Postgraduate Diploma

Genetics and Respiratory Problems in Adults

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Postgraduate Diploma

Genetics and Respiratory Problems in Adults

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

Website: www.techtitute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-genetics-respiratory-problems-adults

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01

Introduction

The vast majority of respiratory diseases are related to genetic alterations. This makes many of them difficult to study to find their origins. Postgraduate Diplomas have concluded that this occurs for two reasons, the first of which is the complexity that the study entails. While the second refers to the complicated processes that this system performs in the body. Therefore, for many professionals, it is essential to continue learning about advances in this area. With the Genetics and Respiratory Problems in Adults program, the professional can broaden his or her knowledge of the genetic basis of Asthma and other related diseases, as well as the different biological treatments that have been implemented in this field.

Update your knowledge in the field of Genetics and Respiratory Problems in Adults, and discover new treatments and procedures"

Professionals in the field of genetics and respiratory diseases have focused their research on determining how genes and the environment influence the development of these conditions. Even so, it is a complex field to develop due to the complicated interaction of these factors. That is, each affected gene has an impact on the phenotype, making it difficult to find an exact origin.

With the right information, medical professionals can target their research to identify which genes affect the respiratory system more precisely. Thus, this Postgraduate Diploma in Genetics and Respiratory Problems in Adults focuses on the genetic aspects of asthma and other diseases related to the respiratory system, showing the student the different phenotypes and biomarkers involved in the detection and treatment process.

As the program progresses, the genetic linkages of COPD (Chronic Obstructive Pulmonary Disease) and the emphasis on alpha-1 anthrypsin will be reviewed in depth, describing the phenotypes of COPD. By the end of the program, the student will be able to better understand the genetic links with respiratory diseases such as idiopathic pulmonary fibrosis, primary pulmonary hypertension; as well as the role of telomeres in pulmonary aging.

With extensive work experience, we have a teaching staff that will accompany the professional in this training. They have extensive experience in the field of Genetics and Respiratory Problems in Adults, putting their knowledge and work experience at the student's disposal for a dynamic and practical learning. Therefore, this degree will give you accelerated knowledge of all aspects of Genetics and Respiratory Problems in Adults.

This program is conducted in a 100% online mode, so the student will have the ease of being able to do it at the time that best suits him, without having to pause their daily activities to attend a class. All you need is a device with internet access to start catapulting your career in an area of work that is in high demand internationally.

Boasting with the most complete and up-to-date educational program in the market, this **Postgraduate Diploma in Genetics and Respiratory Problems in Adults** stands out for the following features:

- The development of case studies presented by experts in Genetics and Respiratory Problems in Adults
- 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-evaluation 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

Genetics and Respiratory Problems have become one of the most fascinating areas of medicine to study. Training in this sector will boost the professional's career to the international level"

Learn about the complex relationship between genetics and respiratory problems and take your career to the next level"

Taking this Postgraduate Diploma in a fully online environment allows you to better manage your study time and work life.

It has the support and guidance of a group of highly qualified professionals in the field of Genetics, taking advantage of their extensive work experience for a dynamic and practical learning experience.

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.

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 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 professional will be assisted by an innovative interactive video system created by renowned and experienced experts.

02

Objectives

It is important for professionals who wish to acquire new skills and specialize in a specific area to have a program that will help them achieve these goals. Therefore, the interest of the professors who teach this Postgraduate Diploma is that students understand the content and learn from a theoretical-practical perspective. In this way, a program has been developed that allows students to update their knowledge in the profession they practice, with special emphasis on those key aspects of Genetics and Respiratory Problems. To this end, TECH establishes a series of general and specific objectives for the greater satisfaction of the future graduate, those being the following:

Learn from a theoretical-practical perspective and boost your career in an area of medicine with high professional growth"

General Objectives

- Provide in-depth knowledge on the genetic linkage of respiratory diseases
- Interpret and generate knowledge with the information provided by primary and secondary sources in the area of Genetics
- Improve evaluation for prognosis and prevention of respiratory diseases
- Understand the precision treatment of pulmonary pathology in the daily practice of medicine
- Acquire a solid knowledge of the different pulmonary pathologies and their genetic basis

Reach your goals with a theoretical-practical method and grow in your field of work"

Specific Objectives

Module 1: Genetics, Precision Medicine and Asthma

- Study in depth the epidemiological associations of asthma that suggest a genetic basis of the disease
- Explore the genetic complexity of asthma in the light of the most current knowledge
- Master the biology, therapeutic targets and clinical use of precision treatments in asthma

