

# Postgraduate Diploma

Infections Caused by  
Accidents and Travel



## Postgraduate Diploma Infections Caused by Accidents and Travel

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Global University
- » Credits: 18 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-infections-accidents-travel](http://www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-infections-accidents-travel)

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01

# Introduction

Infections are becoming a global threat because the microorganisms that cause them are becoming resistant to certain drugs in certain territories, but tourism has meant that they can be found everywhere. It is important for health professionals to be updated with specializations such as this one in order to know the advances in their treatments and to avoid possible occupational accidents during their daily practice with infected people.







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*Healthcare personnel must always continue specializing in order to improve their daily practice with patients”*

The cure of infectious diseases is one of the great societal challenges of today and, to achieve a reduction in the morbidity of affected persons, or to try to alleviate their symptoms, it is necessary for the healthcare professional to have a solid grasp of the subject, adjusted to the latest developments. Regardless of their place of work, any physician may encounter having a patient with an infection originated in another country, since the evolution of tourism has caused citizens to reach all around the world and, on occasions, they do not take the necessary precautions.

Malaria and tuberculosis are among the most prevalent infectious diseases worldwide. The former is endemic in more than 100 countries and the objective is to reduce mortality by at least 20% over that observed in 2005. In turn, the latter accounts for some 8 million new cases per year and more than 1 million deaths, with 20% of cases associated with HIV/AIDS infection, with problems of resistance to treatment and lack of compliance with it, facts that forced the WHO to consider tuberculosis a world health emergency since 1993.

Furthermore, HIV/AIDS remains a pandemic in different parts of the world, with more than 1.8 million adults dying in 2016 and more than 600,000 children under the age of 15 infected in a single year. In developing countries, current treatment is out of reach for many people, and there are numerous cases of resistance to the antiretroviral drugs used.

All this is even more alarming if we take into account all the new infectious diseases that have emerged in the last 20 years, which display epidemic behavior. For this reason, it is essential for the health professional to be aware of the new treatments for the different types of infections, even for the most infrequent or unknown ones, as well as for occupational accidents that can lead to the transmission of blood-borne infections.

The **Postgraduate Diploma in Infections Caused by Accidents and Travel** endorses the latest advances in clinical infectious diseases with a didactic teaching program that positions it as an educational product of the highest scientific rigor at international level. The program also provides training and professional development in different areas:

- Firstly, Clinical features, in order to address the health-infectious disease process in a particular person through the study of the most prevalent and deadly infectious diseases and, secondly, in Epidemiologic features, to study the behavior of the same phenomenon in a particular population.
- Training and professional development in the indication, performance and interpretation of the main state-of-the-art diagnostic tests to complement clinical skills in the diagnostic process. Emphasizing the most up-to-date microbiological tests used to rapidly diagnose germs and study antimicrobial resistance.
- Training and professional development in the complex and determining pathophysiological relationships between immune response and infectious agents.
- Training and professional development in germs related to neoplasms and chronic non-communicable diseases.
- Training and professional development in the development and production of vaccines for the control of morbidity and mortality due to infectious diseases.
- Training and professional development in the important field of antimicrobial therapeutics, providing the best available information on the development and production of new antibiotics.

“*Immerse yourself in this specialization and be the best in your medical specialty*”

“ *Infectious diseases are spreading around the world, favored by tourism, which makes it essential for healthcare professionals to update their knowledge in order to offer improved patient care”*

Its teaching staff is made up of prestigious and renowned Cuban professionals with a long career in health care, teaching and research, who have worked in many countries on several continents, developing professional and teaching experience that they deliver in an extraordinary way in this **Postgraduate Diploma**.

The methodological design of this **Postgraduate Diploma**, developed by a multidisciplinary team of e-learning experts, integrates the latest advances in educational technology for the creation of numerous educational multimedia tools that allow the professional, based primarily on the problem-based learning method, to address real problems in their daily clinical practice, which will allow them to advance by acquiring knowledge and developing skills that will impact their future professional work.

It should be noted that the contents generated for this **Postgraduate Diploma**, as well as the videos, self-evaluations, clinical cases and exams, have been thoroughly reviewed, updated, and integrated by the teachers and the team of experts that make up the working group, to facilitate the learning process with a step-by-step approach in order to achieve the teaching program objectives.

*Specialize with us in Infections caused by accidents and travel and excel in your profession.*

*If you are looking for an online specialization adapted to your needs, do not hesitate, this **Postgraduate Diploma** will allow you to combine your studies with your profession.*

