Postgraduate Certificate
Laboratory Techniques for Nutritional Genomics

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Postgraduate Certificate
Laboratory Techniques for Nutritional Genomics

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

Website: **www.techtitute.com/us/pharmacy/postgraduate-certificate/laboratory-techniques-nutritional-genomics**

Index

01

Introduction

Nutritional Genomics is a growing discipline that requires specialized professionals whose knowledge is constantly up to date. On this occasion TECH presents the best program on the market in Laboratory Techniques for Nutritional Genomics aimed at pharmacists. These professionals must have up-to-date knowledge on all the latest developments in this field.

A diet adapted to our genetics can help us prevent diseases. Therefore, it is important for professionals to know the main Laboratory Techniques in order to continue with their research"

This Postgraduate Certificate covers everything a health professional needs to know about Nutritional Genomics and Precision Nutrition. Therefore, the material is organized in the best possible way, allowing the professional to acquire all the knowledge needed, without leaving them with doubts or information gaps. It is the best program on the market because it offers students the opportunity to learn all the innovation in the field of Nutritional Genomics, 100% online.

Specifically, during this Postgraduate Certificate the student will learn all the theory of Laboratory Techniques used in the field of Nutritional Genomics and Precision Nutrition. Therefore, the basics will be presented so that students can recognize and appreciate them once they are in the laboratory, and they will learn about the bioinformatics programs used in Nutritional Genomics.

This Postgraduate Certificate provides students with specific tools and skills to successfully develop their professional career related to Nutritional Genomics and Precision Nutrition.

As it is an online Postgraduate Certificate, the student is not restricted by fixed schedules or the need to move to another physical location, but can access the content at any time of the day, balancing their work or personal life with their academic life.

This **Postgraduate Certificate in Laboratory Techniques for Nutritional Genomics** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- The development of case studies presented by experts in Nutritional Genomics and Precision Nutrition
- The graphic, schematic and eminently practical contents of the course are designed to provide all the essential information required for professional practice
- Practical exercises where the self-assessment process can be carried out to improve learning
- Special emphasis on innovative methodologies in Laboratory Techniques for Nutritional Genomics
- Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection work
- Content that is accessible from any fixed or portable device with an Internet connection

Our Postgraduate Certificate will allow pharmacists to gain the necessary knowledge in order to achieve success in the field of of Nutritional Genomics"

This Postgraduate Certificate is the best investment you can make when selecting a refresher program to update your knowledge in Laboratory Techniques for Nutritional Genomics"

This program offers teaching in simulated environments, which provides an immersive learning experience designed to prepare for real-life situations

This 100% online Postgraduate Certificate will allow you to combine your studies with your professional work while increasing your knowledge in this field

Its teaching staff includes professionals from the field of nutrition, who contribute their work experience to this program, as well as renowned specialists from reference 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 an immersive program designed to learn 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 developed by renowned and experienced experts in Laboratory Techniques for Nutritional Genomics.