Module 2: Genetics, Precision Medicine And COPD

- In-depth understanding of the genetic and perinatal links of COPD.
- Studying genetic links and smoking in more depth
- Delving into hereditary COPD due to alpha-1 antitrypsin deficiency
- Know the state of the art of COPD management oriented to treatable features
- Exploring genetic linkage to physical training outcomes in COPD

Module 3: Genetics, Precision Medicine and Other Respiratory Diseases

- Further investigate genetic links to pulmonary vascular diseases and interstitial diseases
- In-depth understanding of genetic linkages and susceptibility to infection
- Study telomeres as prognostic markers in respiratory diseases in greater depth
- Master the mechanisms and results of new mRNA-based vaccines

03

Course Management

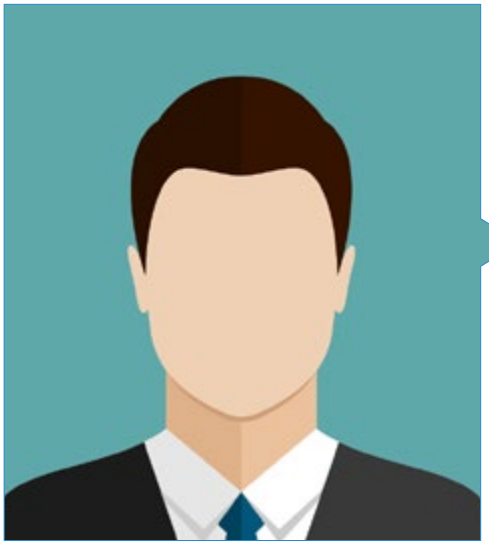
TECH's goal is to provide its students with an elite education, for this purpose it has renowned professionals who are dedicated to accompany their students in a solid learning in the area of Genetics and Respiratory Problems in Adults. For this reason, the Postgraduate Diploma has a team specialized in this medical area and with extensive professional experience, thus offering the best tools for the development of students' skills during the course. In this way, the professional has the guarantees required to specialize at an international level in a booming sector that will catapult him/her to professional success.

Count on the support and experience of the best professionals in the area of Genetics and Respiratory Problems in Adults to acquire the knowledge that will help you boost your career"

Management

Dr. Puente Maestu, Luis

- Professor of Pneumology, Department of Medicine, Universidad Complutense de Madrid.
- Chief of the Pneumology Department of the Hospital Generaluniversitario Gregorio Marañón
- Degree in Medicine from the Complutense University of Madrid
- Specialist in Pneumology, Universidad Complutense de Madrid
- Doctor Cum Laude in Medicine from the Complutense University of Madrid
- Master's Degree in Design and Statistics in Health Sciences from the Autonomous University of Barcelona
- University Master's Degree in Senior Management of Health Services and Business Management of the University of Alcala



Dr. De Miguel Díez, Javier

- Section Chief and Resident Tutor in the Pneumology Department of the Hospital General Universitario Gregorio Marañón.
- PhD in Medicine and Surgery from the Autonomous University of Madrid
- Master's Degree in Healthcare Management
- University Master's Degree in Smoking
- Master's Degree in Advances in Diagnosis and Treatment of Airway Disease
- Postgraduate master's degree in Advances in Diagnosis and Treatment of Sleep Disorders
- Master's Degree in Advances in Diagnosis and Treatment of Diffuse Interstitial Lung Diseases
- Master in Pulmonary Hypertension and Master in Thrombotic Pathology

Professors

Mr. Calles Blanco, Antonio

- Regional Ministry of Health in the Department of Medical Oncology, Madrid.
- Care, teaching and research work at the Hospital General Universitario Gregorio Marañón in Madrid
- Resident tutor and collaborating medical teacher in External Medical Practice Teaching at the Complutense University of Madrid
- Specialist in Medical Oncology at the Hospital Clínico San Carlos, Madrid
- Degree in Medicine and Surgery from the Universidad Autónoma de Madrid

Dr. Alcázar Navarrete, Bernardino

- Specialist Pneumology Physician at the Agencia Pública Empresarial Sanitaria Hospital de Poniente
- Coordinator of the COPD Area of SEPAR
- Member of the Executive Committee of the COPD IIP of SEPAR
- SEPAR Congress Committee Member
- Treasurer of the Southern Association of Pneumologists (Neumosur)
- Clinical pulmonologist with research activity focused mainly in the field of COPD, and more specifically in the study of biomarkers for the diagnosis, treatment and follow-up of this disease