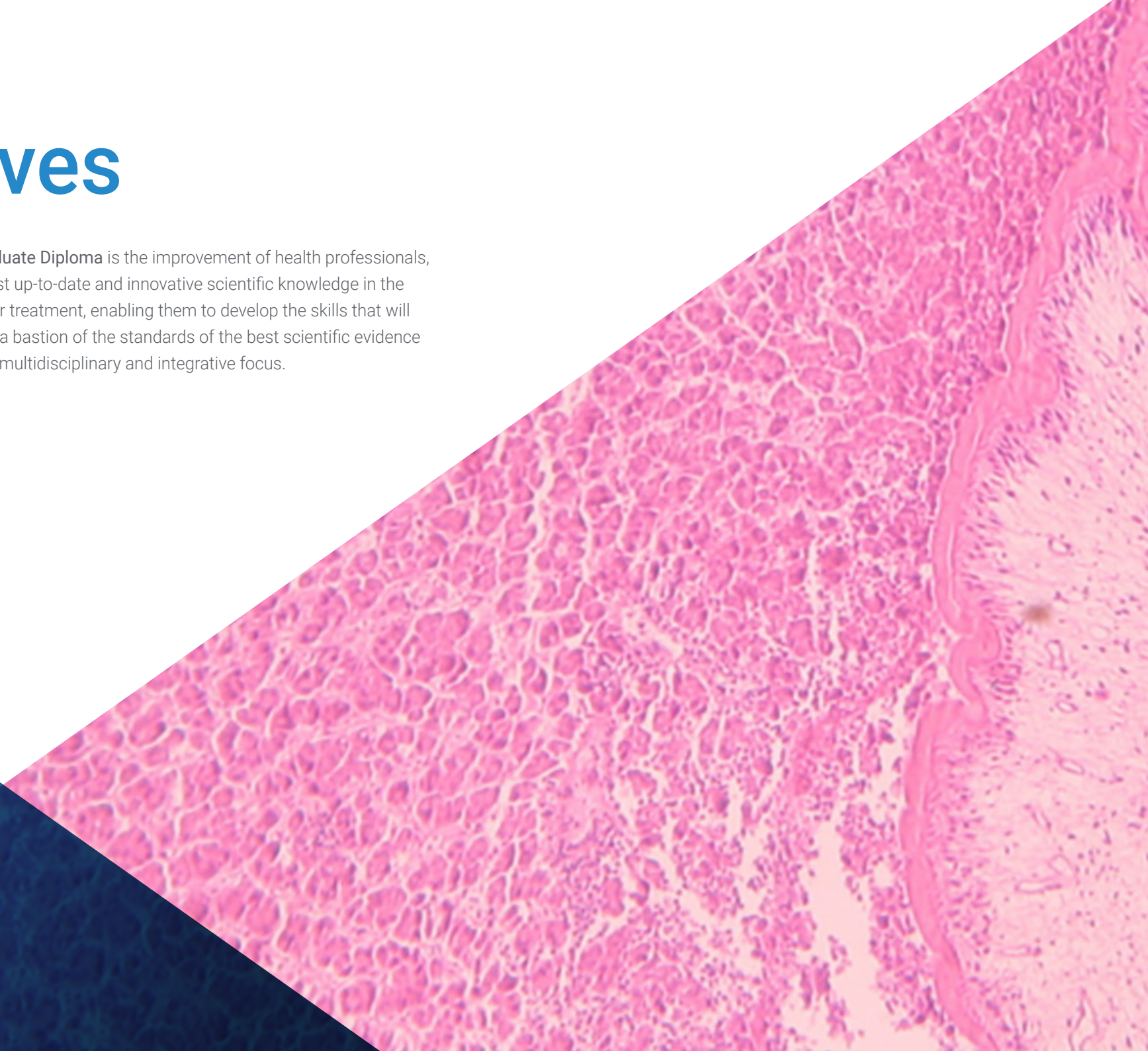




02

# Objectives

The main objective of this **Postgraduate Diploma** is the improvement of health professionals, based on the acquisition of the most up-to-date and innovative scientific knowledge in the field of infectious diseases and their treatment, enabling them to develop the skills that will turn their daily clinical practice into a bastion of the standards of the best scientific evidence available, with a critical, innovative, multidisciplinary and integrative focus.





A large, diagonal, pink-tinted microscopic image of tissue, likely showing glandular structures, occupies the left and top-left portions of the slide. The background is split diagonally into a dark blue upper-right section and a white lower-right section.

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*With this specialization, healthcare professionals will be able to improve their daily practice by gaining knowledge in the prevention, diagnosis and treatment of infections”*





## General Objective

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- Guarantee professional improvement through up-to-date and in-depth knowledge of the best scientific evidence , for the prevention, diagnosis, and treatment of infectious diseases with a multidisciplinary and integrative approach that facilitates the control of these pathologies.





## Specific Objectives

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- ♦ Provide students with advanced, in-depth, updated, and multidisciplinary information that allows them to comprehensively approach the process of health-infectious diseases.
- ♦ Provide training and practical theoretical improvement that will enable a reliable clinical diagnosis supported by the efficient use of diagnostic methods to indicate an effective integral treatment.
- ♦ Assess and interpret the epidemiological characteristics and conditions of the different continents where the appearance and development of infectious diseases often occur.
- ♦ Explain the complex interrelationships between infections and different types of immunosuppression.
- ♦ Address the important role of microbiology and the infectologist in the control of infectious diseases.
- ♦ Describe the main elements that favour occupational accidents and the transmission of blood-borne pathogens.
- ♦ Highlight the importance of morbidity and mortality due to infections in international travelers.
- ♦ Describe the clinical, diagnostic and treatment features of sexually transmitted infections.
- ♦ Identify the main germs involved in foodborne infections and their clinical significance.
- ♦ Explain the pathophysiological and pathogenic interrelationships between tuberculosis co-infection and HIV/AIDS infection.
- ♦ Substantiate the importance of the control of viral haemorrhagic diseases and the detailed study of the most frequent and deadly diseases for the reduction of morbidity and mortality worldwide.
- ♦ Delve deeper into the study of the most important parasitic diseases.
- ♦ Expose the crucial issue of super-resistant microbes and their connection to the use of antimicrobials.
- ♦ Highlighting the development of vaccines for new diseases.
- ♦ Explain the clinical, diagnostic and treatment elements of rare or uncommon infectious diseases.
- ♦ Emphasise the future challenges of infectious diseases in reducing infectious morbidity and mortality.



