# Professional Master's Degree
## Neurodegenerative Diseases

tech global university

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# Professional Master's Degree

## Neurodegenerative Diseases

- Modality: **online**
- Duration: **12 months**
- Certificate: **TECH Global University**
- Credits: **60 ECTS**
- Schedule: **at your own pace**
- Exams: **online**

Website: **www.techtitute.com/in/medicine/professional-master-degree/master-neurodegenerative-diseases**

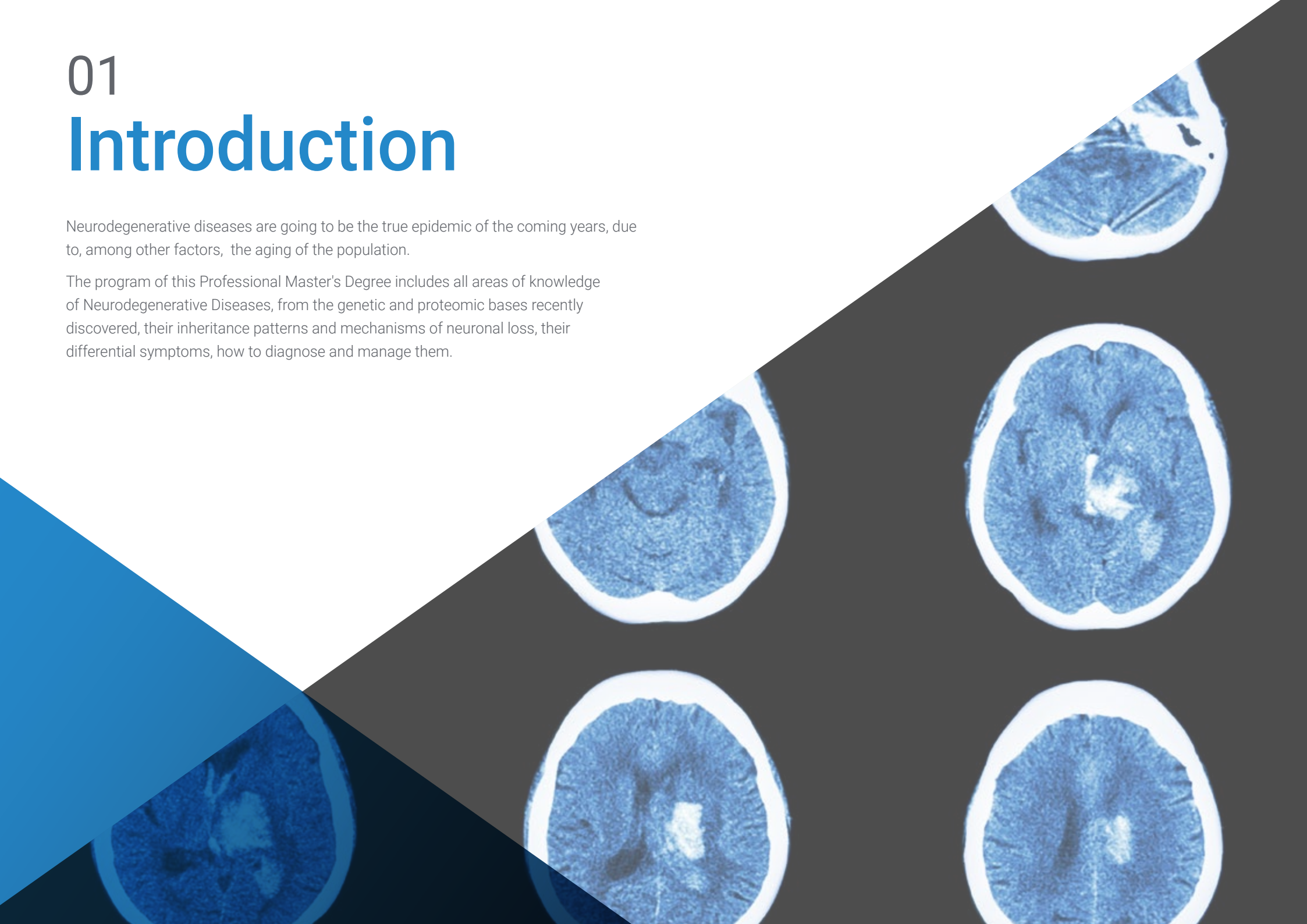
# Index

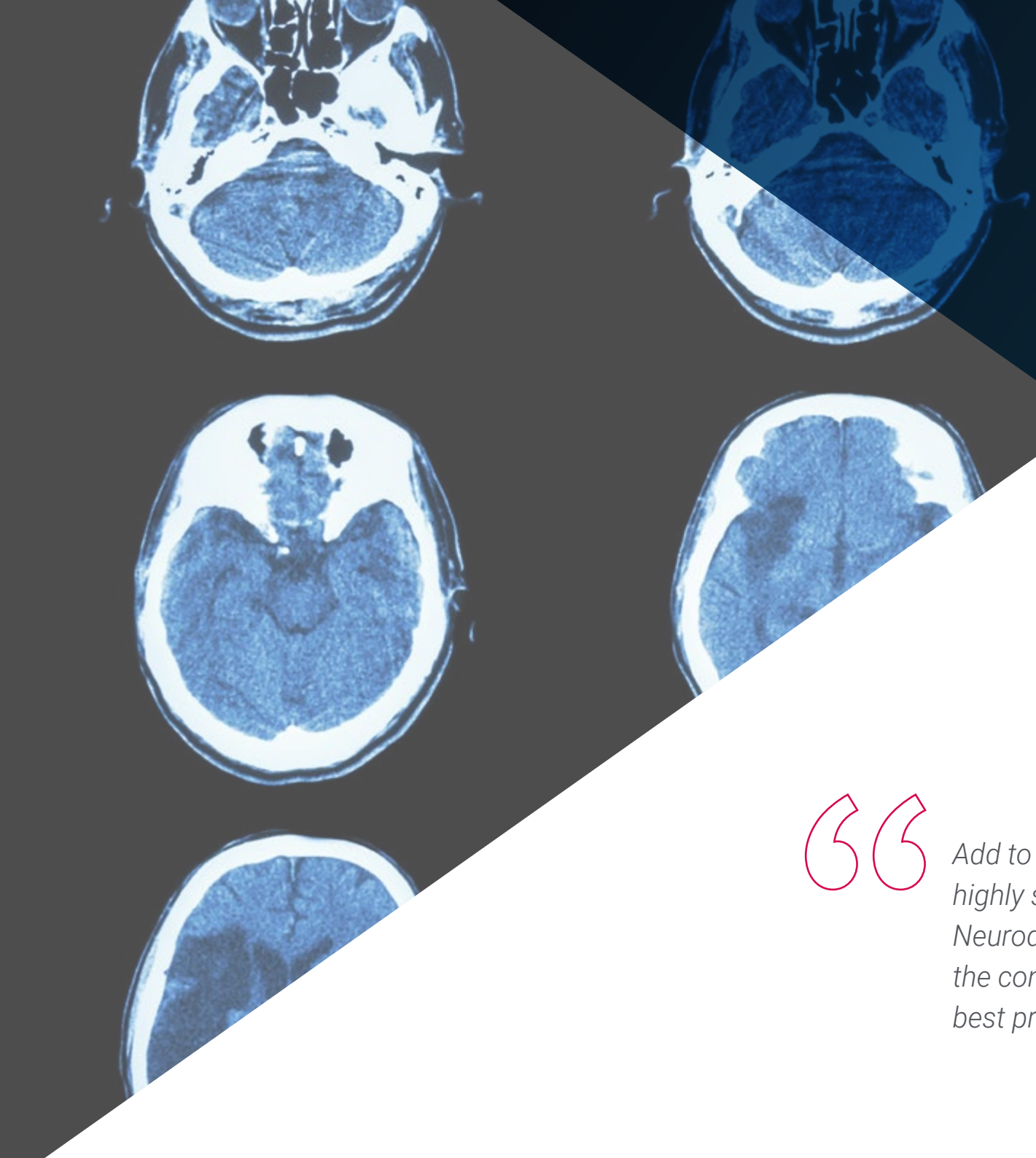
01

# Introduction

Neurodegenerative diseases are going to be the true epidemic of the coming years, due to, among other factors,  the aging of the population.

The program of this Professional Master's Degree includes all areas of knowledge of Neurodegenerative Diseases, from the genetic and proteomic bases recently discovered, their inheritance patterns and mechanisms of neuronal loss, their differential symptoms, how to diagnose and manage them.