Dr. González, Francisco Javier

- Director of the High Complexity Asthma Specialized Unit, Hospital Clínico Universitario de Santiago de Compostela
- Specialist in Pulmonology University Clinical Hospital of Santiago de Compostela
- Associate Professor of Health Sciences University of Santiago de Compostela
- Miembro del Comité Editorial de International Journal of Environmental Research and Public Health

Dr. Calle Rubio, Myriam

- Head of Section at the Hospital Clínico San Carlos
- Care Management Techniques for Clinical Units at the Hospital Clínico San Carlos
- Specialization in Bronchiectasis at the University of Alcalá de Henares
- Master's Degree in Clinical Unit Management at the University of Murcia
- Doctor in the Official Postgraduate Program in Medicine of the Complutense University of Madrid

Dr. Benedetti, Paola Antonella

- Assistant of the Bronchoscopy and Functional Tests Section, Pneumology Department, Hospital Gregorio Marañón, Madrid
- Surgeon at the Universidad Central de Venezuela
- Pneumology Residency at the Hospital Clínico San Carlos, Madrid
- Doctoral candidate of the Medical Surgical Sciences program. Complutense University of Madrid

Dr. España Yandiola, Pedro Pablo

- Head of the Medical/Technical Service, Pneumology Department, Hospital Galdakao-Usánsolo, Basque Country
- Degree in Medicine and Surgery from the University of the Basque Country
- Doctor of Medicine and Surgery, University of the Basque Country
- Professional Master's Degree in Clinical Units Management

Mr. Girón Matute, Walther Iván

- Specialist in Pneumology at Vithas La Milagrosa Hospital
- Medical Degree from the National Autonomous University of Honduras
- Professional Master's Degree in Diagnosis and Treatment of Sleep Disorders. San Antonio Catholic University
- Professional Master's Degree in Infectious Diseases and Treatment. Cardenal Herrera University. 60 ECTS

Dr. de Castro Martínez, Francisco Javier

- Physician in charge of the Difficult to Control Asthma Consultation in the Allergology Department of the Hospital General Universitario Gregorio Marañón.
- Physician in charge (in collaboration with the Pneumology Department) of the monographic consultation of Asthma at the Hospital General Universitario Gregorio Marañón
- Physician Assistant (F.E.A. Allergist) at Hospital General Universitario Gregorio Marañón
- On-call Internal Medicine as an attending physician in the Emergency Department of the Gregorio Marañón Hospital
- Degree in Medicine and Surgery. University of Granada
- Allergology training at the Hospital General Universitario Gregorio Marañon
- PhD program in Immunology from the Department of Medicine of the Complutense University of Madrid
- Postgraduate Certificate in Electrocardiogram in Emergencies. Gregorio Marañón General University Hospital
- Postgraduate Certificate in Diagnostic and Therapeutic Protocols in Emergency Medicine. Gregorio Marañón General University Hospital

Dr. Zambrano Ibarra, Gabriela

- Allergist Physician Hospital General Universitario Gregorio Marañon
- Allergist Physician Hospital del Tajo
- Allergist Physician Hospital del Fuenlabrada
- Research activity: retrospective observational study in routine clinical practice of the immunological follow-up of treatment with high-dose modified allergens in patients with rhinoconjunctivitis and/or asthma sensitized to Phleum pratense, Olea e, Platanus a, Cupressus arizonica and Salsola k pollens using objective biological parameters. Tagus-Aranjuez Hospital
- Research activity: biological standardization of Cupressus arizonica allergenic extract to determine the biological activity in Histamine Equivalent Units (HEP).
- Research activity: prospective study to evaluate the quality of life with its determinants such as adherence to treatment and satisfaction with immunotherapy in patients with rhinoconjunctivitis with or without asthma, sensitized to at least one aeroallergen. Laboratorios Bial-Arístegui, S.A