*Take advantage of the opportunity and take the step to get up-to-date on the latest developments in Infections Caused by Accidents and Travel”*



03

# Course Management

The program includes renowned and recognized medical specialists, who have numerous publications, teaching experience, and professional experience in countries where many of the diseases studied have a high morbimortality. The teaching staff is made up of a multidisciplinary team from various medical specialities, such as internal medicine, paediatrics, general surgery, gynaecology and obstetrics, microbiology, pathological anatomy, pharmacology, among others.







“

*Prestigious doctors have pooled their knowledge to develop this Postgraduate Diploma to keep you up to date with the latest developments in Infections Caused by Accidents and Travel”*

## Management



### Dr. Quintero Casanova, Jesús

- Degree in Medicine and Surgery from the Medical University of Havana. Cuba
- Specialist in Internal Medicine. Heroes 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 (Chad) and Venezuela in 2009, 2013-15.
- 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 Prize in Cuba, 2002
- Medical Science Teaching Award. Cuba



## Professors

### Dr. Rico, Alicia

- ♦ Specialist in the Microbiology and Parasitology Department at La Paz University Hospital. Madrid 2020
- ♦ Degree in Medicine from the Complutense University Madrid. 1998
- ♦ Doctorate Courses at the Complutense University of Madrid.
- ♦ Assistant and co-founder of the Infectious Diseases and Clinical Microbiology Unit. La Paz University Hospital Madrid Since 2007
- ♦ PROA team member. Since 2010
- ♦ Clinical teaching collaborator. Department of Medicine of the UAM. Since 2015
- ♦ Member of the Infections and Policy Committee. La Paz Hospital Since 2016
- ♦ Member of SEIMC (the Spanish Society of Infectious Diseases and Clinical Microbiology). Since 2000
- ♦ Participation in several research projects

### Dr. Arribas López, José Ramón

- ♦ Head of the Infectious Diseases and Clinical Microbiology Unit. La Paz University Hospital Since 2015
- ♦ Doctor of Medicine Autonomous University of Madrid. 1993
- ♦ Degree Medicine and Surgery. Complutense University of Madrid. 1985
- ♦ Coordinator of the High-Level Isolation Unit. La Paz University Hospital– Carlos III
- ♦ Member Interministerial Committee for the management of the Ebola crisis
- ♦ Head of the AIDS and Infectious Diseases research group at IdiPAZ

### Dr. Mora Rillo, Marta

- ♦ Specialist in the area of Infectious Diseases at La Paz University Hospital. Since 2008
- ♦ Clinical Teaching Collaborator in the Department of Medicine. Autonomous University of Madrid. Since 2017
- ♦ Doctor of Medicine Autonomous University of Madrid. 2013
- ♦ Degree in Medicine and Surgery. University of Zaragoza. 1999
- ♦ Master's Degree in Infectious Diseases in Intensive Care. University of Valencia. 2018
- ♦ Online Masters in Infectious Diseases and Antimicrobial Treatment CEU Cardenal Herrera University. 2017
- ♦ Master's Degree in Tropical Medicine and International Health. Autonomous University of Madrid. 2014
- ♦ Expert in Emerging and High-Risk Virus Pathology. Autonomous University of Madrid. 2019
- ♦ Expert in Tropical Medicine. Autonomous University of Madrid. 2012

### Dr. Ramos, Juan Carlos

- ♦ Doctor at La Paz University Hospital. Madrid Since 2013
- ♦ Official Doctoral Programme in Medicine. University of Alcalá. 2006
- ♦ Degree Medicine and Surgery. Complutense University of Madrid. 1994
- ♦ Master's Degree in Infectious Diseases in Intensive Care. Fundación Universidad-Empresa Valencia. 2019
- ♦ Author of Several Scientific Publications

**Dr. Loeches Yagüe, María Belén**

- ♦ Specialist in the area of Infectious Diseases at La Paz General University Hospital, Madrid. Since 2012.
- ♦ Doctor of Medicine Autonomous University of Madrid. 2017
- ♦ Degree in Medicine. Complutense University of Madrid. 1999
- ♦ Master in Theoretical and Practical Learning in Infectious Diseases. Complutense University of Madrid. 2009
- ♦ Specialised Training in Microbiology and Infectious Diseases. Gregorio Marañón General University Hospital. 2005-2009
- ♦ Professor of Infectious Diseases at the Infanta Sofía University Hospital in Madrid. European University of Madrid. 2013-2015

**Dr. Álvarez Almanza, Evaristo Delfín**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Microbiology and Parasitology at the Pedro Kouri Institute. Cuba.
- ♦ Master's Degree in Infectious Diseases from the Pedro Kouri Institute of Cuba.
- ♦ Head of the Microbiology Department of the Héroes del Baire Hospital.
- ♦ Member of the Cuban Society of Microbiology.
- ♦ Member of the Cuban Society of Teachers.
- ♦ Medical specialist in Columbia, 2006-07.
- ♦ Professor on the Medicine Degree in the Faculty of Medical Sciences in 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 medicine.
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Medical Science Teaching Award. Cuba.

