

# Postgraduate Certificate

Medical/Pharmacological  
Treatments and Research  
in Trichology and New  
Treatment Alternatives





## Postgraduate Certificate

### Medical/Pharmacological Treatments and Research in Trichology and New Treatment Alternatives

Course Modality: **Online**

Duration: **6 weeks**

Certificate: **TECH Technological University**

**6 ECTS Credits**

Teaching Hours: **150 hours.**

Website: [www.techtitute.com/medicine/postgraduate-certificate/medical-pharmacological-treatments-research-trichology-new-treatment-alternatives](http://www.techtitute.com/medicine/postgraduate-certificate/medical-pharmacological-treatments-research-trichology-new-treatment-alternatives)

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# 01

# Introduction

Modern pharmacology offers very effective solutions in most cases of capillary dysfunctions. This course will show you the latest medical options to address them, with the most effective advances in the medical field. A unique training opportunity provided by the world's largest online university.

*We provide you with the most complete training on quality in occupational medicine so that you can specialize in this field and give a boost to your profession.*







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*An extensive compendium of knowledge on hair treatments in the field of pharmacology"*

The most common pharmacological treatments (minoxidil, finasteride, dutasteride), treatments for alopecia Areata with dexamethasone minipulse therapy and anti-JAK drugs, treatment with antiandrogens for frontal fibrosing alopecia, treatment with estrogens.

Furthermore, new treatments or alternative treatments such as platelet-rich plasma with its indications and current legislation, low frequency laser or LLLI are reviewed.

Likewise, we will show the latest research and development to address unsolved problems and the advances in cloning and pharmacology in order to solve the trichological problems faced by our patients.

This **Postgraduate Certificate in Medical/Pharmacological Treatments and Research in Trichology and New Treatment Alternatives** contains the most complete and up-to-date scientific program on the market. The most important features of the program include:

- ♦ Practical cases presented by experts in hair surgery.
- ♦ The latest developments in Hair Surgery, with special and dedicated attention to the innovative methodologies.
- ♦ Practical exercises where the self-evaluation process can be carried out to improve learning.
- ♦ Graphic contents, diagrams, and practical cases that gather scientific and practical information on the disciplines that are essential for professional hair surgery practice.
- ♦ Theoretical lessons, questions to experts and/or tutors, discussion forums on controversial issues and individual reflection work throughout this Postgraduate Diploma.
- ♦ Content that is accessible from any fixed or portable device with an Internet connection.



*A course designed with the excellence demanded by all TECH trainings, to boost your professional growth with the support of the best training system in the online market"*

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*A Postgraduate Certificate created with the demand for excellence of all TECH specializations, to boost your professional growth backed up by the most advanced training system on the online market”*

The teaching staff includes professionals from the field of medicine, with extensive experience in hair transplantation, who bring their 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 in Hair Transplantation.

*A multimedia program that will allow you to study in a simpler and more interactive way.*

*With learning strategies focused on practice, this training will give you the opportunity to learn in a real and immediate way.*





# 02

# Objectives

The objective of this training is to ensure that our students learn in a stimulating and attractive way, so that their interest in studying does not diminish during work time. In this way, we give real encouragement to achieving the learning objectives and with them, your professional growth.







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*Clear and realistic objectives, which you will be able to achieve through a stimulating and high quality study process”*



## General Objectives

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- Acquisition of knowledge, skills and abilities, both theoretical and practical, to be able to start working as a hair surgeon.
- Acquire diagnostic and treatment skills in cases of patients with alopecia and other hair and scalp problems, as well as to learn clinical-surgical skills, an essential foundation for the acquisition of deeper knowledge in this field.
- Learn the required clinical-surgical skills to solve patients' problems in Hair Transplantation and Hair Medicine.







## Specific Objectives

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- Review the most common pharmacological treatments (minoxidil, finasteride, dutasteride), treatments for alopecia Areata with dexamethasone minipulse therapy and anti-JAK drugs, treatment with antiandrogens for frontal fibrosing alopecia, treatment with estrogens.
- Review new treatments or alternative treatments such as platelet rich plasma with its indications and current legislation, low frequency laser or LLLI.
- Show the most up-to-date lines of research and development to solve unsolved problems and the advances in cloning and pharmacology to solve patients hair-related problems.