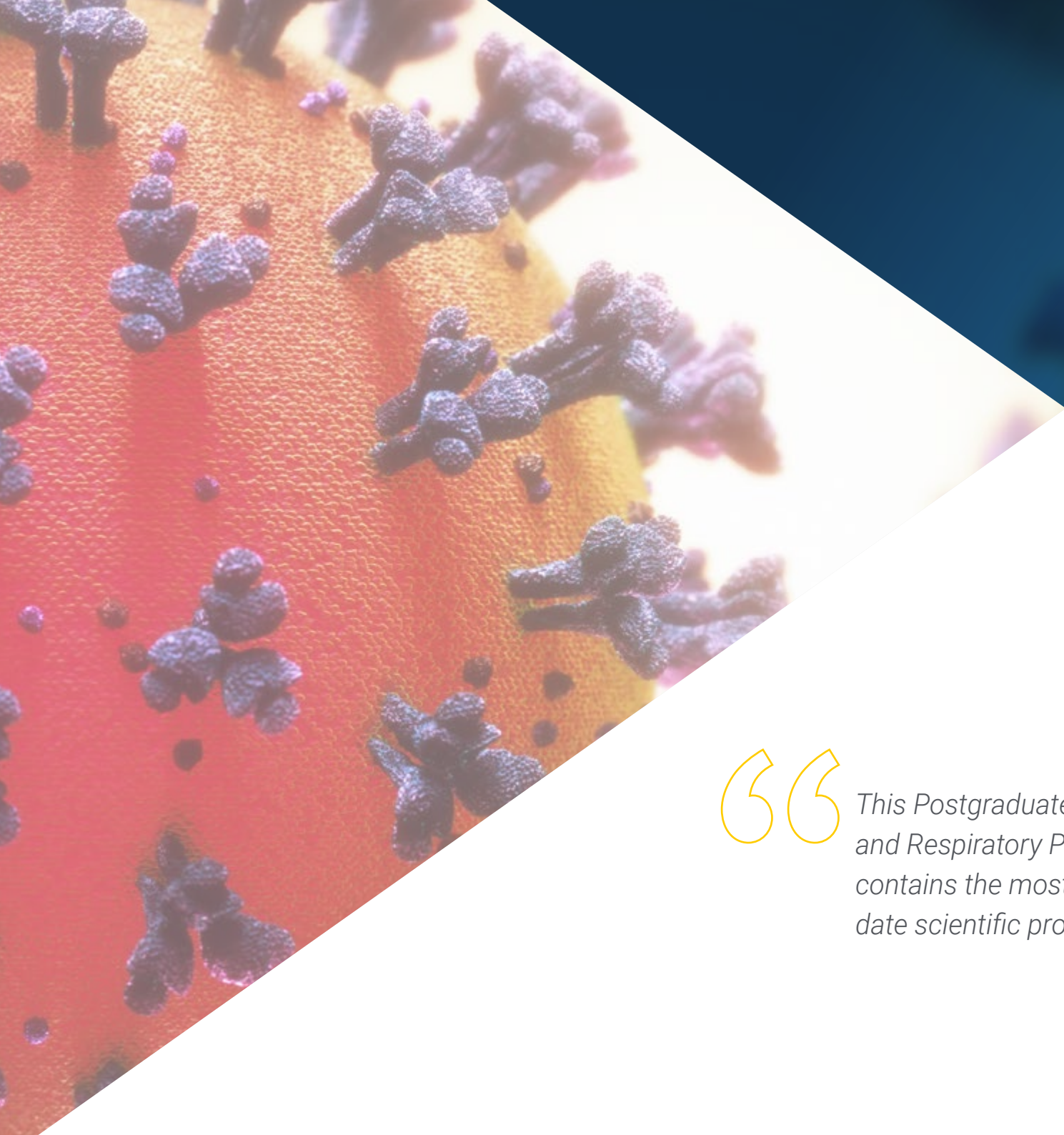
Ms. Bellón Alonso, Sara

- Specialist Physician in the Pediatrics Service of the Gregorio Marañón University Hospital. Pediatric Pneumology Unit
- Graduate of the School of Medicine. University of Oviedo
- Bachelor's Degree in Medicine and Surgery at the School of Medicine. University of Oviedo

04

Structure and Content

With a syllabus designed based on the requirements requested in Genetics and Respiratory Problems in Adults and the demands proposed by the teaching team, the result is a curriculum with the necessary modules to offer a broad perspective of this area of medicine, allowing the student to apply this knowledge at an international level. From the very first class, you will notice the extensive work of the professional team behind the syllabus, broadening the students' knowledge and allowing them to develop in an environment that is supported by a team of experts.