*Add to your qualifications a highly specialized program in Neurodegenerative Diseases, with the confidence of learning from the best professionals in the sector"*

This Professional Master's Degree examines neurodegenerative conditions by relating their clinical manifestations to altered proteins. On many occasions, an anomalous protein may give different clinical manifestations and, on other occasions, a clinical manifestation may be produced by the alteration of different proteins.

There are new contributions in this Professional Master's Degree, such as the description of other Neurodegenerative Diseases related to the alteration of the metabolism of copper, iron, neuroectodermal disorders and the description of alterations with Vascular or Inflammatory pathology, from a neurodegeneration point of view.

The structure of the program allows differentiating these diseases by their clinical manifestations. We have also sought to provide uniformity in the diagnostic methodology by dedicating a complete module to diagnostic methods, in which the student will discover their sensitivity and specificity.

The student who studies the Professional Master's Degree will obtain a complete and integral vision of the whole neurodegenerative pathology, which will allow them to improve their clinical skills in this field of medicine. It will also enable you to use the most cost-effective diagnostic tools and perform appropriate patient management. It will also allow you to learn about the latest genetic treatments, already approved, for some of the diseases and future treatment trends.

The Professional Master's Degree in Neurodegenerative Diseases aims to prepare with rigor, teach with precision and provide ways of improvement so that the student will be able to lead realistic care and teaching programs in the specific area of their professional skills.

This **Professional Master's Degree in Neurodegenerative Diseases** contains the most complete and up-to-date scientific program on the market The most important features include:

- Development of a large number of case studies presented by experts
- Graphic, schematic, and highly practical contents
- The latest developments and cutting-edge advances in this area
- Practical exercises where the self-evaluation process can be carried out to improve learning
- Innovative and highly efficient 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

*Expand your knowledge through the Professional Master's Degree in Neurodegenerative Diseases"*

*The latest advances in the area of Neurodegenerative Diseases compiled in a highly efficient Professional Master's Degree that will optimize your effort with the best results"*

*All the necessary methodology for the professional, in a high-impact, specific and specific Professional Master's Degree.*

*An educational program created to allow you to implement your acquired knowledge into your daily practice in an almost immediate way.*

This Professional Master's Degree is centred on putting into practice the theoretical knowledge gained in the course. Through the most effective teaching systems, proven methods imported from the most prestigious universities in the world, you will be able to acquire new knowledge in a practical way. In this way, we strive to convert your efforts into real and immediate skills.

Our online system is another of the strengths of our proposal. With an interactive platform that has the advantages of the latest technological developments, we put the most interactive digital tools at your service. This way, we can offer you a learning method that can be completely adapted to your needs, so that you can perfectly combine this program with your personal or professional life.

02

# Objectives

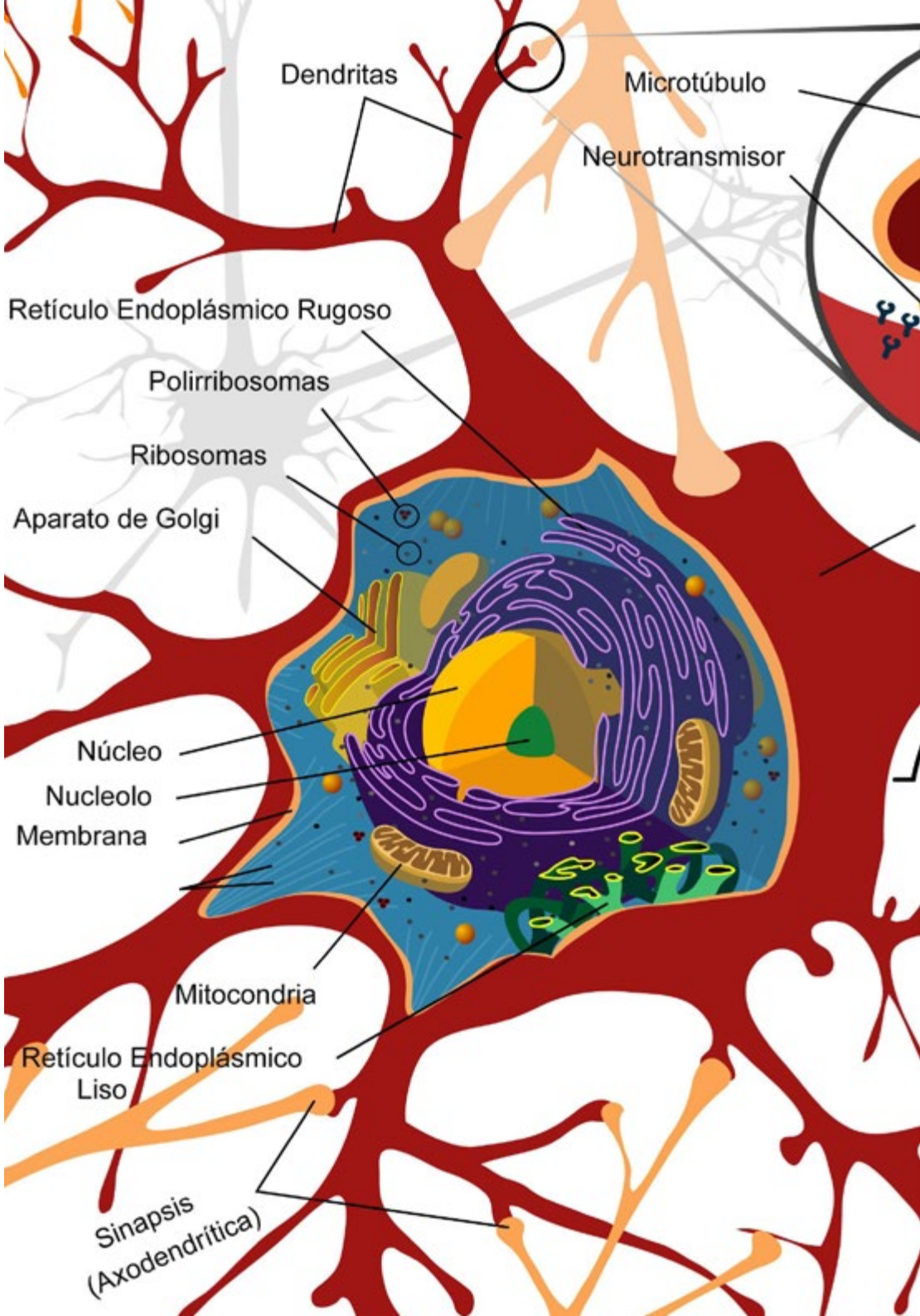
The objective of this Professional Master's Degree is to offer medical professionals a complete program to acquire knowledge and skills in the field of Neurodegenerative Diseases or to update on the latest advances in this area of intervention. A practical and effective way to keep you at the forefront of a constantly evolving profession.