“

*Realistic objectives, which will measure your progress and your advancement as a professional, in a constant and effective way”*

03

# Course Management

This Postgraduate Certificate is the opportunity to learn from the best, with a teaching staff of professionals in the sector who will invest their theoretical and practical knowledge to take you to the highest level of training. With the latest and most effective teaching methods on the online teaching market.







“

*The most up-to-date developments in the field of hair transplantation, from leading experts in this type of procedure”*

## Management



### Dr. Pérez Castaño, Cristina Gema

- ♦ Degree in Medicine and Surgery from the Complutense University of Madrid in 2004. Specialist via MIR in Intensive Care Medicine at the Doce de Octubre Hospital in Madrid. Doctoral courses in the field of surgery and infectious diseases with outstanding results. PhD in organ transplantation with asystole donors through a Mutua Madrileña Scholarship, specialized training in medical pathology, infectious diseases, organ transplantation and emergency units worldwide. Homologation of the master's degree in out-of-hospital emergency medicine, accredited by the Laín Entralgo Agency of the Community of Madrid, Spain.
- ♦ Specialist in hair transplantation in clinics such as MC360, MAN MEDICAL INSTITUTE and head of the hair transplant unit at the EIVIESTETIC clinic in Ibiza, collaborating in various hair transplant units in the diagnostic and surgical area and various medical-esthetic treatments.
- ♦ Along with the rest of the MAN MEDICAL INSTITUTE hair surgery medical team in 2019, she received the "Medical Team of the Year 2019" award for the hair surgery branch from the newspaper La Razón "Salud".



*Take the leap to train with some of today's leading professionals. You will gain a competitive advantage in your profession"*

## Professors

### **Dr. Coelho, Catarina Sofia da Silva**

- ◆ Degree in Medicine and Medical Surgery from the Autonomous University of Barcelona Faculty of Medicine. Postgraduate studies in esthetic and anti-aging medicine at the University of Alcalá (2019).
- ◆ Master's Degree in Esthetic Medicine from the University of Alcalá in 2020.
- ◆ Training in Hair Microsurgery and Trichology at CM2C Medical Center (Portugal), practicing as a Hair Surgeon at the same center from Oct 2017-Aug 2019.
- ◆ Along with the rest of the MAN MEDICAL INSTITUTE hair surgery medical team in 2019, she received the "Medical Team of the Year 2019" award for the hair surgery branch from the newspaper La Razón "Salud".

### **Dr. Ángel Navarro, Rosa María**

- ◆ Degree in Medicine and Surgery from the Complutense University of Madrid in 1984. Specialist in Allergy and Immuno-pathology from the University of Buenos Aires. Argentina. Four-year residency at the J.M. Ramos Mejía University Hospital. Specialist in Public Health from the University of Buenos Aires. Argentina. .
- ◆ Medical specialist in hair micrografting from the Distance Learning University of Madrid (UDIMA) with complementary training and extensive experience in both classroom and online teaching skills based on years of educational and healthcare experience.



# 04

## Structure and Content

The Postgraduate Certificate is structured as a comprehensive tour through each and every one of the concepts required to understand and work in this field. With an approach focused on practical application that will help you grow as a professional from the very beginning of your training.





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*A comprehensive syllabus focused on acquiring knowledge and converting it into real skills, created to propel you to excellence”*