This Postgraduate Diploma in Genetics and Respiratory Problems in Adults contains the most complete and up-to-date scientific program on the market"

Module 1. Genetics, Precision Medicine and Asthma

1.1. Epidemiology of Asthma
  1.1.1. Family, Racial or Gender Associations
  1.1.2. Twin Studies
1.2. Asthma-Related Genes
  1.2.1. Location 1
1.3. Asthma- Associate Genes
  1.3.1. Location 2
1.4. Inflammatory Pathways in Asthma
1.5. Precision Medicine in Asthma
  1.5.1. Anti IgE Antibodies
1.6. Precision Medicine in Asthma
  1.6.1. Anti-IL5 or Anti-IL5 Receptor Antibody
1.7. Precision Medicine in Asthma
  1.7.1. Anti-IL4/IL13 Antibodies
1.8. Precision Medicine and Other Biological Treatments in Asthma
  1.8.1. Anti-IL9, Anti-TNFalpha, Anti T-Lymphocyte Antibodies
1.9. Precision Medicine
  1.9.1. Current and Future Biomarkers
1.10. Precision Medicine in Asthma
  1.10.1. Linking Phenotypes to Specific Treatments

Module 2. Genetics, Precision Medicine And COPD

2.1. Genetic Links of COPD
2.2. Genetics of Alpha1 Deficiency
  2.2.1. Antitrypsin
2.3. Epidemiology of Alpha 1 Antitrypsin Deficiency
2.4. Management of Alpha 1-Antitrypsin Deficiency
  2.4.1. Treatment Genetic Counseling
2.5. COPD and Low Birth Weight
  2.5.1. COPD Trajectories
2.6. Genetics of Smoking
2.7. COPD Phenotypes
  2.7.1. Bio markers

2.8. Personalized Medicine:
  2.8.1. Phenotype-Oriented Treatment
2.9. Sarcopenia
  2.9.1. Exercise Intolerance
  2.9.2. Physical Inactivity
  2.9.3. Sedentary Behavior
2.10. Association of Polymorphisms in ACTN3 Genes
  2.10.1. ECA and PPARGC1A with the Effectiveness of Physical Training

Module 3. Genetics, Precision Medicine and Other Respiratory Diseases

3.1. Linkage of Diffuse Interstitial Lung Diseases and Genetics
3.2. Linkage of Primary Pulmonary Hypertension and Genetics
3.3. Genetic Bases of Susceptibility to Hypoxemia in COPD
3.4. Genetic Disorders that Increase Susceptibility to Venous Thrombo Embolic Disease and Pulmonary Thromboembolism
3.5. Cystic Fibrosis in Adults
  3.5.1. Suspicion and Diagnosis
3.6. Genetic Aspects of Obstructive Sleep Apneas Syndrome
3.7. Telomeres and Respiratory Diseases
3.8. Genetic Variability in Susceptibility and Severity of Pneumonia
3.9. Genetic Variability in Susceptibility and Severity of Pneumonia
3.10. mRNA-Based Vaccines
  3.10.1. Outcomes and Side Effects in SARS-COVID-19 Disease as an Example

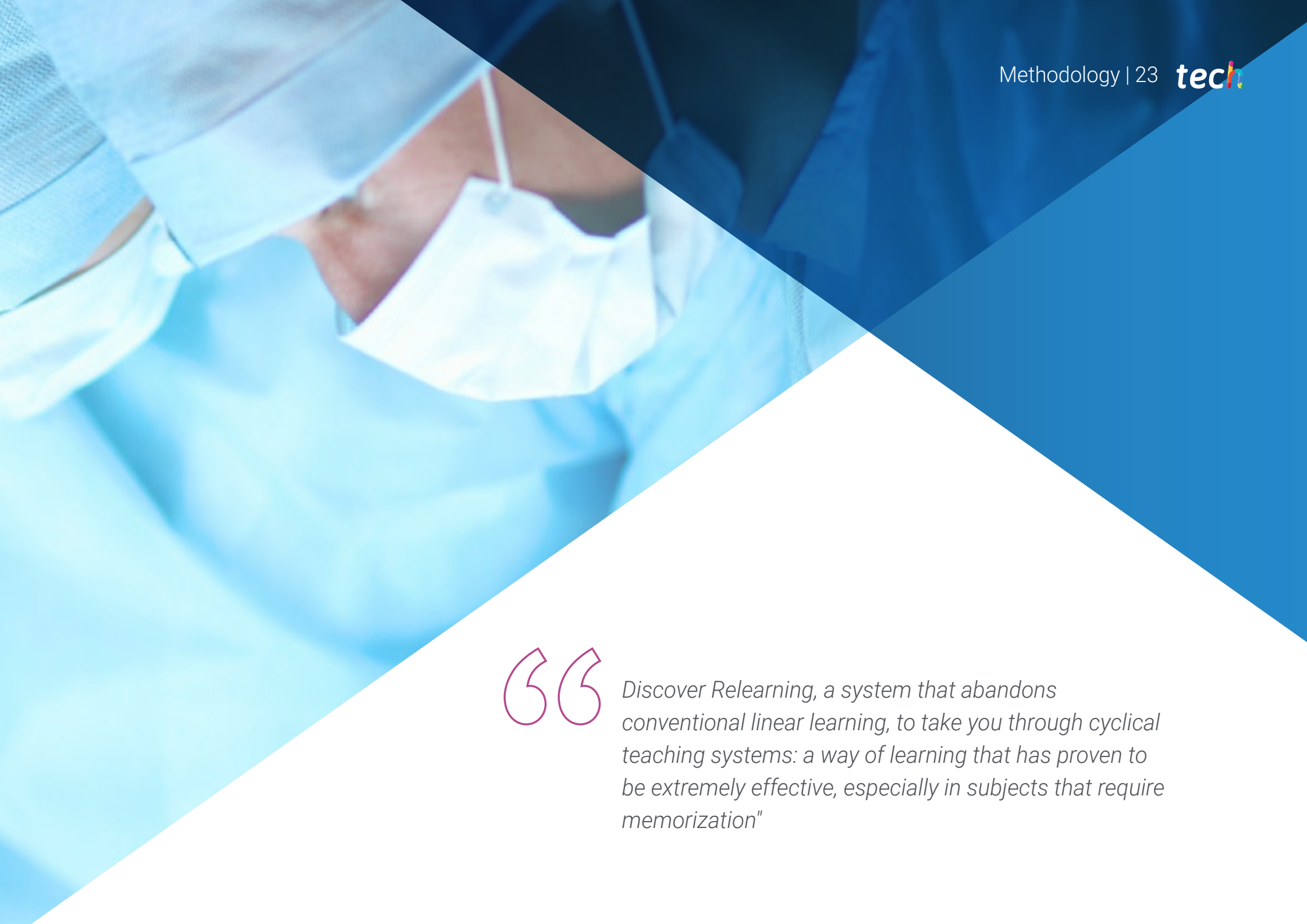
Completing this program will help you become a better professional in Genetics and Respiratory Problems in Adults"