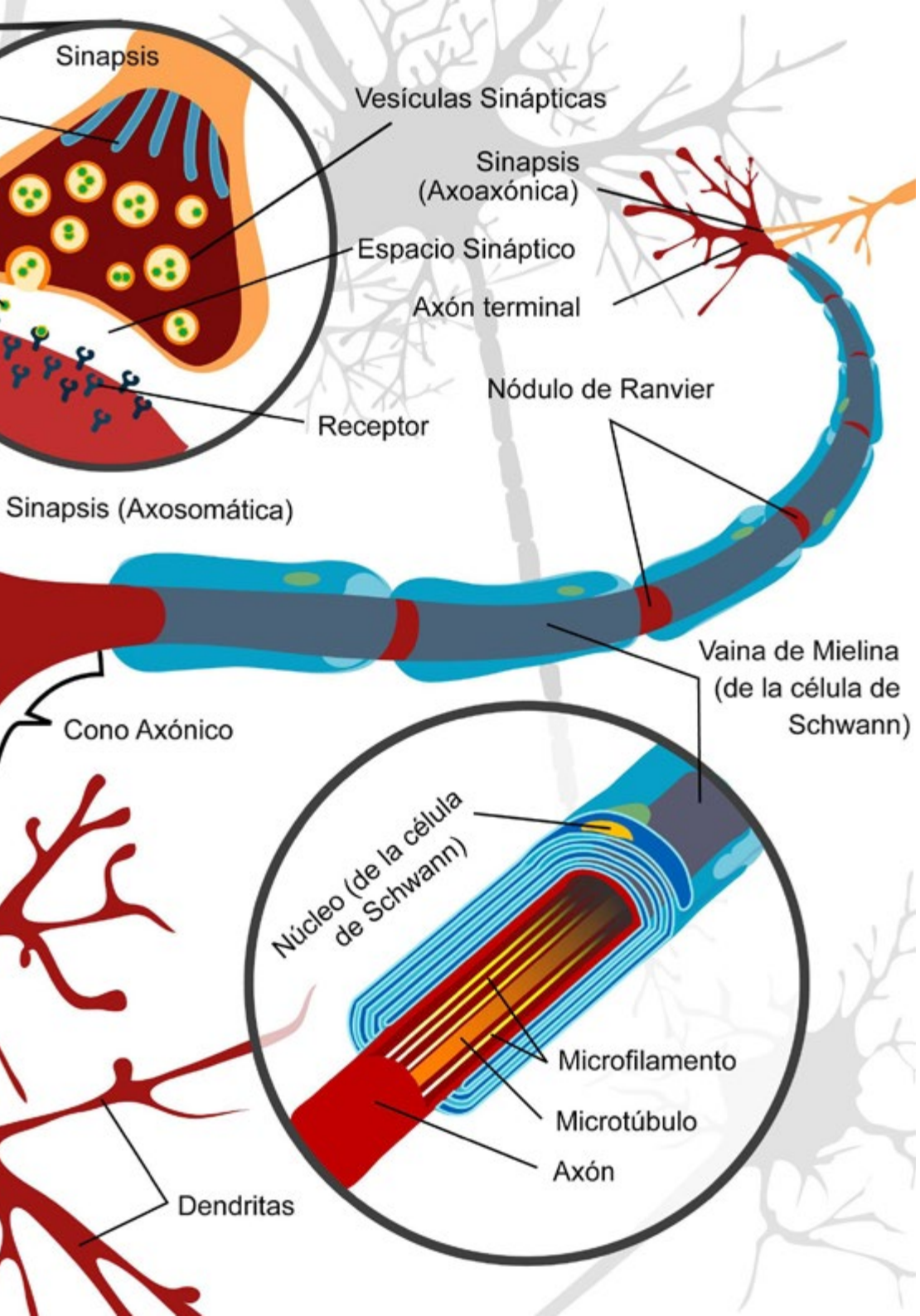
*Our goal is simple: to help you get the most complete update in Neurodegenerative Diseases in a Professional Master's Degree fully compatible with your work and personal obligations"*

## General Objectives

- Know the most modern findings in the genetic and proteomic alterations of these diseases, as well as in the translational neurology that have produced these findings
- Acquire the appropriate and most effective tools to recognize the clinical picture, interpret the findings of complementary tests and appropriately treat patients with neurodegenerative diseases

*An opportunity created for professionals who are looking for an intensive and effective program, with which to take a significant step forward in the practice of their profession"*






## Specific Objectives

**Module 1. Etiology and Biopathology of Neurodegenerative Diseases**

- Update knowledge on the genetic and molecular basis of neurodegenerative diseases
- Understand the basic mechanisms of neuronal death involved in these diseases
- Broaden knowledge of Translational Neurology focused on Neurodegenerative Diseases
- Recognize the type of inheritance and its implication in genetic counseling to patients and their families
- Provide knowledge on the neuroepidemiology of these disorders and their impact on the caregiver, family and society

**Module 2. Neurodegenerative Dementias**

- Be able to make a clinical differential diagnosis between the different degenerative dementias
- Associate molecular alterations of specific proteins with specific clinical syndromes
- Update on the knowledge of biomarkers in blood and CSF of the different types of neurodegenerative dementias
- Know how to differentiate the different phenotypes of frontotemporal dementias and their different genetic and molecular alterations
- Update knowledge on current and clinical trial treatments for degenerative dementias and symptomatic management

### Module 3. Neurodegeneration and Parkinsonism

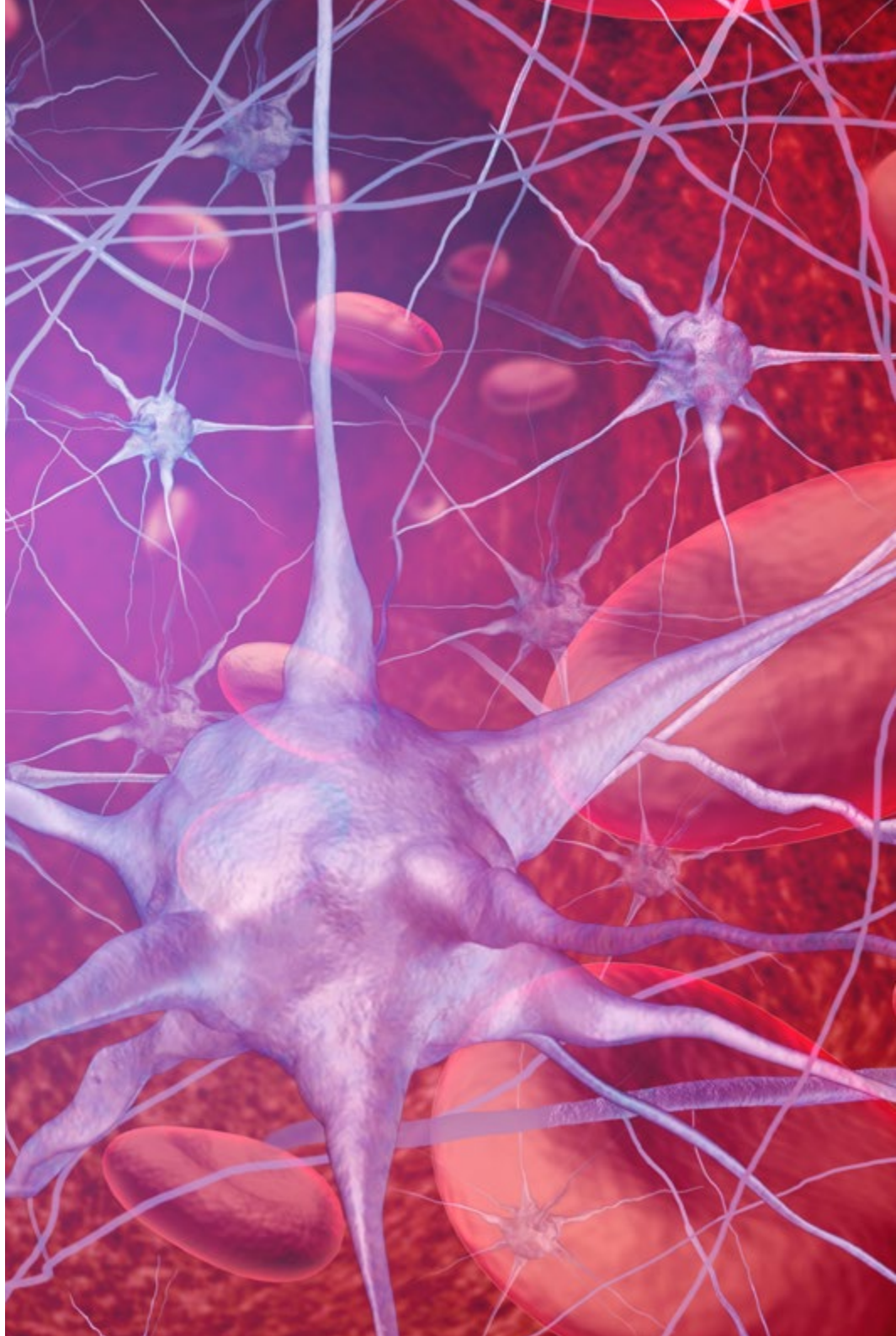
- Be able to make an adequate diagnosis in the early stages of Parkinson's disease
- Know how to recognize clinically the types of parkinsonisms, their differences and their therapeutic implications and prognosis
- Recognize early signs and symptoms in neurodegenerative movement disorders
- Update knowledge on sleep disorders associated with neurodegenerative diseases and specifically Parkinson's disease and parkinsonisms

### Module 4. Neurodegenerative Motor Neuron Diseases and Hereditary Spastic Parapesia

- Update knowledge on the classification of Neurodegenerative Motor Neuron Diseases
- Increase knowledge of therapeutic tools undergoing clinical trials and their future prospects
- Improve symptomatic management of patients with neurodegenerative motor neuron disorders
- Know how to recognize variants of Amyotrophic Lateral Sclerosis

### Module 5. Neurodegenerative Epilepsy Syndromes

- Broaden knowledge of the underlying mechanisms of epilepsy in neurodegenerative diseases
- Know how to recognize and diagnose epileptic syndromes with a neurodegenerative basis, to understand their pathophysiology and their inheritance mechanisms
- Recognize the different clinical patterns of this type of epileptic syndromes
- Update knowledge on the symptomatic management and treatment of these patients