## Module 1. Medical/Pharmacological Treatments and Research in Trichology and New Treatment Alternatives

- 1.1. ORAL VS TOPICAL MINOXIDIL (Rogaine®)
  - 1.1.1. Antihypertensive.
  - 1.1.2. Available in 2% and 5% Solutions
  - 1.1.3. Desired Effects: Vasodilation, Angiogenesis, and Enhanced Cell Proliferation
  - 1.1.4. Side Effects: Contact Dermatitis and Temporary Hair Loss during the First Four Months of Use
  - 1.1.5. Minoxidil 5% Foam Does Not Contain Propylene Glycol (potential irritant) and Lowers the Incidence of Pruritus.
- 1.2. Oral Dutasteride (Avodart ®): Efficacy and Safety
  - 1.2.1. Dihydrotestosterone Production Inhibitor for the Treatment of Benign Prostatic Hyperplasia (BPH)
  - 1.2.2. Dutasteride efficacy at 2.5 mg/day
  - 1.2.3. Side effects:
- 1.3. Finasteride (Propecia®): Most Common for Male Pattern Baldness
  - 1.3.1. A Reductase Inhibitor that Reduces the Conversion of Testosterone to Dihydrotestosterone or DHT Better than Finasteride
  - 1.3.2. More Effective Equal Safety for Men and Women
  - 1.3.3. Women: Avoid Pregnancy during Treatment and 6 Months After. It Is Not Officially Approved for Use in Women.
    - 1.3.3.1. Combination with an Effective Oral Contraceptive
  - 1.3.4. Finasteride vs Dutasteride Safety.
  - 1.3.5. Dutasteride Microinjections
  - 1.3.6. Improved Hair Quantity and Thickness
  - 1.3.7. Progress Over Time: 6 Months to 1 Year.
  - 1.3.8. Daily dose: 1 mg
  - 1.3.9. Problems of a sexual nature.
- 1.4. 2% Ketoconazole Topical Shampoo (Nizoral ®)
  - 1.4.1. Antifungal Agent
  - 1.4.2. Treatment for Dermatitis and Dandruff
  - 1.4.3. Action on Scalp Microflora
  - 1.4.4. Beneficial Effect on Androgenetic Alopecia Associated with Hair Follicle Inflammation
- 1.5. Dexamethasone Minipulse Therapy (alopecia areata): Risks vs. Continuous Corticosteroids
- 1.6. JAK Inhibitor Drugs (Alopecia Areata)
  - 1.6.1. Clinical Trials: Ruxolitinib or Tofacitinib (Extensive Alopecia Areata)
  - 1.6.2. Efficacy and Safety Results.
- 1.7. Anti-Androgens (Frontal Fibrosing Alopecia): Finasteride and Oral Dutasteride in Females with Frontal Fibrosing Alopecia
  - 1.7.1. Loss of Eyebrows and Hair in the Frontal and Temporal Region ("headband area").
  - 1.7.2. Block the Binding of Androgen Receptor to Testosterone
  - 1.7.3. Cyproterone Acetate and Spironolactone
- 1.8. Prostaglandin Analogs
  - 1.8.1. Lipidic Substances Derived from 20-Carbon Fatty Acids (Eicosanoids)
  - 1.8.2. They affect and act on different systems of the organism: nervous system, smooth muscle, blood and reproductive system;
  - 1.8.3. They regulate various functions: blood pressure, blood coagulation, the allergic inflammatory response and the activity of the digestive system.
  - 1.8.4. Bimatoprost (Latisse®) is now available as a treatment for eyelash growth.
  - 1.8.5. Latanoprost increases hair density and may increase pigmentation.
- 1.9. Estrogens
  - 1.9.1. Indirect Anti-Androgens
- 1.10. Capillary Cloning:
  - 1.10.1. Future Therapies. Unlimited Follicles from Hair Stem Cells. Human Clinical Trials.
  - 1.10.2. Two main approaches under investigation: direct injection of cultured cells or the use of factors that promote cell multiplication.
  - 1.10.3. Cells are cultured and the culture supernatant is processed to produce a rich compound to promote hair growth.
  - 1.10.4. PRP: Biostimulation Techniques
    - 1.10.4.1. Increase the Number of Blood Vessels and Improve Circulation
    - 1.10.4.2. Promote the Production of Collagen
    - 1.10.4.3. Counteract the Negative Effect of Free Radicals and Prevent Cellular Aging
    - 1.10.4.4. In Spain and according to the Resolution of the Spanish Agency of Medicines and Health Products (AEMPS) of May 23, 2013, the materials and methods are restricted to the use of CLOSED TECHNIQUES.