05

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the ***New England Journal of Medicine*** have considered it to be one of the most effective.



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

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.

According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method"

The effectiveness of the method is justified by four fundamental achievements:

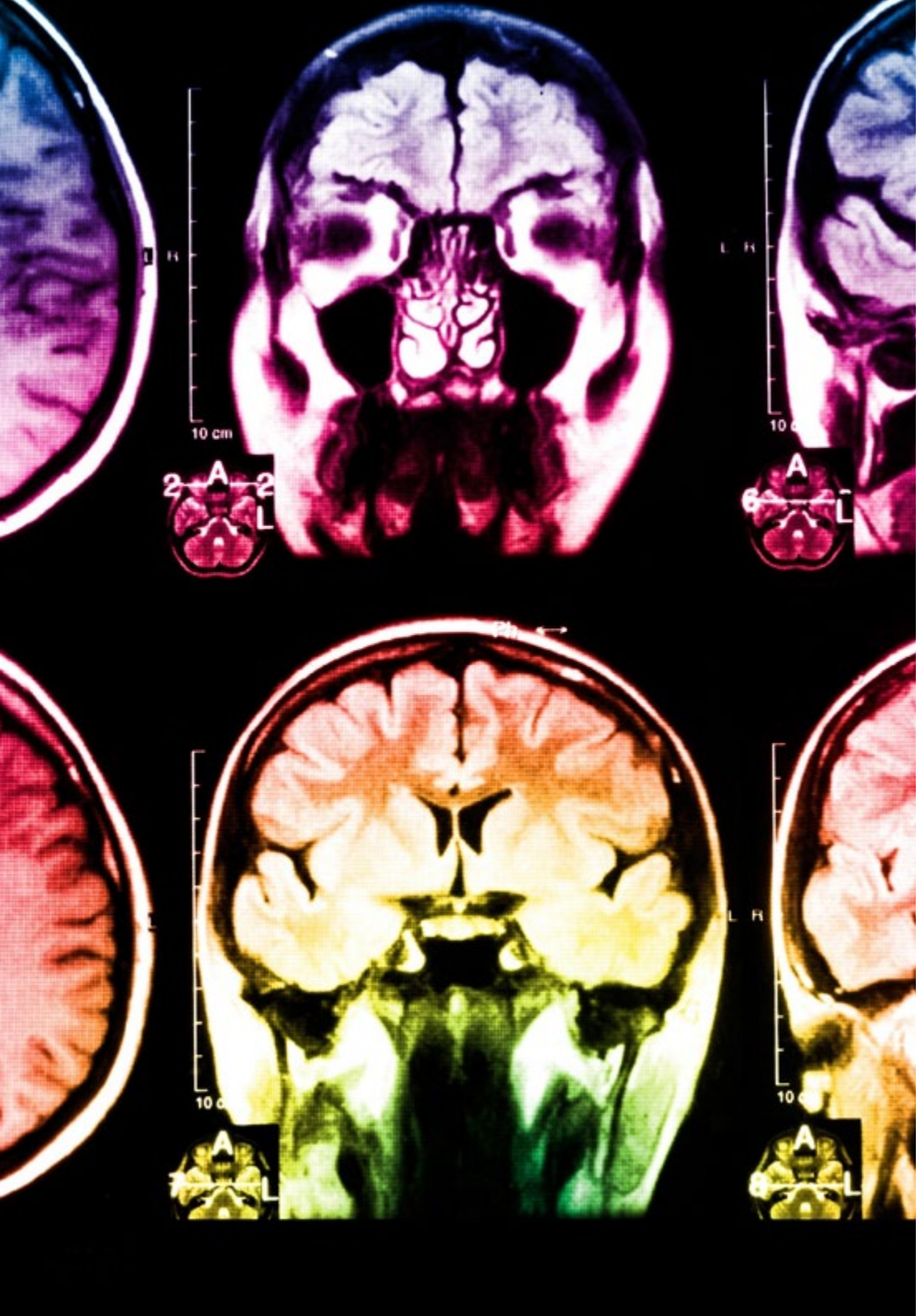
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