### Module 6. Neurodegenerative Ataxias

- Update knowledge of the genetic basis of neurodegenerative ataxias and its implication for classification
- Recognize the specific clinical markers of neurodegenerative ataxias
- Recognize inheritance patterns of these ataxias in order to provide better genetic counseling
- Know how to recognize ataxic syndromes with other clinical and genetic load components
- Update the clinical management of these patients

### Module 7. Diagnostic Methods of Neurodegenerative Diseases

- Update the knowledge of the different diagnostic methods of neurodegenerative diseases
- Know how to evaluate the specificity and sensitivity of the different diagnostic tests for Neurodegenerative Diseases
- Recognize in neuroimaging tests, the most specific markers of neurodegenerative diseases
- Know which type of patients to order these tests for in order to improve test efficiency

### Module 8. Neuroectodermal Neurodegenerative Disorders

- Recognize the most frequent neuroectodermal disorders, their different genetic and proteomic bases
- Update the treatment of its different clinical manifestations
- Know how to recognize other less frequent neuroectodermal disorders
- Evaluate the prognosis of these pathologies according to the appearance of their alterations

### Module 9. Neurodegenerative Disorders Caused by Prions

- Expand the diagnostic capacity of Spongiform Encephalopathies and recognize the different clinical manifestations of these diseases
- Update the genetic basis of these diseases and their implications for possible future treatments
- Know how to manage the symptoms of these diseases to improve the quality of life of patients
- Improve the knowledge of the different diagnostic tools for prion diseases

### Module 10. Other Neurodegenerative Disorders

- Know other Neurodegenerative Diseases difficult to classify
- Know the mechanisms of neurodegeneration caused by alterations in the metabolism of copper and iron
- Update on the relationship between neurodegeneration and inflammatory and vascular diseases

*Highly specialized objectives in a program created to prepare the best professionals in Neurodegenerative Diseases"*

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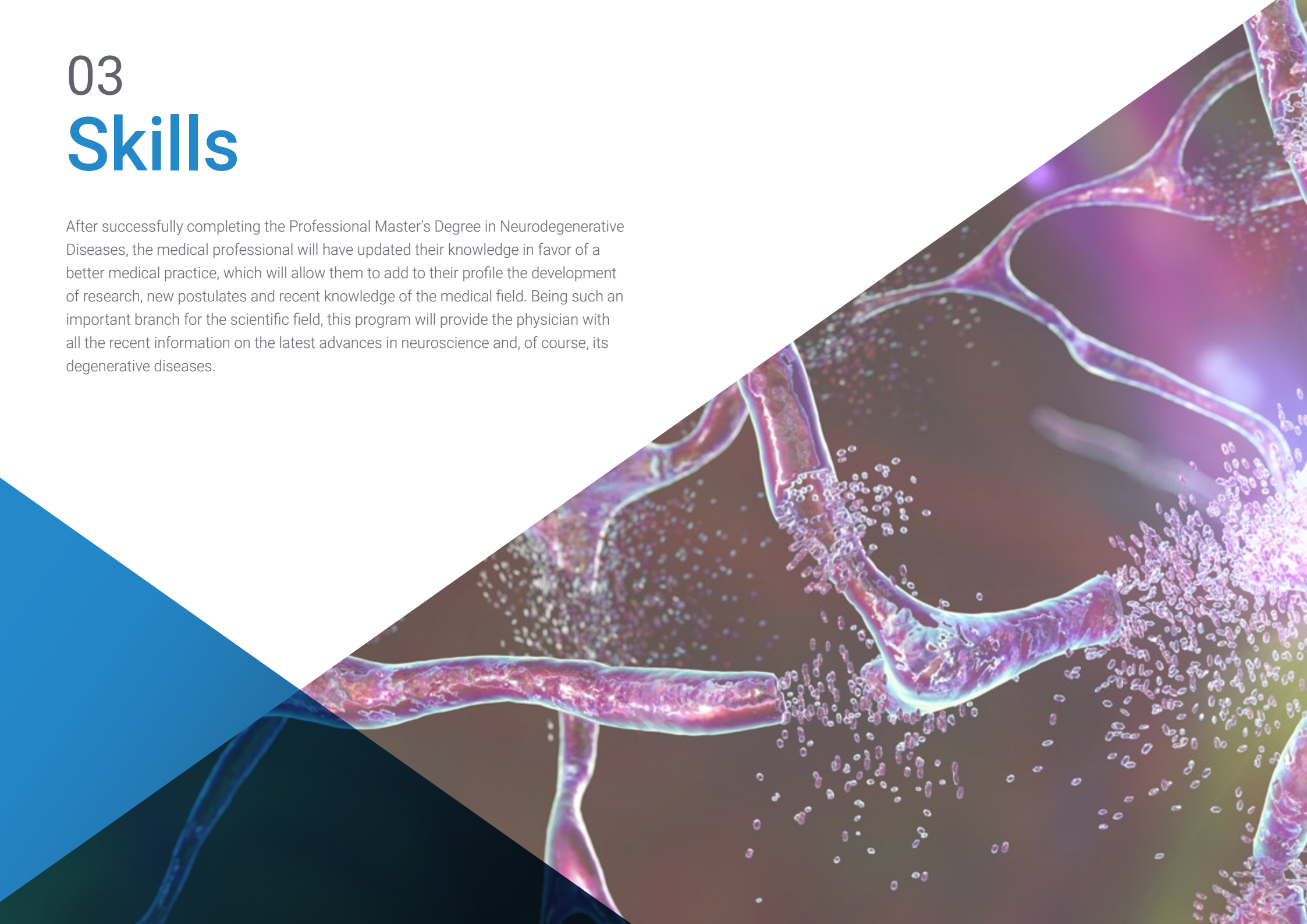
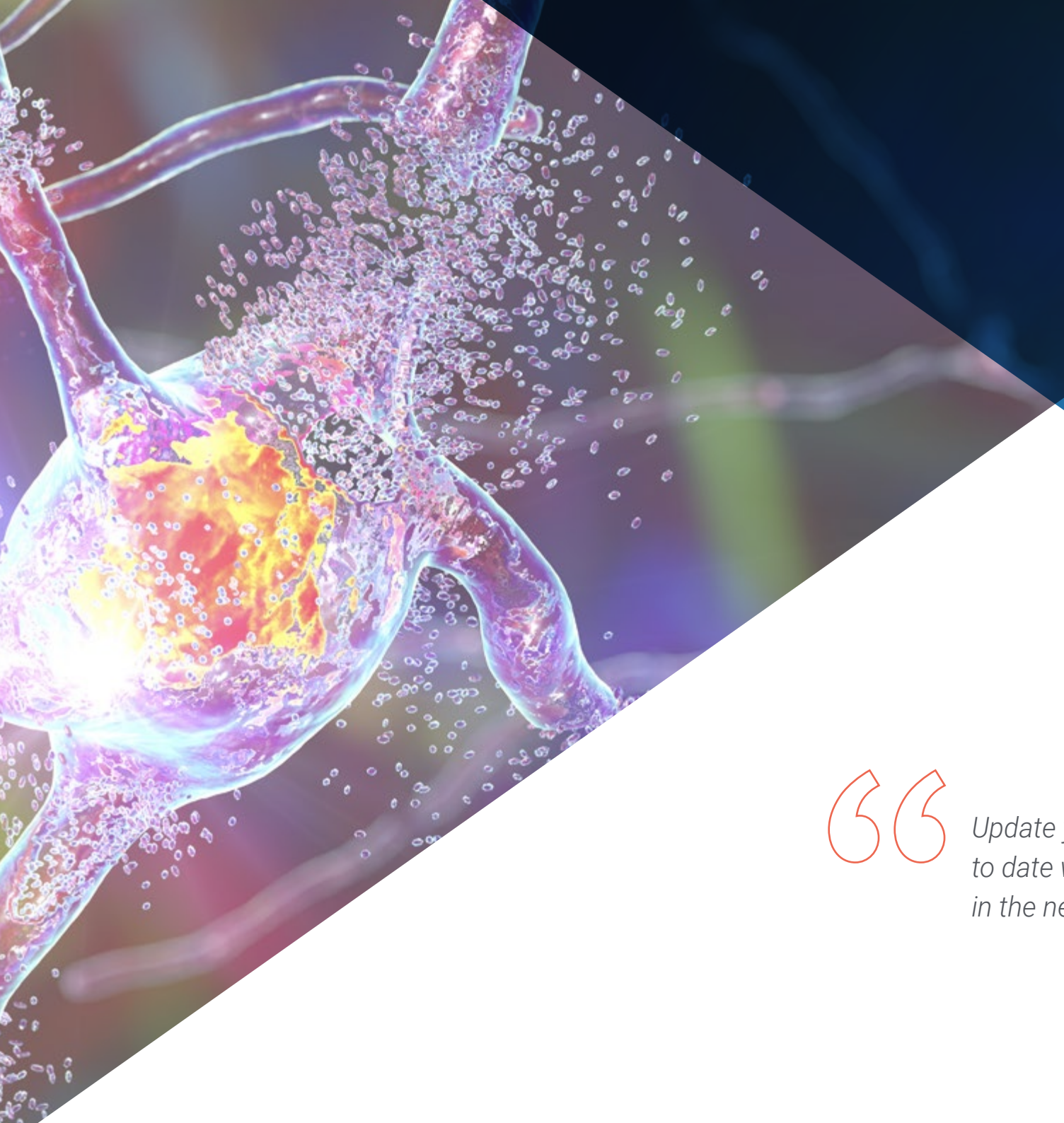
# Skills

After successfully completing the Professional Master's Degree in Neurodegenerative Diseases, the medical professional will have updated their knowledge in favor of a better medical practice, which will allow them to add to their profile the development of research, new postulates and recent knowledge of the medical field. Being such an important branch for the scientific field, this program will provide the physician with all the recent information on the latest advances in neuroscience and, of course, its degenerative diseases.