**Dr. Batista Valladares, Adrián**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Family and Community Medicine.
- ♦ Master's Degree in Clinical Infectology.
- ♦ Diploma in diagnostic ultrasound.
- ♦ Diploma in Healthcare Management.
- ♦ Head of Senior Citizen Services in Isla de la Juventud. Cuba.
- ♦ Member of the Cuban Society of Family Medicine.
- ♦ Professor of the medicine and family medicine degrees at the Faculty of Medical Sciences in 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 family medicine.
- ♦ Member of tribunals for national scientific events. Cuba.

**Dr. Caro Díaz, Daylien**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Medical Emergencies and Intensive Care. "Héroes del Baire" Hospital.
- ♦ Master's degree in emergency medical care.
- ♦ Member of the Cuban Society of Emergency and Intensive Care Medicine.
- ♦ Professor of Medicine and Emergency Medicine at the Faculty of Medical Sciences on the Isle of Youth.
- ♦ Member of tribunals for national scientific events. Cuba.
- ♦ Medical Specialist in Honduras in 2012-2016.

**Dr. Dranguet Bouly, José Ismael**

- ♦ 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.
- ♦ 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 Teachers.
- ♦ Medical specialist in Mozambique, 2008-10.
- ♦ Professor on the Medicine Degree and Internal Medicine Specialty 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
- ♦ Medical Science Teaching Award. Cuba.
- ♦ Professor at the Catholic University of Santiago de Guayaquil Ecuador, 2018.

**Dr. Jiménez Valdés, Erlivan**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Pediatrician. “Héroes del Baire” Hospital.
- ♦ Master's Degree in comprehensive childcare.
- ♦ 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 in 2017.

**Dr. Dávila, Henry Luis**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Gynecology and Obstetrics at Héroes del Baire Hospital. Cuba.
- ♦ Professional Master's Degree in Comprehensive Care for Women.
- ♦ Head of the Neck Pathology Service at Héroes del Baire Hospital.
- ♦ Member of the Cuban Society of Gynecology and Obstetrics.
- ♦ Member of the Cuban Society of Teachers.
- ♦ Medical specialist in Guatemala, 2010-12.
- ♦ Professor on the Medicine Degree in the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Member of state examining boards medicine.
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ National research award. Cuba
- ♦ Medical Science Teaching Award. Cuba

**Dr. Núñez González, Lisbel**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Family and Community Medicine.
- ♦ Diploma in Pathological Anatomy.
- ♦ Dean of the Faculty of Medical Sciences in Isla de la Juventud. 2009-2011.
- ♦ Member of the Cuban Society of Family Medicine.
- ♦ Medical specialist in Venezuela in 2009, 2003-05.
- ♦ Professor of the medicine and family medicine degrees at the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Member of state examining boards for the medicine degree and family medicine.
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Medical Science Teaching Award. Cuba.



**Dr. Peña Fernández, Margarita**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Family and Community Medicine.
- ♦ Master's Degree in Clinical Infectology.
- ♦ Head of primary health care services on the Isle of Youth. Cuba.
- ♦ President of the Council of Scientific Societies on the Isle of Youth.
- ♦ Member of the Cuban Society of Family Medicine.
- ♦ Medical Specialist in Zimbabwe in 2009, 2003-05.
- ♦ Medical Specialist in Angola, 2011-13.
- ♦ Professor of the medicine and family medicine degrees at the Faculty of Medical Sciences in 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 family medicine.
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Medical Science Teaching Award. Cuba.

**Dr. Pérez Suárez, Frank**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Gastroenterology from the National Institute of Gastroenterology of Cuba.
- ♦ Head of the Gastroenterology Service at the Calixto García Hospital in Cuba.
- ♦ Member of the Cuban Society of Gastroenterology.
- ♦ Medical Specialist in Quito, Ecuador, 2013-present.
- ♦ Professor in the Medicine Degree and Pediatrics Gastroenterology in the Faculty of Medical Sciences in Isla de la Juventud.
- ♦ Member of tribunals for national scientific events. Cuba.