- 1.11. Hair Transplantation with Micrografts in Men and Women
  - 1.11.1. Robots Capable of Automated Extraction
- 1.12. Low Power Laser:
  - 1.12.1. Different Wavelengths and Different Modes
  - 1.12.2. Low-Level Laser Intensive (LLLI) Laser Therapy
  - 1.12.3. Uses: Female Androgenetic Alopecia and/or MAGA Male Androgenetic Alopecia. Treatments in Monotherapy or as Combined Therapies.
  - 1.12.4. Penetrates the Surface of the Skin. Stimulates Blood Flow. Helps Nutrients, Blood, and Oxygen Reach Hair Follicles.
  - 1.12.5. Hair Revitalization, Elimination of Toxins and any Blockages Found within the Follicle.
- 1.13. Alternative Treatments:
  - 1.13.1. Herbs, Vitamins, and Minerals
  - 1.13.2. Biotin, Caffeine, Melatonin, Copper Complexes
- 1.14. Considerations:
  - 1.14.1. Minoxidil and Finasteride must be used continuously for results and once discontinued, the natural balding process will resume.
  - 1.14.2. PG analogs have a much more potent and longer lasting effect, although not permanent.
  - 1.14.3. Prostaglandin F2 alpha analogs, latanoprost and bimatoprost are used in the treatment of ocular hypertension and glaucoma.



*A unique, key, and decisive  
Training experience to boost your  
professional development”*

05

# Methodology

This training provides you with a different way of learning. Our methodology is developed through a cyclical way of learning: ***Re-learning***.

This teaching system, from Harvard University, is used in the most prestigious medical schools in the world and has been considered one of the most effective by major publications such as the ***New England Journal of Medicine***.







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*Learn about Relearning, a system from Harvard 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 the physician's professional practice.

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*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 training, 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). Therefore, 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.



### Surgical techniques and clinical procedures on video

We bring you closer to the latest techniques, to the latest educational advances, to the forefront of educational news. 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

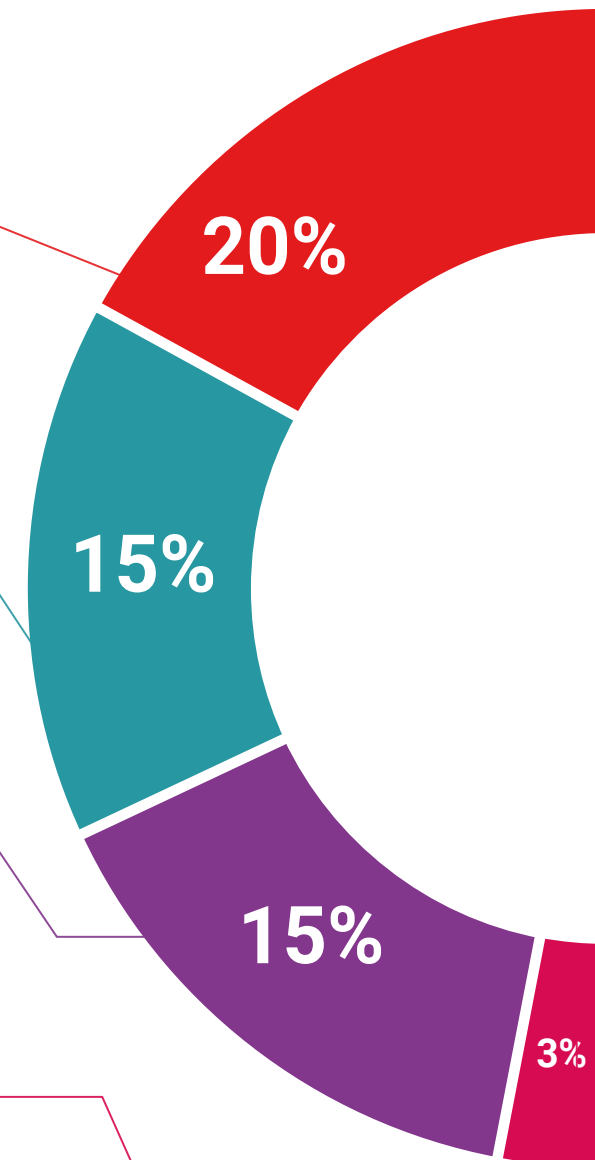
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge. This unique training system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