*Update your knowledge and keep up to date with the latest developments in the neurological sector"*

## General Skills

- Develop and understand knowledge that contributes to the information on neurodegenerative diseases
- Students will update knowledge based on postulates that study neurodegenerative diseases
- Students will know how to apply knowledge in the different medical processes related to neurodegenerative diseases
- Students will be able to develop their own criteria to create postulates that will allow them to delve deeper into neurodegenerative diseases in the future

## Specific Skills

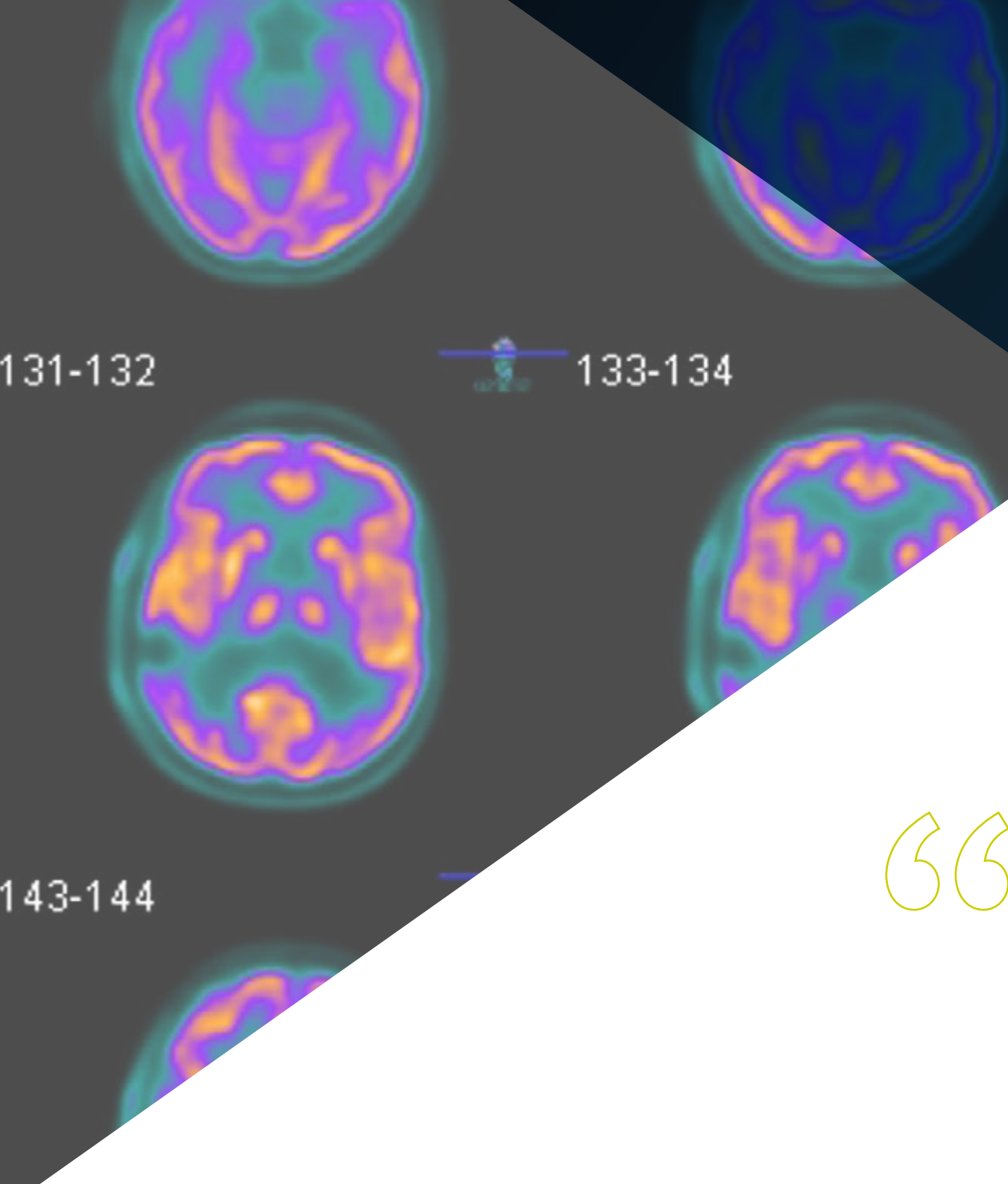
- Broaden the view and update topics covering neurodegenerative diseases and all their care for patient care
- Identify the main causes that produce neurological diseases
- Know the medical treatments to face neurodegenerative diseases
- Identify the basic concepts of medicine used to treat a degenerative disease

*With this 100% online program you will be up to date with the new technologies used in the intervention of patients with Neurodegenerative Diseases"*

04

# Course Management

This comprehensive Professional Master's Degree in Neurodegenerative Diseases is taught by leading specialists in the field. Trained in different fields of clinical care and practice, all of them experienced in teaching and research in different areas of the nervous system and with the necessary management knowledge to provide a broad, systematic and realistic vision within the complexity of this area of Neuroscience, this group of experts will accompany you throughout the program, putting their real and up-to-date experience at your service.




*An exceptional opportunity to learn from the best professionals in the sector"*

## International Guest Director

Dr. Adriano Aguzzi is a leading specialist at European and international level, holding the position of director of the Swiss National Reference Center for Prion Diseases. From this institution, he delves into the **diagnosis of Transmissible Spongiform Encephalopathies and develops his own therapeutic methods to address these pathologies** from the thorough study of the immunological and molecular basis.

Aguzzi's greatest scientific achievements are related to the discovery of the **pathways by which prions reach the central nervous system** through genetic manipulation of mice in vivo. In addition, his laboratory is committed to the development of **state-of-the-art tissue clarification technologies** with which microscopic images of complete rodent brains are obtained for 3D reconstruction with maximum precision. These techniques are promising for the academic community, allowing the **characterization of vascular phenotypes** in the context of stroke and neurodegenerative diseases such as Alzheimer's or Parkinson's disease.

Among his many studies, his project **Exploring the Locales of Cognitive Decline** stands out. In it, Aguzzi proposes the **combination of three-dimensional morphology** with sophisticated **fluorochrome chemistry and molecular methods of genome interrogation/perturbatio**n. Through these revolutionary techniques, he aims to create a detailed atlas of the d**ifferent cell types** causing neurodegenerative damage.

His avant-garde contributions have received a variety of awards. These include the Ernst-Jung Award, the Robert-Koch Award and an honorary medal from the European Molecular Biology Organization.

He was also awarded the NOMIS Distinguished Scientist Award and has received Advanced grants from the European Research Council (ERC) to further his innovations.

In addition, this distinguished neuroscientist is on the editorial board of **Science** and is editor-in-chief of the **Swiss Medical Weekly**. He is also a member of the advisory board of numerous philanthropic foundations and biomedical companies and serves as Director of the Institute of Neuropathology at the University of Zurich.