02

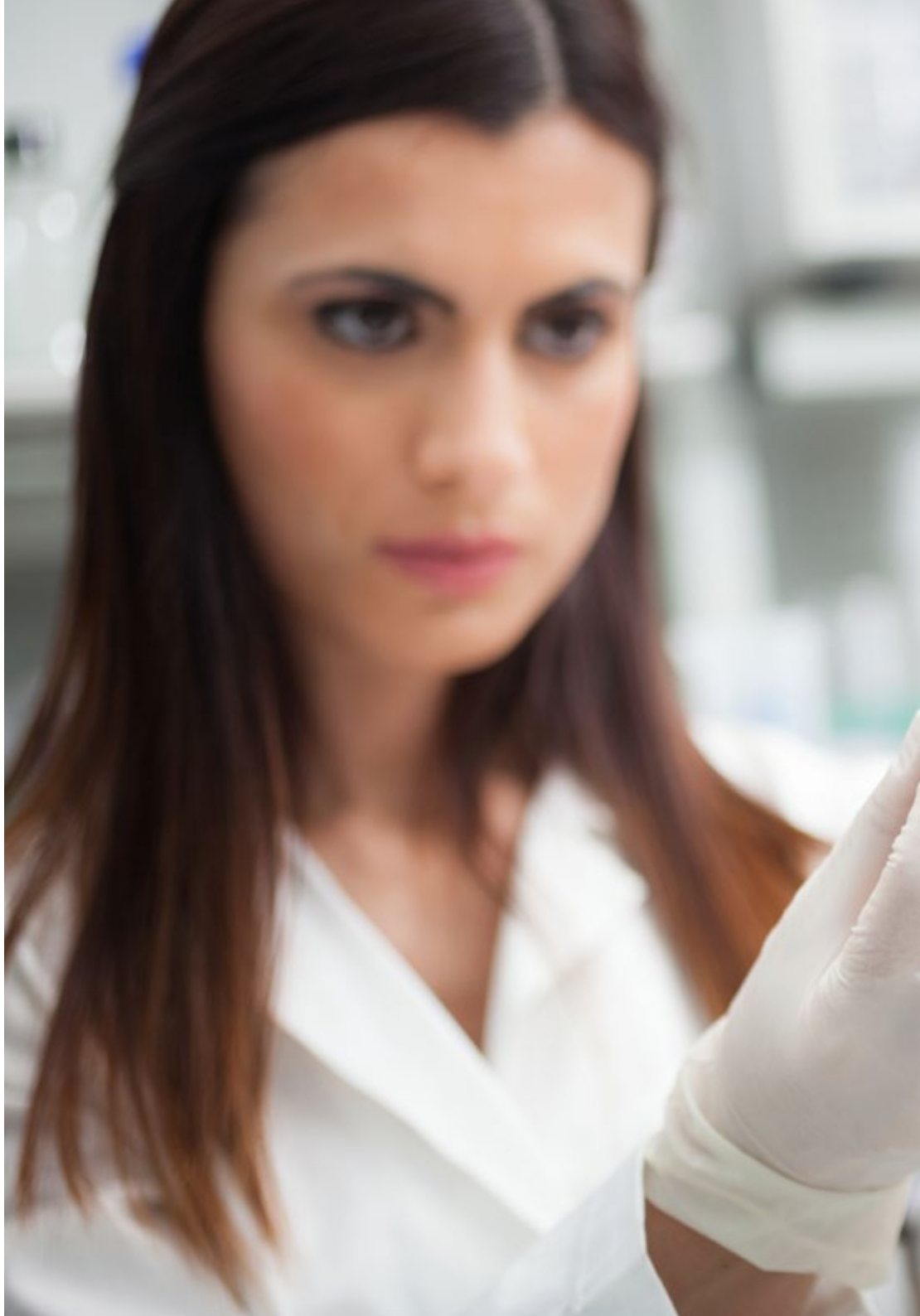
Objectives

The main objective of the program is the development of theoretical and practical learning, so that the pharmacist can master the study of Nutritional Genomics and Precision Nutrition in a practical and rigorous way.

This refresher program will generate a sense of confidence in the performance of your daily practice, which will help you grow personally and professionally"

General Objectives

- Acquire theoretical knowledge of human population genetics
- Acquire knowledge of Nutritional Genomics and Precision Nutrition to be able to apply it in clinical practice
- Learn about the trajectory of this innovative field and the key studies that contributed to its development
- Know in which pathologies and conditions of human life Nutritional Genomics and Precision Nutrition can be applied
- Be able to assess individual responses to nutrition and dietary patterns in order to promote health and disease prevention
- Learn how nutrition influences gene expression in humans
- Learn about new concepts and future trends in the field of Nutritional Genomics and Precision Nutrition
- Adapt personalized dietary and lifestyle habits according to genetic polymorphisms
- Provide health professionals with all the up-to-date knowledge in the field of Nutritional Genomics and Precision Nutrition in order to know how to apply it in their professional activity
- Put all the up-to-date knowledge into perspective. Where we are now and where we are headed so that the student can appreciate the ethical, economic and scientific implications in the field



Specific Objectives

- Understand the techniques used in Nutritional Genomics Studies
- Acquire knowledge of the latest advances in omics and bioinformatics techniques

Take the step and join one of the largest online universities in the world"

03

Course Management

The program's teaching staff includes leading experts in Nutritional Genomics and Precision Nutrition for Pharmacists, who contribute the experience of their work to this program. Additionally, other recognized experts participate in its design and preparation, completing the program in an interdisciplinary manner.