**Dr. Pérez Suárez, Yovany**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Internal Medicine. Héroes del Baire Hospital.
- ♦ Master's degree in comprehensive emergency care.
- ♦ Diploma in Medical Biochemistry.
- ♦ Member of the Cuban Society of Internal Medicine.
- ♦ Medical specialist in Ecuador and professor at the Secular University Eloy Alfaro of Manabí in the years 2013-2018.
- ♦ Professor on the Medicine Degree and Internal Medicine Specialty at the Faculty of Medical Sciences of Isla de la Juventud.
- ♦ Member of tribunals for national scientific events. Cuba

**Dr. Viera Paz, Adriel**

- ♦ Degree in Medicine and Surgery from the University of Havana. Cuba.
- ♦ Specialist in Family and Community Medicine and Intensive Care.
- ♦ Master's degree in comprehensive emergency care.
- ♦ Member of the Cuban Society of Family medicine and the Cuban Society of Intensive Therapy.
- ♦ Professor of Medicine and Family Medicine and Intensive Care at the Faculty of Medical Sciences of the Isle of Youth.
- ♦ 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 family medicine.
- ♦ Member of tribunals for national scientific events. Cuba
- ♦ Medical specialist in Guatemala, 2001-03.
- ♦ Medical specialist in Brazil, 2017-18.

**Dr. Valle Vargas, Mariano**

- 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.
- 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 Teachers.
- Medical specialist in Venezuela in 2009, 2007-10.
- Professor on the Medicine Degree and Internal Medicine Specialty 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
- Medical Science Teaching Award. Cuba.

**Dr. Tamayo Garrido, Ihosvani**

- Degree in Medicine and Surgery from the University of Havana. Cuba.
- Specialist in General Surgery. Héroes del Baire Hospital.
- Master's degree in emergency medical care.
- Diploma in Laparoscopic Surgery.
- Member of the Cuban Society of Surgery.
- Professor of Medicine and Surgery at the Faculty of Medical Sciences of the Isle of Youth.
- Member of tribunals for national scientific events. Cuba.
- Medical Specialist in Honduras in 2012-2016.



04

# Structure and Content

This training program has been created to provide healthcare professionals with the necessary tools for their daily practice in the treatment of infectious diseases caused by accidents or that may affect the patient while traveling abroad. Thus, the content of this **Postgraduate Diploma** comprises the most updated syllabus on the market, which has been developed by leading experts in the field at the international level, with the aim of making specialists more accurate in the diagnosis and treatment of this type of infections.





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*The Postgraduate Diploma in Infections Caused by Accidents and Travel includes the latest developments in the field”*



## Module 1. Epidemiology and microbiology of infectious diseases

- 1.1. Epidemiological, Economic and Social Conditions by Continents that Favour the Development of Infectious Diseases
  - 1.1.1. Africa
  - 1.1.2. America
  - 1.1.3. Europe and Asia
- 1.2. New and Emerging Diseases by Continent
  - 1.2.1. Morbidity and Mortality from Infectious Diseases in Africa
  - 1.2.2. Morbidity and Mortality from Infectious Diseases in the Americas
  - 1.2.3. Infectious Disease Morbidity and Mortality in Asia
  - 1.2.4. Morbidity and Mortality from Infectious Diseases in Europe
- 1.3. The Taxonomy of Infectious Agents
  - 1.3.1. Viruses
  - 1.3.2. Bacteria
  - 1.3.3. Fungi
  - 1.3.4. Parasites
- 1.4. Disease-producing Properties of Micro-organisms
  - 1.4.1. Mechanisms of Pathogenicity
  - 1.4.2. Mechanisms of Adhesion and Multiplication
  - 1.4.3. Mechanisms Enabling the Acquisition of Nutrients from the Host
  - 1.4.4. Mechanisms Inhibiting the Phagocytic Process
  - 1.4.5. Mechanisms for Evading the Immune Response
- 1.5. Microscopy and Staining
  - 1.5.1. Microscopes and Types of Microscopes
  - 1.5.2. Composite Stains
  - 1.5.3. Acid-resistant Micro-organism Staining
  - 1.5.4. Staining to Demonstrate Cellular Structures
- 1.6. Cultures and Growth of Micro-organisms
  - 1.6.1. General Culture Mediums
  - 1.6.2. Specific Culture Methods
- 1.7. Effect of Chemical and Physical Agents on Micro-organisms
  - 1.7.1. Sterilization and Disinfection
  - 1.7.2. Disinfectants and Antiseptics Used in Practice
- 1.8. Molecular Biology and Its Importance for the Infectologist

1.8.1. Bacterial Genetics

1.8.2. Polymerase Chain Reaction Tests

1.9. Indication and Interpretation of Microbiological Studies

## Module 2. Occupational Accident and Blood-borne Pathogens

- 2.1. Epidemiology of Blood Borne Pathogen Infections
- 2.2. Main Blood-Borne Infections
  - 2.2.1. Hepatitis B Virus Infection
  - 2.2.2. Hepatitis C Virus Infection
  - 2.2.3. HIV/AIDS
- 2.3. Diagnostic and Therapeutic approach to Accidents Involving Blood
  - 2.3.1. Diagnostic Follow-up of Cases
  - 2.3.2. Treatment
- 2.4. Universal Precautions in the Prevention of Accidents in the Workplace
- 2.5. Biosafety Measures and the Role of the Epidemiologist in Reducing Biohazards
  - 2.5.1. Biological Risk
  - 2.5.2. Biosafety
  - 2.5.3. Biosecurity Plans for Biological Protection