## Dr. Aguzzi, Adriano

- Director of the Swiss National Reference Center for Prion Diseases
- Director of the Institute of Neuropathology, Zurich
- Professor at the University of Zurich
- Editor-in-Chief of the Swiss Medical Weekly
- Postdoctoral Fellow at the Research Institute for Molecular Pathology (IMP) in Vienna
- Doctor of Medicine, Faculty of Medicine, University of Freiburg
- Chairman of the Board of the European Brain Research Institute (EBRI) in Italy
- Member of: Scientific Advisory Board of the Italian Institute of Technology in Genoa, Advisory Board of the Giovanni Armenise-Harvard Foundation of Boston, Neurosciences Committee of the Wellcome Trust, London, Supervisory Board of the Roche Research Foundation

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

## Management

### Dr. Yusta Izquierdo, Antonio

- Degree in medicine and surgery in 1985 from the Faculty of Medicine of the Autonomous University of Madrid Obtained 5 passes, 16 Bs, 7 As, and 4 As with honors during the course of the degree
- Bachelor's Degree in medicine and surgery with the grade of outstanding, after the completion of the thesis **"Plasmapheresis and immunosuppressants in the treatment of myasthenia gravis,"** in October 1985
- Doctor of Medicine and Surgery Degree from the Autonomous Medical School of Madrid with the Doctoral Thesis entitled: **"Normal variations of short-, medium- and long-latency auditory evoked potentials** Mid- and long-latency evoked potentials in dementia patients" With the qualification of "apto cum laude by unanimous decision" In October 1990
- Specialty in Neurology at the Neurology Service of the Puerta de Hierro Clinic (Dr. Liaño Martínez) between 1987 and 1991
- Coordinator of the Neuromuscular Pathology Unit of the Neurology Service of the Puerta de Hierro Clinic in Madrid, between July 1990 and March 1991
- Specialist in Neurology at the University Hospital of Guadalajara from April 29, 1991 to May 2, 2004
- Head of Neurology at the Integrated Care Management of Guadalajara, the University Hospital of Guadalajara and the Brain Injury Unit of the Institute of Neurological Diseases of Castilla La Mancha since May 3, 2004, a position he still holds today
- Professor of Health Sciences -Profile Neurology- at the Faculty of Medicine of the University of Alcalá, since October 1, 1991, position he currently holds
- Coordinator of the subject "MEDICAL CLINIC" of the Sixth Year, Faculty of Medicine of Alcalá, at the University Hospital of Guadalajara; from the academic year 1993-94 to the academic year 2010-1011

## Professors

### Dr. Romero Delgado, Fernando

- Assistant Neurology Specialist at the University Hospital of Guadalajara (October 2018-present)
- Consultant Neurologist, Multiple Sclerosis and Other Demyelinating Diseases Monographic Consultation; and Neurology on-call at Sanitas La Moraleja University Hospital (June 2016 - Present)
- On-call contract as Neurology Assistant at Guadalajara University Hospital (February 2018- September 2018)
- Assistant Neurology Specialist at San Carlos Clinical Hospital (August 2017 - February 2018)
- Integrated Researcher at the Multiple Sclerosis Unit of the San Carlos Clinical Hospital, through the Foundation for Biomedical Research (June 2017 - July 2017)
- Integrated Researcher in the Multiple Sclerosis and Others Demyelinating Diseases Unit at the General University Hospital Gregorio Marañón, through the Foundation for Biomedical Research (July 2015 - May 2017)

### Dr. Carvalho Monteiro, Guilherme

- Master's Degree in Neuroimmunology at the Autonomous University of Barcelona
- Specialty of Neurology via MIR at the University Hospital of Guadalajara (HUG)
- External Rotation at the Movement Disorders Unit of the Ramón y Cajal University Hospital of Madrid, Spain Head of unit: Juan Carlos Martínez Castrillo
- Master's Degree in "Clinical Reasoning and Practice" from the University of Alcalá, Spain
- Degree in Medicine from the University of Salamanca Numerous scientific publications in prestigious journals in the medical sector

**Dr. López Zuazo, Ignacio**

- Degree in Medicine and General Surgery from the Faculty of Medicine of the Complutense University of Madrid. Promotion 1984-90
- Specialist in Neurology, with order number 507 in Oct.-91. Specialist in the Neurology Service of the Puerta de Hierro University Clinic in Madrid
- Permanent Statutory Staff as F.E.A. of Neurology in SESCAM
- FEA Neurology: La Mancha-Centro Hospital Complex. Alcázar de San Juan 20/02/1996-31/10/2007
- FEA Neurology: Guadalajara University Hospital. 01/11/2007-present
- Neurology Madrid Group Hospitals, Madrid Norte Sanchinarro 09/01/2009-present
- Outpatient and Inpatient Care Activity in the Neurology Ward
- Experience in the performance and interpretation of neurophysiological tests (conduction studies, EMG, evoked potentials, EEG) and neurosonology (TSA and transcranial echodoppler)

**Dr. Hernandez Cristobal, Jaime**

- Degree in Medicine from the University of Salamanca
- Neurology Specialist, Fundación Jiménez Díaz Hospital (Madrid)
- Doctor in Medicine, Autonomous University of Madrid
- Author of numerous publications specialized in different aspects of Neurology in scientific journals

**Dr. Orts Castro, Emilio**

- November 2007 to present: F.E.A. fixed Neurology at the University Hospital of Guadalajara
- June 2009 - June 2018 Neurology Specialist at the "Maestranza" Specialty Medical Center
- February 1995 - October 2007: F.E.A. of Neurology at the General Hospital La Mancha Centro (Alcázar de San Juan, Ciudad Real) March 2005: obtaining the position of F.E.A. in the "Mancha-Centro" Hospital Complex after the extraordinary OPE of December 2002
- March 1993 - January 1995: Clinical Chief Physician of the Neurology Area at the San José Institute Foundation in Madrid; Monographic Center dedicated to the study and treatment of epileptic patients

**Dr. Mass Serrano, Miguel**

- Medical Specialist in Neurology
- Faculty Specialist in Neurology
- Specialized Health Care Training in Neurology
- External Rotation in the Multiple Sclerosis Center
- Master's Degree in Clinical Medicine
- Bachelor's Degree in Medicine And Surgery

05

# Structure and Content

The structure and contents of this program has been designed by a team of professionals who are aware of the relevance of up-to-date specialization to be able to progress in the labor market with security and competitiveness, and to provide professional practice with the excellence that is only possible with the best education.

*This Professional Master's Degree contains the most complete and up-to-date scientific program on the market"*

## **Module 1.** Etiology and Biopathology of Neurodegenerative Diseases

1.1. Concepts and Classification of Neurodegenerative Diseases
1.2. Pathophysiology and Classification of Neurodegenerative Diseases
  1.3.1 Neurodegenerative Dementias
  1.3.2 Neruodegenerative Diseases Expressed by Movement Disorders
1.4. Genetics in Neurodegenerative Diseases and Human Aging
  1.4.1 Patterns of Genetic Alteration in Neurodegenerative Disorders
  1.4.1 Genetics of Human Aging
1.5. Animal Models in Neurodegenerative Diseases
1.6. Mechanisms of Cell Loss in Neurodegenerative Diseases
1.7. Inheritance in Neurodegenerative Diseases
1.8. Genetic Counseling in Neurodegenerative Diseases
1.9. Proteomics and Neurodegenerative Diseases
  1.9.1 Classification of Neurodegenerative Disorders According to Their Protein Disruption
1.10. Epidemiology of Neurodegenerative Diseases
1.11. Social and Economic Burden of Neurodegenerative Diseases

## **Module 2.** Neurodegenerative Dementias

2.1. Alzheimer's Disease.
2.2. Clinical Variants of Alzheimer's Disease
2.3. Familial Alzheimer's Disease
2.4. Frontotemporal Dementias
2.5. Frontotemporal Lobar Degeneration with Immunoreactive Inclusions for FUS
2.6. Pick Disease
2.7. Biomarkers of Neurodegenerative Dementias
2.8. Progressive Subcortical Gliosis
2.9. Treatment of Dementias
  2.9.1 Medical Treatment
  2.9.2 Symptomatic Treatment
  2.9.3 New Perspectives in the Treatment of Neurodegenerative Dementias
2.10. Socio-Sanitary Problems and Palliative Treatment of Neurodegenerative Dementias



## **Module 3.** Neurodegeneration and Parkinsonism

3.1. Parkinson's Disease
3.2. Differential Diagnosis of Parkinsonism
3.3. Lewy Body Dementia
3.3. Progressive Supranuclear Palsy
3.4. Cortico-Basal Degeneration
3.5. Taupathias
3.6. Multisystem Atrophies
  3.6.1 Shy-Drager Syndrome
  3.6.2 Oliponto-Cerebellar Atrophy
  3.6.3 Striato-Nigric Degeneration
3.7. Parkinson-Dementia Syndromes
3.8. Huntington's Disease
  3.8.1 Clinical Manifestations
  3.8.2 Pharmacological Management
3.9. Hyposmia in Neurodegenerative Disorders
3.10. Sleep Disorders in Neurodegenerative Diseases