Leading professionals in the field have come together to teach you the latest advances in Laboratory Techniques for Nutritional Genomics"

Management

Dr. Konstantinidou, Valentini

- PhD in Biomedicine
- Lecturer in Nutrigenetics
- Founder of DNANUTRICOACH®
- Dietitian - Nutritionist
- Food Technologist

Professors

Dr. García Santamarina, Sarela

- Dr. in Biomedical Research, Pompeu Fabra University, Barcelona, Spain, 2008-2013.
- Master's Degree in Molecular Biology of Infectious Diseases, London School of Hygiene & Tropical Medicine, London, UK, 2006-2007
- Master's Degree in Biochemistry and Molecular Biology, Autonomous University of Barcelona, Spain, 2003-2004
- Degree in Chemistry, Major in Organic Chemistry, University of Santiago de Compostela, Spain, 1996-2001
- Postdoctoral Researcher EIPOD Marie Curie. Mentoring: Dr. Athanasios Typas, Dr. Peer Bork, and Dr. Kiran Patil. Project: "Effects of drugs on intestinal flora". European Molecular Biology Laboratory (EMBL), Heidelberg, Germany. Since 2018

Mr. Anglada, Roger

- Graduate in Multimedia, Catalunya Open University (Universitat Oberta de Catalunya)
- Senior Technician in Analysis and Control, Institute of Secondary Education Narcís Monturiol, Barcelona
- Senior research support technician at the Genomics Service of the Pompeu Fabra University where he is responsible for the equipment and devices for sequencing and real-time PCR, providing support to users from different centers both in the design and interpretation of the results
- Co-author of several scientific publications since 2002. He combines his work with lectures and teaching both at Pompeu Fabra University and in different programs and courses


Coronavirus Test
Negative
Positive

04

Structure and Content

The structure of the contents has been designed by a team of professionals who know of the implications of education in daily practice, are aware of the current relevance of Nutritional Genomics and Precision Nutrition education and who are committed to quality teaching through new educational technologies.

We have the most complete and up-to-date scientific program on the market. We strive for excellence and for you to achieve it too"