## Module 3 Infections in the International Traveller

- 3.1. Vaccines in the International Traveller
  - 3.1.1. Main Vaccines in the International Traveller.
  - 3.1.2. Vaccination Against Yellow Fever
- 3.2. Prophylaxis for Travellers to Tropical Areas
  - 3.2.1. Pharmacological Treatment According to the Geographical Area to be Visited
  - 3.2.2. Glucose-6-Phosphate Dehydrogenase Deficiency and Antimalarial Drugs
  - 3.2.3. Preventive Measures for Travellers in Tropical Areas
- 3.3. Traveller's Diarrhoea
  - 3.3.1. Epidemiology
  - 3.3.2. Etiology
  - 3.3.3. Clinical Manifestations
  - 3.3.4. Diagnosis
  - 3.3.5. Treatment
- 3.4. Health Screening of International Travellers



- 3.5. Fever on Return from International Travel
  - 3.5.1. Main Aetiologies
  - 3.5.2. Diagnostic Approach
  - 3.5.3. Imported Infectious Pathology in the International Traveller

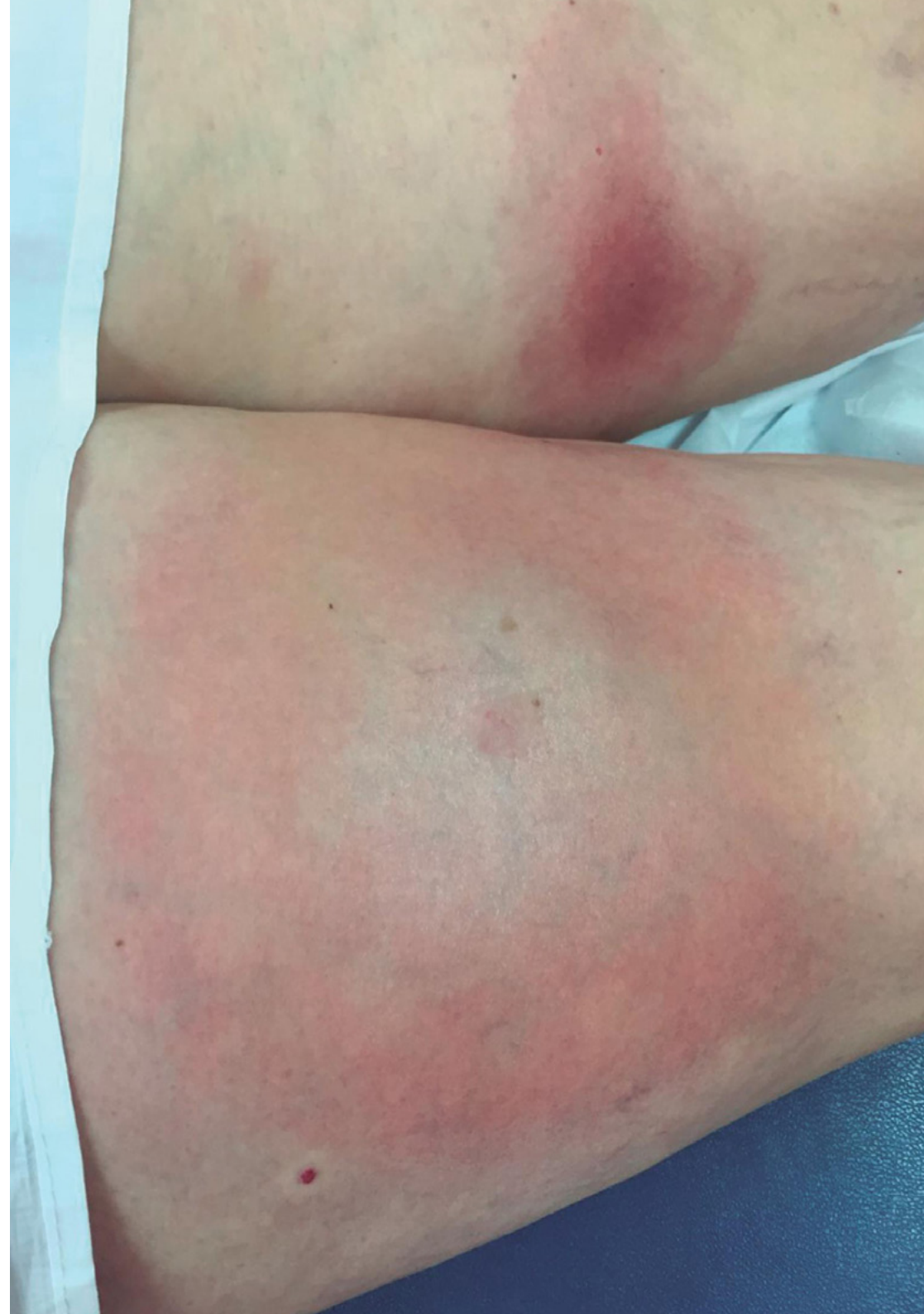
## Module 4 Multi-Resistance and Vaccines