Relearning Methodology

At TECH we enhance the Harvard case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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

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

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

This program offers the best educational material, prepared with professionals in mind:

Study Material

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

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high-quality pieces in each and every one of the materials that are made available to the student.

Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.

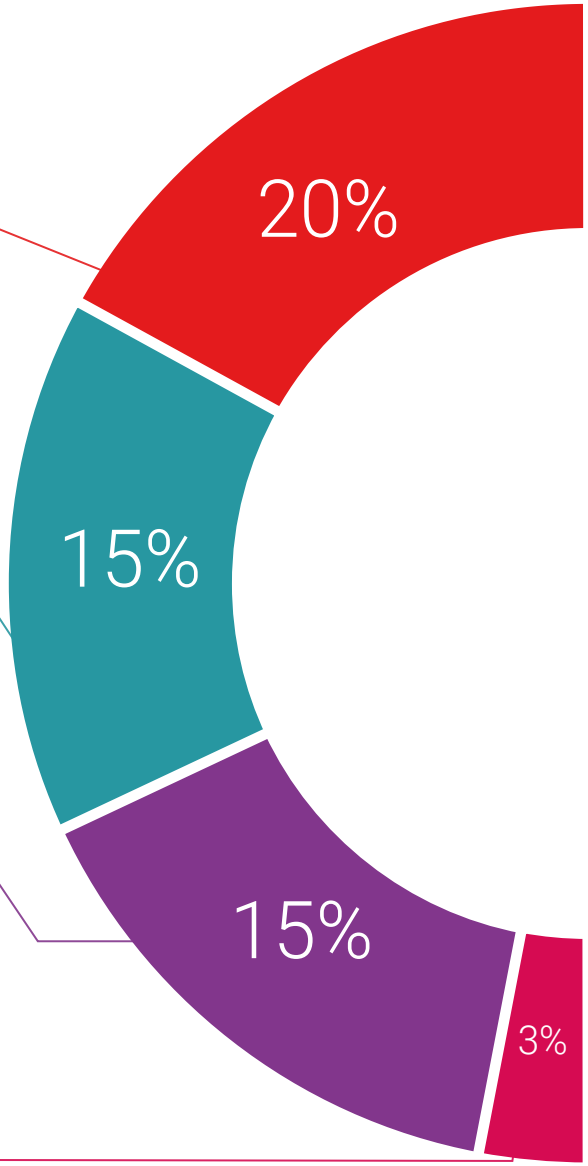
Interactive Summaries

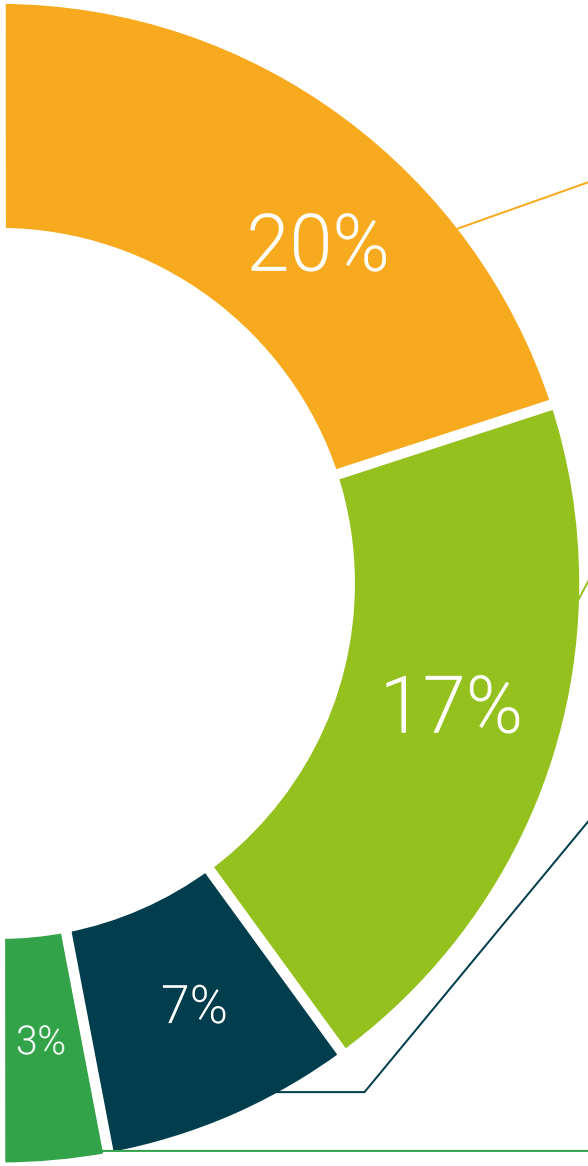
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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

Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.

Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.

Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.

Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.

06

Certificate