Module 1. Laboratory Techniques for Nutritional Genomics

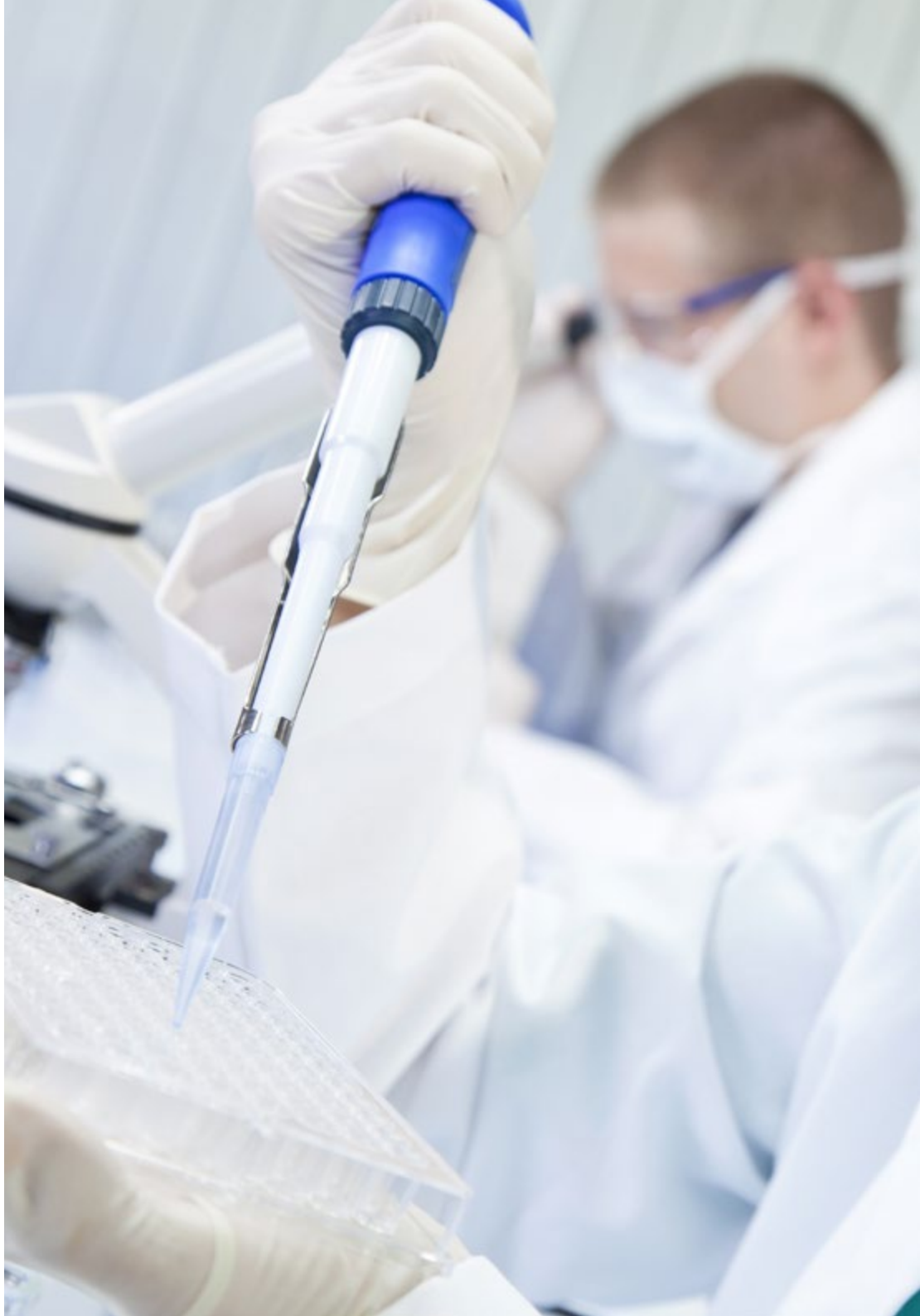
1.1. Molecular Biology Laboratory
- 1.1.1. Basic Instructions
- 1.1.2. Basic Material
- 1.1.3. Accreditations Required in the U.S.

1.2. DNA Extraction
- 1.2.1. From Saliva
- 1.2.2. From Blood
- 1.2.3. From Other Fabrics

1.3. Real-Time PCR
- 1.3.1. Introduction - History of the Method
- 1.3.2. Basic Protocols Used
- 1.3.3. Most Used Equipment

1.4. Sequencing
- 1.4.1. Introduction - History of the Method
- 1.4.2. Basic Protocols Used
- 1.4.3. Most Used Equipment

1.5. High-Throughput
- 1.5.1. Introduction - History of the Method
- 1.5.2. Examples of Human Studies



1.6. Gene Expression - Genomics - Transcriptomics
- 1.6.1. Introduction - History of the Method
- 1.6.2. Microarrays
- 1.6.3. Microfluidic Cards
- 1.6.4. Examples of Human Studies

1.7. Omic Technologies and their Biomarkers
- 1.7.1. Epigenomics
- 1.7.2. Proteomics
- 1.7.3. Metabolomics
- 1.7.4. Metagenomics

1.8. Bioinformatics Analysis
- 1.8.1. Pre- and Post-Computing Bioinformatics Programs and Tools
- 1.8.2. GO Terms, Clustering of DNA Microarray Data
- 1.8.3. Functional Enrichment, GEPAS, Babelomics

A unique, key and decisive experience to boost your professional development"