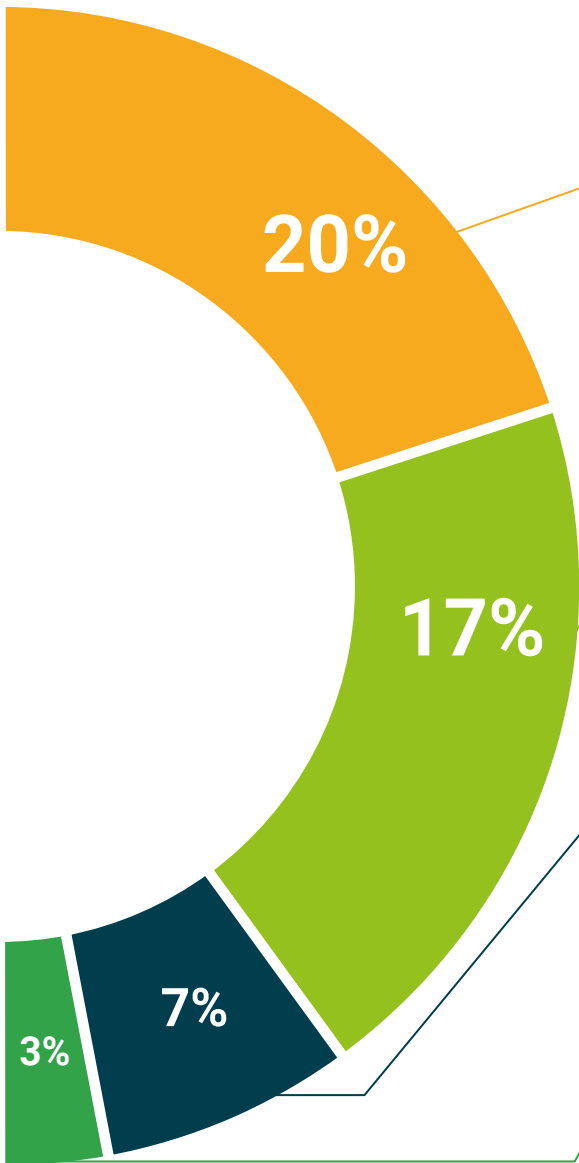


### Additional Reading

By participating in this course you will have access to a virtual library where you will be able to complement and keep your training up-to-date with the latest articles on the subject, consensus documents, international guidelines...

An invaluable resource that you will be able to use even when you finish your course with us.





#### Learning from an expert

Watching a course perform a task is the most effective way of learning. This is called Learning From an Expert: a proven way to reinforce knowledge and memory of what has been learned. For this reason, we include this type of learning in our course 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.



#### Testing & Re-testing

We periodically assess and reassess your knowledge throughout this program through activities and drills in order to check if 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 recall, 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 Certificate in Medical/Pharmacological Treatments and Research in Trichology and New Treatment Alternatives** guarantees you, besides the most rigorous and up-to-date training, access to a University Course degree issued by TECH Technological University.







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

This Medical/Pharmacological Treatments and Research in Trichology and New Treatment Alternatives Course university in includes the most complete and up-da-te scientific program on the market.

After students have passed the assessments, they will receive by certified mail their Postgraduate Certificate Certificate issued by TECH Technological University.

The certificate issued by TECH Technological University will reflect the qualification obtained in the Postgraduate, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professionals career evaluation committees.

Title: Postgraduate Certificate in Medical/Pharmacological Treatments and Research in Trichology and New Treatment Alternatives

ECTS: 6

Official Number of Hours: 150 hours.



health future  
confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
development language  
virtual classroom

**tech** technological  
university

## Postgraduate Certificate

Medical/Pharmacological  
Treatments and Research  
in Trichology and New  
Treatment Alternatives

Course Modality: **Online**

Duration: **6 weeks**

Certificate: **TECH Technological University**

**6 ECTS Credits**

Teaching Hours: **150 hours.**

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