The Postgraduate Diploma inGenetics and Respiratory Problems in Adults guarantees, in addition to the most rigorous and up-to-date training, access to a Postgraduate Diploma issued by TECH Global University.

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

This program will allow you to obtain your **Postgraduate Diploma in Genetics and Respiratory Problems in Adults** 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.

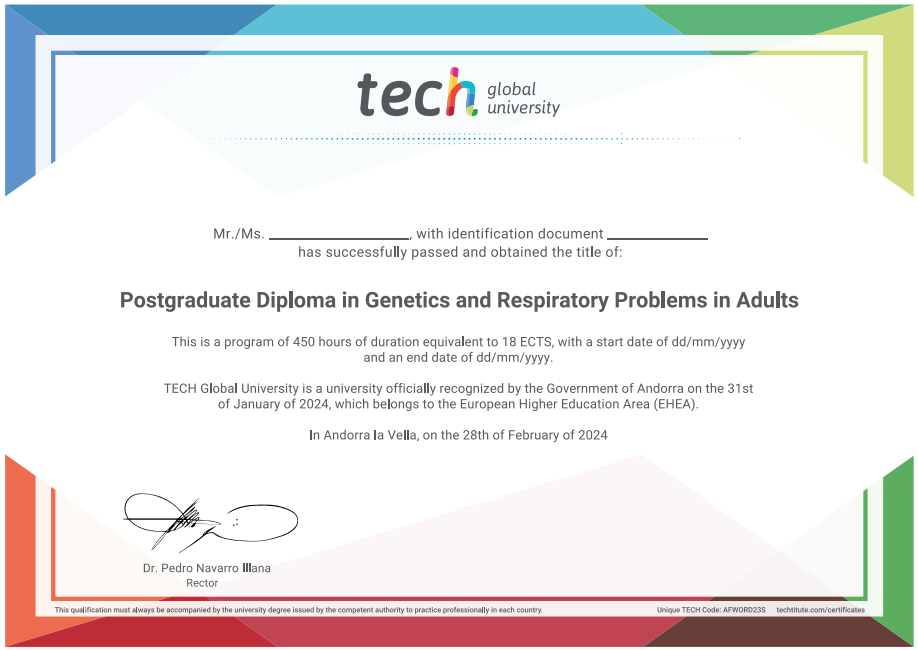
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Genetics and Respiratory Problems in Adults**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**


tech global university

Mr./Ms. _____, with identification document _____
has successfully passed and obtained the title of:

Postgraduate Diploma in Genetics and Respiratory Problems in Adults

This is a program of 450 hours of duration equivalent to 18 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

This qualification must always be accompanied by the university degree issued by the competent authority to practice professionally in each country. Unique TECH Code: AFWORD23S techtitute.com/certificates

*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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