05

Methodology

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

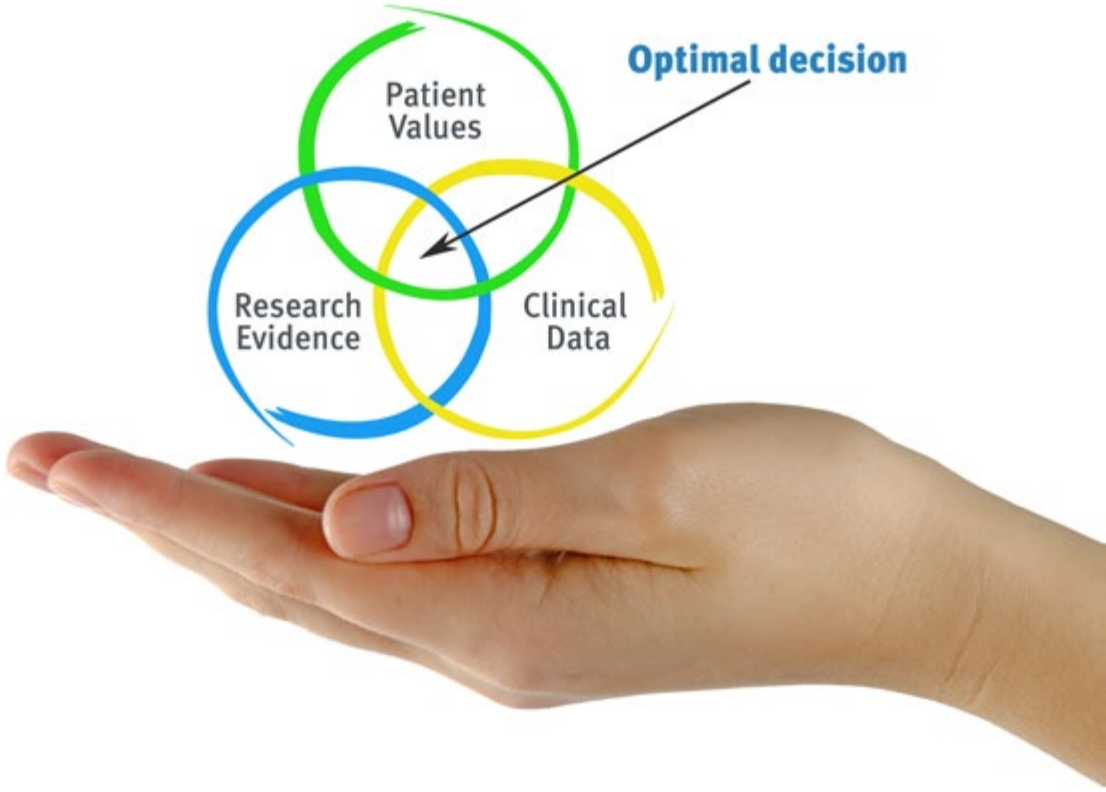
This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.

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 be confronted with multiple simulated clinical cases based on real patients, in which they will have to investigate, establish hypotheses and ultimately, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Pharmacists learn better, more quickly 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, attempting to recreate the actual conditions in a pharmacist'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:

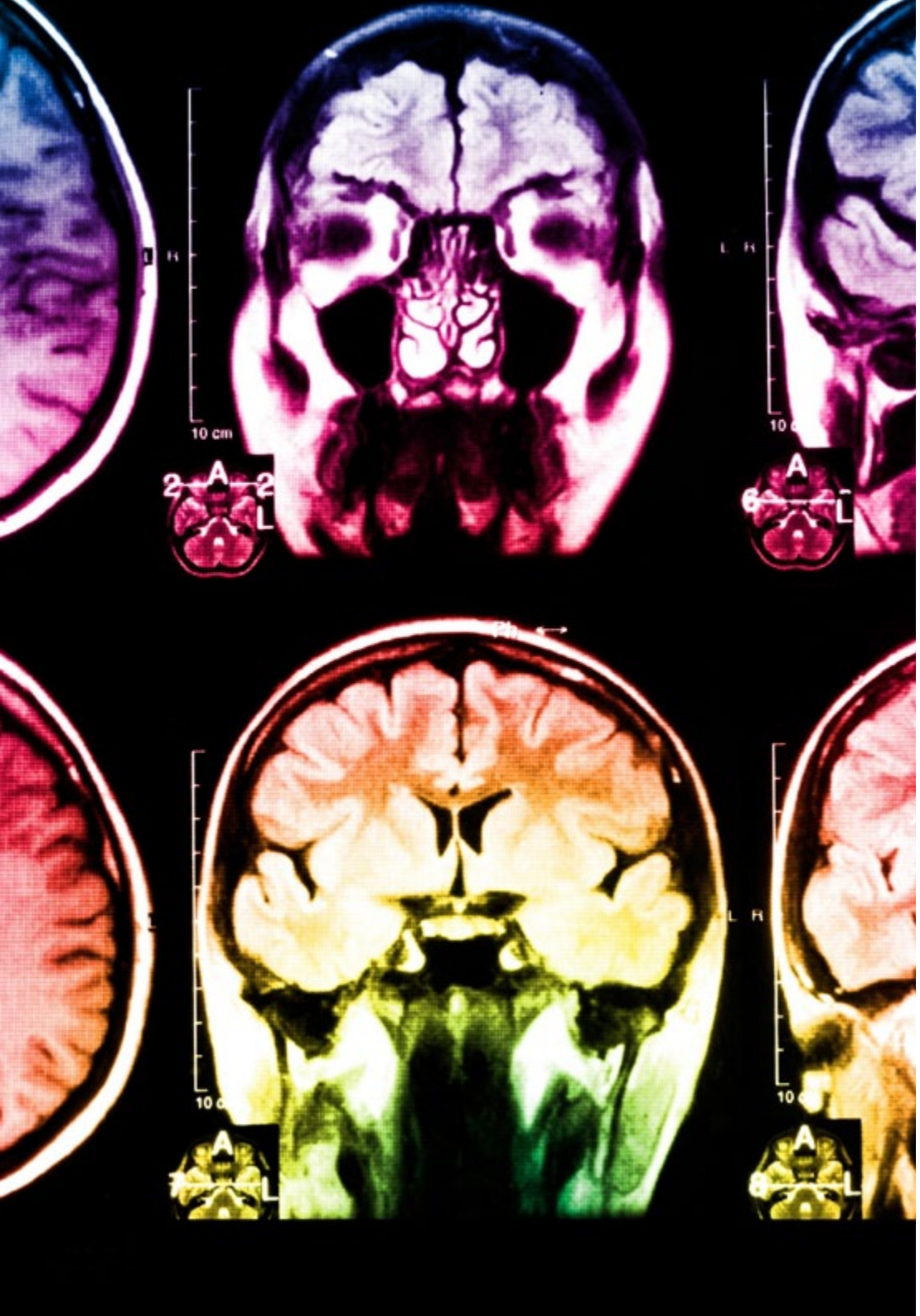
1. Pharmacists who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts 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.

Our university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.

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



At the forefront of world teaching, the 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 115.000 pharmacists have been trained with unprecedented success in all clinical specialties, regardless of the surgical load. This pedagogical methodology is developed in a highly demanding environment, with a university student body with a high socioeconomic profile and an average age of 43.5 years.

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

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.

Video Techniques and Procedures

TECH introduces students to the latest techniques, to the latest educational advances, to the forefront of current pharmaceutical care procedures. All of this, first hand, and explained and detailed with precision to contribute to assimilation and a better understanding. And best of all, you can watch them as many times as you want.