## **Module 4.** Neurodegenerative Motor Neuron Diseases and Hereditary Spastic Parapesia

4.1. Upper Motor Neuron Diseases Primary Lateral Sclerosis
4.2. Hereditary Spastic Paraparesis
4.3. Chronic Spinal Muscular Atrophy
4.4. Oras Spinal and Bulbar Muscular Atrophies
4.5. Sporadic Amyotrophic Lateral Sclerosis
4.6. Familial Amyotrophic Lateral Sclerosis
4.7. Treatment of Amitrophic Lateral Sclerosis
  4.7.1 Multidisciplinary Team in the Treatment of ALS Patients
  4.7.2 Pharmacological Management of the ALS Patient New Perspectives
4.8. Gene Therapy for Chronic Spinal Muscular Atrophy
4.9. Post-Polio Syndrome
4.10. ALS-Parkinson's-Dementia Complex

## **Module 5.** Neurodegenerative Epilepsy Syndromes

5.1. Epilepsy in Adult Neurodegenerative Diseases
5.2. Neurodegeneration in Epilepsy
5.3. Neurodegeneration and Epilepsy Excitotoxicity
5.4. Progressive Myoclonic Epilepsy
  5.4.1 Genetic Disorders in Myoclonic Epilepsies
5.5. Lafora Disease
5.6. Unverricht-Lundborg Disease
5.7. Epilepsy with Progressive Mental Retardation
5.8. Hemiconvusion-Epilepsy-Hemiplegia-Epilepsy Syndrome
5.9. Parkinsonisms and Epilepsy
5.10. Treatment of Epilepsy in Neurodegenerative Diseases

## **Module 6.** Neurodegenerative Ataxias

6.1. Clinical Approach and Classification of Progressive Cerebellar Ataxias
6.2. Autosomal-Dominant Ataxias Genetic Mutations and Genotype-Phenotype Correlation
6.3. Autosomal Recessive Ataxias
6.4. Episodic Ataxias
  6.4.1 Episodic Ataxia Type 1
  6.4.2 Episodic Ataxia Type 2
6.5. Heredoataxias Associated with Genetic Alterations of Metabolism
6.6. Friedreich's Ataxia
6.7. Ataxias Secondary to Mutations in Mitochondrial DNA
6.8. Sporadic Progressive Ataxias
6.9. Fragile X Syndrome, Tremor, and Ataxia
6.10. Neurological Alterations Secondary to Vitamin E Deficiency



## **Module 7.** Diagnostic Methods of Neurodegenerative Diseases

7.1. Use of Genetic Analysis for Clustering and Separation of Neurodegenerative Diseases.
7.2. Neuroimaging in Neurodegenerative Dementias
7.3. Neuroimaging in Neurodegenerative Parkinsonisms
7.4. Clinical Utility of Markers in Blood and Cerebrospinal Fluid
7.5. Positron Emission Tomography in Neurodegenerative Disorders
7.6. Utility of Biopsy in Neurodegenerative Diseases
7.7. Neuropsychological Tests in Neurodegenerative Dementias

## **Module 8.** Neuroectodermal Neurodegenerative Disorders

8.1. Neurofibromatosis.
8.2. Tuberous Sclerosis of Bourneville
8.3. Sturge-Weber Disease
8.4. Von Hippel-Lindau Disease
8.5. Ataxia-Telangiectasia
8.6. Neurocutaneous Melanosis
8.7 Xeroderma Pigmentosum
8.8. Cerebrotendinous Xanthomatosis
8.9. Hypomelanosis of Ito
8.10. Menkes Disease

## **Module 9.** Neurodegenerative Disorders Caused by Prions

9.1. Introduction to the Neurodegenerative Pathology Caused by Priors
9.2. Sporadic Creutzfeldt-Jakob Disease
  9.2.1 Incidence
  9.2.2 Symptomatic Treatment of Creutzfeldt-Jakob Disease
9.3. CIE Variant Creutzfeldt-Jakob Disease ("Mad Cow disease")
9.4. Creutzfeldt-Jakob Disease Genetics
9.5. Iatrogenic Creutzfeldt-Jakob Disease
9.6. Fatal Family Insomnia
9.7. Gerstmann-Sträussler-Scheinker Disease
9.8. Kuru Disease
9.9. Protease-Sensitive Prionopathy



**Module 10.** Other Neurodegenerative Disorders

10.1. Hereditary Amyloidosis and Neurodegeneration
10.2. Neurodegeneration with Iron Accumulation in the Brain
10.3. Familial Encephalopathy Due to Neuroserpin Inclusion Bodies
10.4. Hereditary Ferritinopathies
10.5. Neurodegenerative Disease Due to Copper Metabolism Disorder
10.6. Cadasil
10.7. Amyloid Angiopathy
10.8. Neurodegenerative Dystonia
10.9. Neurodegeneration in Multiple Sclerosis

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

06

# 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:**

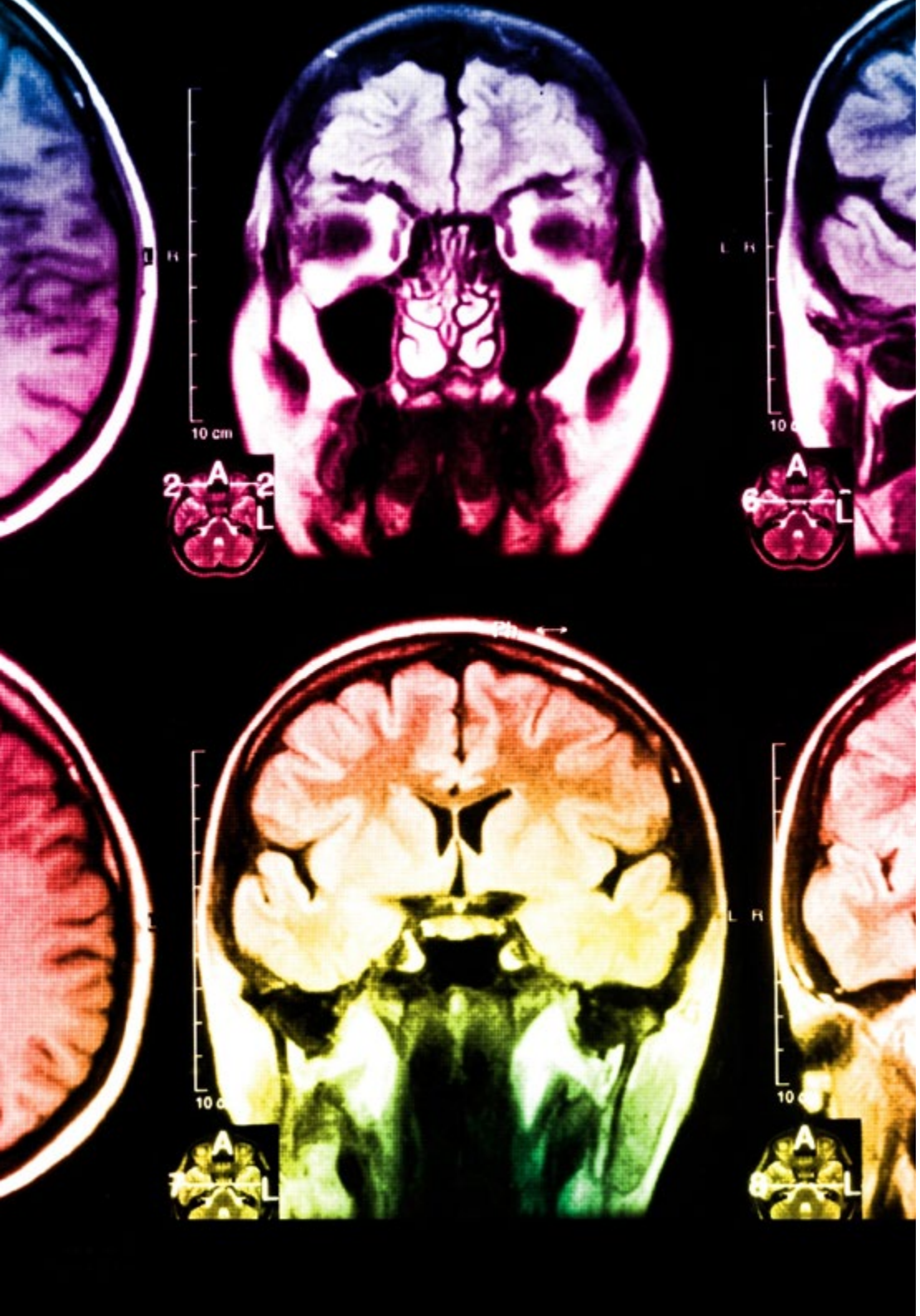
1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that evaluate real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better 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 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.