- 4.1. The Silent Epidemic of Antibiotic Resistance
  - 4.1.1. Globalisation and Resistance
  - 4.1.2. Change from Susceptible to Resistant of the Microorganisms
- 4.2. The Main Genetic Mechanisms of Antimicrobial Resistance
  - 4.2.1. Describe the Main Mechanisms of Antimicrobial Resistance
  - 4.2.2. Selective Antimicrobial Pressure on Antimicrobial Resistance
- 4.3. Superbugs
  - 4.3.1. Pneumococcus Resistant to Penicillin and Macrolides
  - 4.3.2. Multidrug-Resistant Staphylococci
  - 4.3.3. Resistant Infections in Intensive Care Units (ICUs)
  - 4.3.4. Resistant Urinary Tract Infections
  - 4.3.5. Other Multi-Resistant Microorganisms
- 4.4. Resistant Viruses
  - 4.4.1. HIV
  - 4.4.2. Influenza
  - 4.4.3. Hepatitis Viruses
- 4.5. Multidrug-Resistant Malaria
  - 4.5.1. Chloroquine Resistance
  - 4.5.2. Resistance to Other Antimalarials
- 4.6. The Main Genetic Studies of Antimicrobial Resistance
  - 4.6.1. Interpretation of Resistance Studies
- 4.7. Global Strategies for Reducing Antimicrobial Resistance
  - 4.7.1. The Control of Prescribing Antibiotics
  - 4.7.2. Microbiological Mapping and Clinical Practice Guidelines

- 4.8. Overview of Vaccines
  - 4.8.1. Immunological Basis of Vaccination
  - 4.8.2. The Process of Vaccination Production
  - 4.8.3. Quality Control of Vaccines
  - 4.8.4. Vaccine Safety and Major Adverse Events
  - 4.8.5. Clinical and Epidemiological Studies for Vaccine Approval
- 4.9. The Use of Vaccines
  - 4.9.1. Vaccine-Preventable Diseases and Vaccination Programmes
  - 4.9.2. Global Experiences of the Effectiveness of Vaccination Programmes
  - 4.9.3. Vaccine Candidates for New Diseases

## Module 5. Rare Infectious Diseases and Other Challenges in Infectiology

- 5.1. Overview of Rare Infectious Diseases
  - 5.1.1. General Concepts
  - 5.1.2. Epidemiology of Rare or Uncommon Infectious Diseases
- 5.2. Bubonic Plague
  - 5.2.1. Definition
  - 5.2.2. Etiology
  - 5.2.3. Clinical Picture
  - 5.2.4. Diagnosis
  - 5.2.5. Treatment
- 5.3. Lyme Disease
  - 5.3.1. Definition
  - 5.3.2. Etiology
  - 5.3.3. Clinical Picture
  - 5.3.4. Diagnosis
  - 5.3.5. Treatment





- 5.4. Babesiosis
  - 5.4.1. Definition
  - 5.4.2. Etiology
  - 5.4.3. Clinical Picture
  - 5.4.4. Diagnosis
  - 5.4.5. Treatment
- 5.5. Rift Valley Fever
  - 5.5.1. Definition
  - 5.5.2. Etiology
  - 5.5.3. Clinical Picture
  - 5.5.4. Diagnosis
  - 5.5.5. Treatment
- 5.6. Diphyllbothriasis
  - 5.6.1. Definition
  - 5.6.2. Etiology
  - 5.6.3. Clinical Picture
  - 5.6.4. Diagnosis
  - 5.6.5. Treatment
- 5.7. Zygomycosis
  - 5.7.1. Definition
  - 5.7.2. Etiology
  - 5.7.3. Clinical Picture
  - 5.7.4. Diagnosis
  - 5.7.5. Treatment
- 5.8. Cysticercosis
  - 5.8.1. Definition
  - 5.8.2. Etiology
  - 5.8.3. Clinical Picture
  - 5.8.4. Diagnosis
  - 5.8.5. Treatment

- 5.9. Kuru
  - 5.9.1. Definition
  - 5.9.2. Etiology
  - 5.9.3. Clinical Picture
  - 5.9.4. Diagnosis
  - 5.9.5. Treatment

#### **Challenges in Infectology:**

- 5.10. The Re-emergence of Old Diseases: Causes and Effects
  - 5.10.1. Emerging and New Infectious Diseases that Demand New Approaches to Their Control
  - 5.10.2. The Rise of Microbiological Resistance to Antimicrobial Drugs
  - 5.10.3. Development of New Antibiotics



*A unique, key, and decisive  
Professional Master's Degree  
experience to boost your  
professional development"*

05

# Methodology

This training program 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.