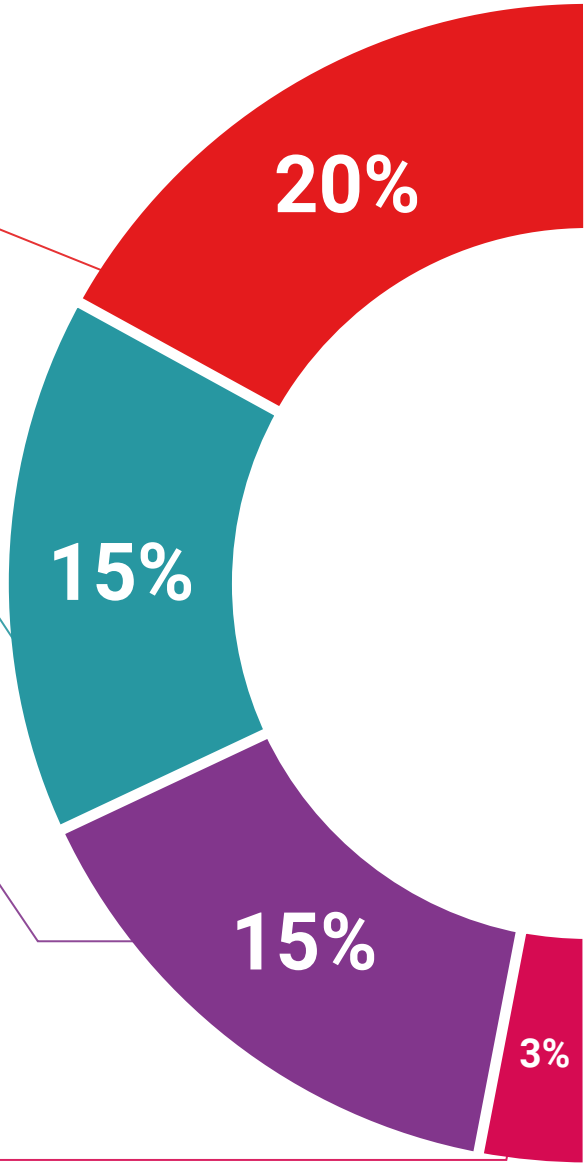
Interactive Summaries

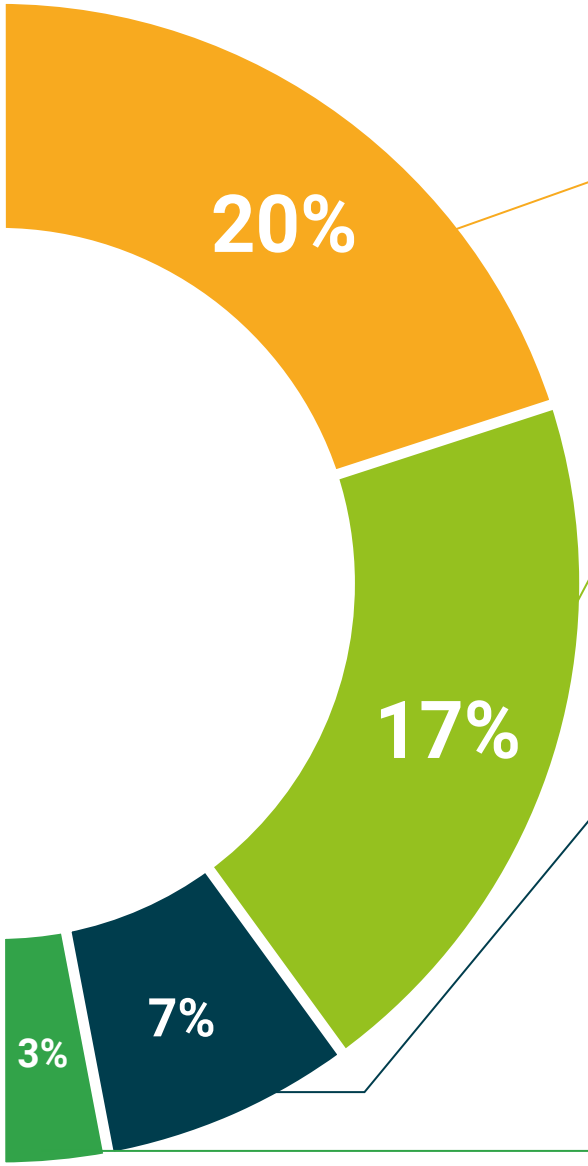
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This unique multimedia content presentation training system 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, 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 & 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 termed Learning from an Expert strengthens knowledge and recall capacity, and generates confidence in the face of difficult decisions in the future.

Quick Action Guides

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

06

Certificate

The Postgraduate Certificate in Laboratory Techniques for Nutritional Genomics guarantees, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.

Successfully complete this program and receive your university qualification without travel or laborious paperwork"

This **Postgraduate Certificate in Laboratory Techniques for Nutritional Genomics** contains the most complete and up-to-date scientific program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery*.

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

Title: **Postgraduate Certificate in Laboratory Techniques for Nutritional Genomics**
Official Nº of hours: **150 h.**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Awards the following

DIPLOMA

to

Mr./Ms. _____, with identification number _____.

For having passed and accredited the following program

POSTGRADUATE CERTIFICATE

in

Laboratory Techniques for Nutritional Genomics

This is a qualification awarded by this University, equivalent to 150 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
Dean

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 EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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