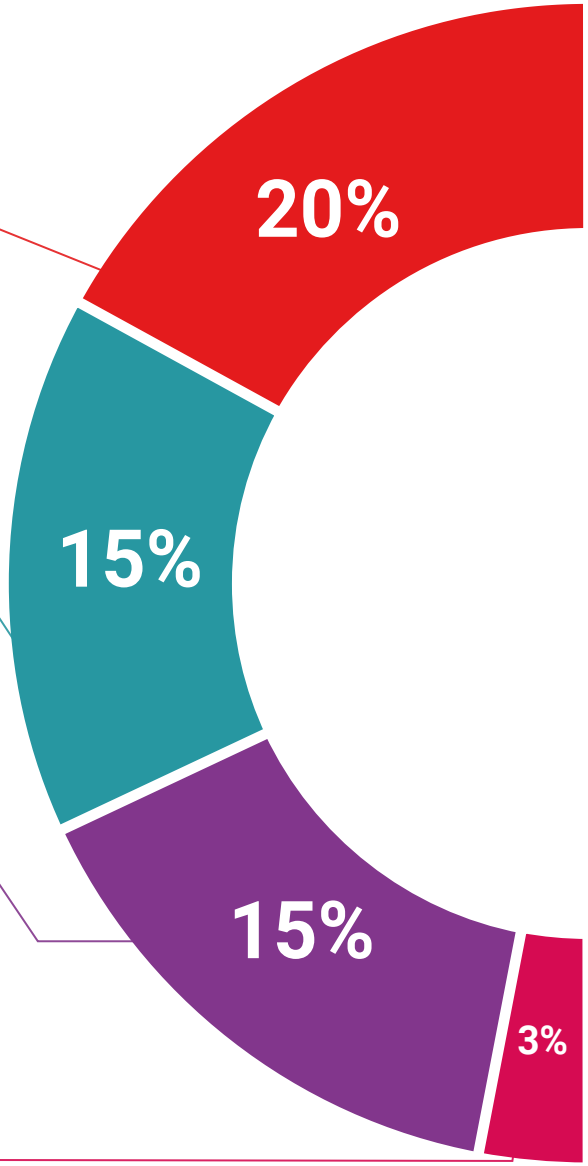
### Interactive Summaries

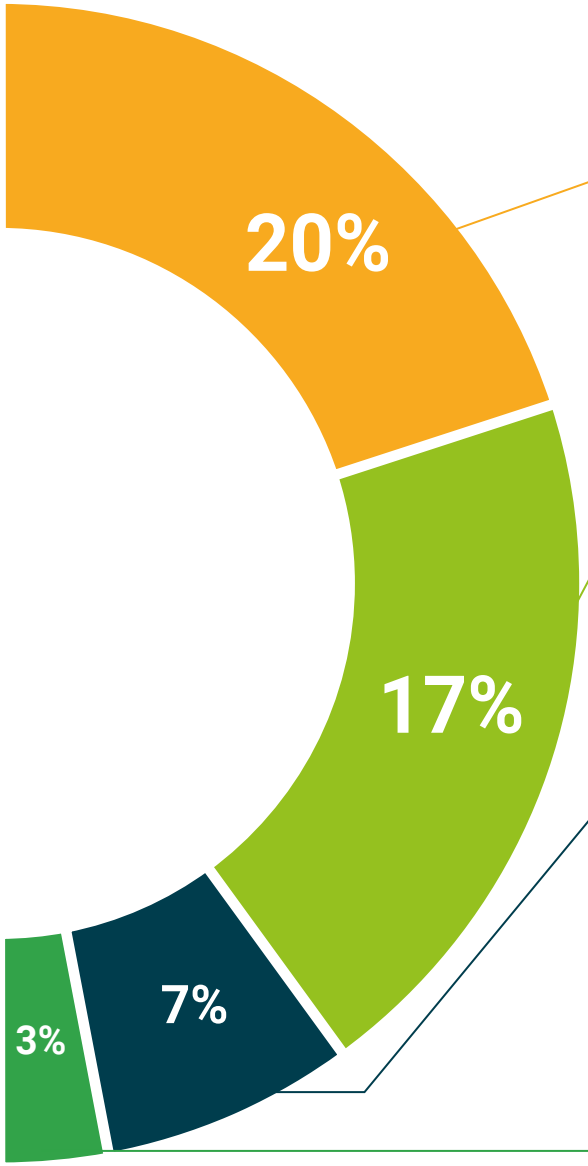
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

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.

07

# Certificate

This Professional Master's Degree in Neurodegenerative Diseases guarantees students, in addition to the most rigorous and up-to-date education, access to a Professional Master's Degree issued by TECH Global University.

*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*

This program will allow you to obtain your **Professional Master's Degree certificate in Neurodegenerative Diseases** 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: **Professional Master's Degree in Neurodegenerative Diseases**

Modality: **online**

Duration: **12 months**

Accreditation: **60 ECTS**


tech global university

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

**Professional Master's Degree in Neurodegenerative Diseases**

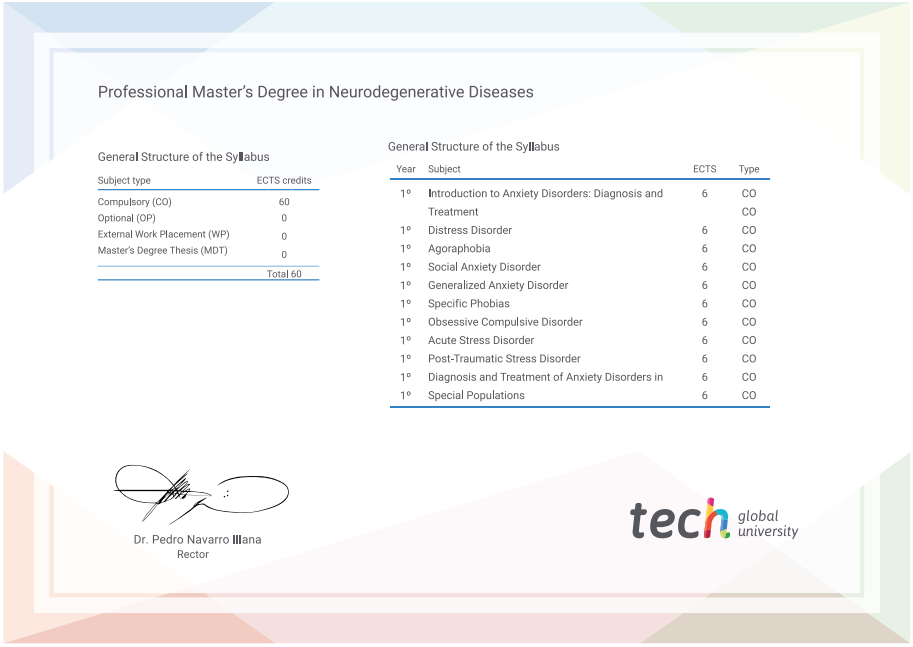
This is a program of 1,500 hours of duration equivalent to 60 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

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


Professional Master's Degree in Neurodegenerative Diseases

General Structure of the Syllabus

| Subject type | ECTS credits |
|---|---|
| Compulsory (CO) | 60 |
| Optional (OP) | 0 |
| External Work Placement (WP) | 0 |
| Master's Degree Thesis (MDT) | 0 |
| | Total 60 |

General Structure of the Syllabus

| Year | Subject | ECTS | Type |
|---|---|---|---|
| 1º | Introduction to Anxiety Disorders: Diagnosis and Treatment | 6 | CO |
| 1º | Distress Disorder | 6 | CO |
| 1º | Agoraphobia | 6 | CO |
| 1º | Social Anxiety Disorder | 6 | CO |
| 1º | Generalized Anxiety Disorder | 6 | CO |
| 1º | Specific Phobias | 6 | CO |
| 1º | Obsessive Compulsive Disorder | 6 | CO |
| 1º | Acute Stress Disorder | 6 | CO |
| 1º | Post-Traumatic Stress Disorder | 6 | CO |
| 1º | Diagnosis and Treatment of Anxiety Disorders in Special Populations | 6 | CO |

Dr. Pedro Navarro Illana
Rector

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


tech global university
Professional Master's Degree
Neurodegenerative Diseases
» Modality: online
» Duration: 12 months
» Certificate: TECH Global University
» Credits: 60 ECTS
» Schedule: at your own pace
» Exams: online

# Professional Master's Degree
## Neurodegenerative Diseases

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