“

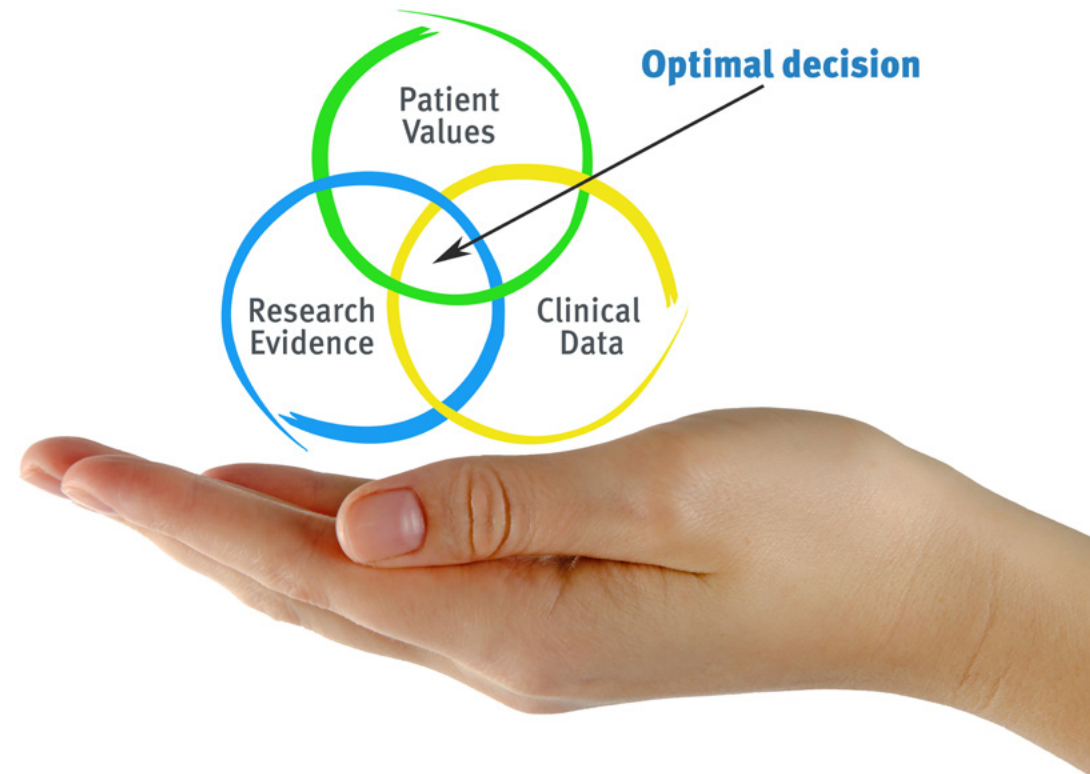
*Discover Re-learning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization”*



## At TECH we use the Case Method

In a given 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. Specialists learn better, faster, 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, trying to recreate the real conditions in professional medical 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:

1. Students who follow this method not only grasp concepts, but also develop their mental capacity by evaluating real situations and applying their knowledge.
2. The learning 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.

*The physician 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 250,000 physicians with unprecedented success, in all clinical specialties regardless of the surgical load. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

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

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

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



In this program you will have access to the best educational material, prepared with you in mind:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

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



#### Latest Techniques and Procedures on Video

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



#### Interactive Summaries

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

This unique 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

The Postgraduate Diploma in Infections Caused by Accidents and Travel guarantees, in addition to the most rigorous and up-to-date education, access to a diploma issued by TECH Global University.





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

This private qualification will allow you to obtain a **Postgraduate Diploma in Infections Caused by Accidents and Travel** 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.

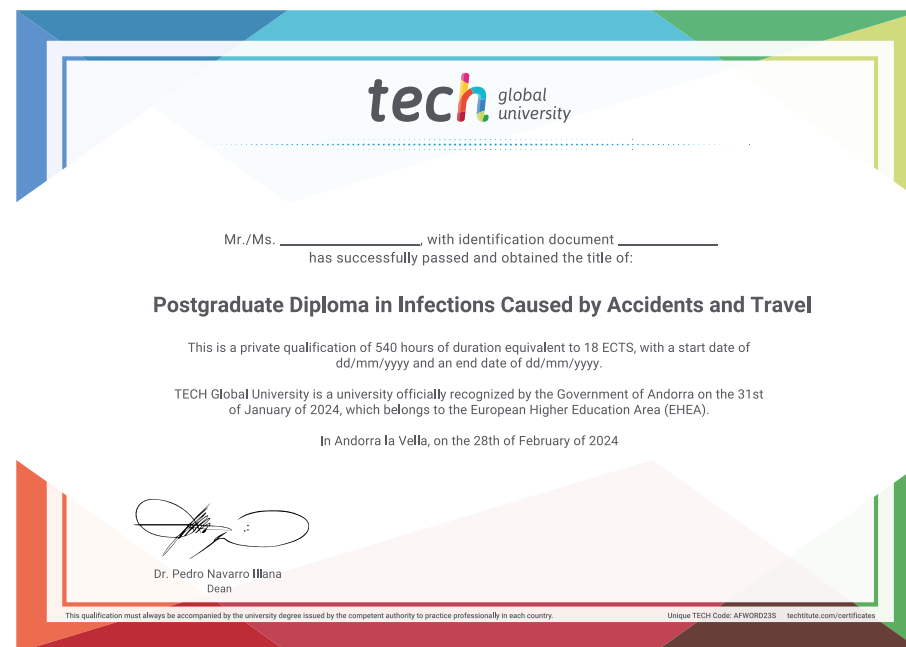
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Infections Caused by Accidents and Travel**

Modality: **online**

Duration: **6 months**

Accreditation: **18 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.



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education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
online training  
development languages  
virtual classroom



## Postgraduate Diploma Infections Caused by Accidents and Travel

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Global University**
- » Credits: **18 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

# Postgraduate Diploma

Infections Caused by  
Accidents and Travel