
 - 2.9.2. Hepatotoxicity of Antifungal Agents

Module 3. Antiparasitics II

- 3.1. General Elements
 - 3.1.1. Concept
 - 3.1.2. Origins and Development
- 3.2. Classification
 - 3.2.1. Classification by Chemical Structure
 - 3.2.2. Classification by Action Against Different Parasites
- 3.3. Mechanisms of action
 - 3.3.1. Action Mechanisms of Antiparasitics
- 3.4. Antiparasitics for Intestinal Parasitism: New Advances
 - 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. Antimalarials: Latest WHO Recommendations
 - 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
- .6. Update on Antiparasitics for Filariasis
 - 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. Latest Advances in Antiparasitics for Trypanosomiasis
 - 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. Antiparasitics for Schistosomiasis
 - 3.8.1. Classification
 - 3.8.2. Mechanism of Action
 - 3.8.3. Antimicrobial Spectrum
 - 3.8.4. Pharmacokinetics and Pharmacodynamics
 - 3.8.5. Therapeutic Uses
 - 3.8.6. Adverse Effects
 - 3.8.7. Presentation and Dosage

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- 3.9. Antiparasitics for Leishmaniasis
 - 3.9.1. Classification
 - 3.9.2. Mechanism of Action
 - 3.9.3. Antimicrobial Spectrum
 - 3.9.4. Pharmacokinetics and Pharmacodynamics
 - 3.9.5. Therapeutic Uses
 - 3.9.6. Adverse Effects
 - 3.9.7. Presentation and Dosage
- 3.10. Treatment of Other Less Common Parasitosis
 - 3.10.1. Dracunculosis
 - 3.10.2. Quiste hidatídico
 - 3.10.3. Other Tissue Parasites

Module 4. Antibiotic Resistance

- 4.1. Emergence and Development of Antibiotic Resistance
 - 4.1.1. Concept
 - 4.1.2. Classification
 - 4.1.3. Origins and Development
- 4.2. Mechanisms of Antibiotic Resistance: An Update
 - 4.2.1. Mechanisms of Antimicrobial Resistance
 - 4.2.2. New Resistance Mechanisms
- 4.3. Staphylococcal Resistance: Yesterday, Today, and Tomorrow
 - 4.3.1. Evolution of Staphylococcal Resistance
 - 4.3.2. Mechanisms of Staphylococcal Resistance
- 4.4. Resistance of Gram-Positive Germs: Latest Recommendations
 - 4.4.1. Evolution and Resistance of GramPositive Germs
 - 4.4.2. Resistance Mechanisms of GramPositive Germs
- 4.5. Resistance of Gram-Negative Germs: Current Clinical Implications
 - 4.5.1. Evolution of GramNegative Germ Resistance
 - 4.5.2. Resistance Mechanisms of GramNegative Germs





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- 4.6. Virus Resistance
 - 4.6.1. Evolution of Virus Resistance
 - 4.6.2. Virus Resistance Mechanisms
- 4.7. Fungal Resistance
 - 4.7.1. Evolution of Fungal Resistance
 - 4.7.2. Mechanisms of Fungal Resistance
- 4.8. Parasite Resistance: An Emerging Problem
 - 4.8.1. Evolution of Parasite Resistance
 - 4.8.2. Mechanisms of Parasite Resistance
 - 4.8.3. Resistance to Antimalarials
- 4.9. New Mechanisms of Antibiotic Resistance and Superbugs
 - 4.9.1. Emergence and Progression of Superbugs
 - 4.9.2. New Resistance Mechanisms of Superbugs
- 4.10. Antibiotic Resistance Control Mechanisms and Programs
 - 4.10.1. Antibiotic Resistance Control Strategies
 - 4.10.2. Global Program and International Experiences in the Control of Antibiotic Resistance



Enrolling in this Postgraduate Diploma will be accessing an international medical community, thanks to which, you can stay up to date in scientific developments around the world"





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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.



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:

- 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.



Methodology | 29 tech

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.

tech 30 | Methodology

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.









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This Postgraduate Diploma in Antivirals, Antimycotics, Antiparasitics and Antibiotic Resistance Development 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 Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: Postgraduate Diploma in Antivirals, Antimycotics, Antiparasitics and Antibiotic Resistance Development

Official No of hours: 500 h.



Antivirals, Antimycotics, Antiparasitics and Antibiotic Resistance Development

This is a qualification awarded by this University, equivalent to 500 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17 2020

Tere Guevara Navarro

his qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country

rique TECH Code: AFWORD23S techtitute.com/certifica

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



Postgraduate Diploma

Antivirals, Antimycotics, Antiparasitics, and Antibiotic Resistance Development

Course Modality: Online Duration: 6 months.

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