

# Postgraduate Diploma

Dermatosis due to Microbiome Alterations and External Agents





## Postgraduate Diploma

### Dermatosis Due to Microbiome Alterations and External Agents

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

Website: [www.techtute.com/us/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-dermatosis-microbiome-alterations-external-agents](http://www.techtute.com/us/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-dermatosis-microbiome-alterations-external-agents)

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# 01

# Introduction

Dermatological problems are one of the most common reasons for consultations in the day to day veterinary clinic for small animals. The diagnosis and treatment of these cases are very often a challenge for veterinarians, since the clinical aspects of the different skin diseases are often very similar.

This program focuses on the structure and physiology of skin and determines a logical and correct diagnostic approximation of the skin caused by microbiome alterations or external agents. It also addresses three of the most relevant pathologies in pet dermatology: pyodermas, dermatoses caused by fungi and dermatoses caused by protozoa, among which we highlight leishmaniasis, a very important disease in many geographical areas.





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*Veterinarians must continue  
their training to adapt to new  
developments in this field”*

Dermatology is possibly the most frequently encountered specialty within pet veterinary medicine in daily clinical practise.

Because of this, and taking into account its importance, this Postgraduate Diploma program has been developed by a leading veterinary teaching team in Veterinary Dermatology.

The combination of experience, both theoretical and practical, allows the veterinary professional to develop, first hand, specialized knowledge to carry out a good diagnosis and treatment of dermatological diseases from the theoretical point of view, with the latest news and scientific advances and from the extensive practical experience of all teachers. The combination of a great team of interrelated teachers is what makes this Postgraduate Diploma unique among all those offered in similar programs.

The topics developed in this Postgraduate Diploma address, in-depth, the most important small animal dermatoses, including dogs, cats and other non-traditional pets.

With this Postgraduate Diploma, veterinary professionals acquire advanced knowledge of Veterinary Dermatology for daily clinical practice. The study system applied by this university provides a solid foundation in the specialized knowledge of the Physiopathology of the skin and latest generation dermatological therapeutics.

As it is an online program, students are not restricted by set timetables, nor do they need to physically move to another location. All the content can be accessed at any time of the day, so you can balance your professional or personal life with your academic one.

This **Postgraduate Diploma in Dermatoses due to Microbiome Alterations and External Agents** contains the most complete and up-to-date scientific program on the market.

The most important features include:

- ♦ The development of case studies presented by Small Animal Dermatology experts.
- ♦ 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.
- ♦ Breakthroughs in Dermatology in Small Animals
- ♦ Practical exercises where the self-assessment process can be carried out to improve learning
- ♦ Special emphasis on innovative methodologies in Dermatology in Small Animals
- ♦ 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



*Don't miss the opportunity to study this Postgraduate Diploma with us. It's the perfect opportunity to advance your career and stand out in an industry with high demand for professionals"*

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*This Postgraduate Diploma is the best investment you can make when choosing a refresher programme to update your existing knowledge of Veterinary Dermatology”*

*This program has the best educational material, which will allow a contextual study to facilitate your learning.*

*This 100% online Postgraduate Diploma will allow to combine your studies with your professional work while expanding your knowledge in this field.*

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 education programmed 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 throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts in Dermatology in Small Animals and with extensive experience.





# 02 Objectives

This program in Dermatitis Due to Microbiome Disorders and External Agents is aimed at facilitating medical professionals' performance with the latest advances and most innovative treatments in the sector.







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*Learn about the latest advances in the field from the comfort of your home, thanks to the online format of this program”*



## General Objectives

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- ♦ Generate specialized and advanced knowledge regarding the skin
- ♦ Determine its pathophysiology in the general clinic of the individual as a whole
- ♦ Examine the concepts of microbiome and skin dysbiosis
- ♦ Identify the clinical signs and injury patterns associated with pyodermas, fungal dermatoses and protozoal dermatoses
- ♦ Delve into the different dermatoses of the module in their clinical, etiopathogenic, diagnostic and treatment aspects
- ♦ Establish the correct clinical and diagnostic approaches for each of the above diseases
- ♦ Learn about the most current treatments to control pyodermas, mycoses and protozoal dermatoses
- ♦ Identify the main ectoparasites that cause dermatosis
- ♦ Examine the most frequent and common parasitic dermatoses in daily clinical practice
- ♦ Identify the main allergic dermatoses affecting dogs and cats
- ♦ Analyze the different clinical manifestations associated with allergic dermatoses in dogs and cats and know how to differentiate them from other dermatoses
- ♦ Propose an allergy diagnostic protocol to obtain a reliable diagnosis following current international recommendations
- ♦ Apply the multimodal and individualized therapeutic strategy of choice for each allergic patient, selecting the most appropriate treatments for the control of their clinical condition, following current international recommendations
- ♦ Examine autoimmune or immune-mediated diseases
- ♦ Analyze the injury patterns associated with cutaneous autoimmune or immunemediated diseases
- ♦ Determine an appropriate methodology for the diagnosis of immune-mediated and autoimmune skin diseases
- ♦ Develop expertise based on new findings on cutaneous autoimmune or immune-mediated diseases
- ♦ Analyze the pathophysiological basis of the endocrine mechanisms that are altered and produce cutaneous symptomatology
- ♦ Generate specialized knowledge on the processes related to hepatic, renal and digestive metabolism that produce skin anomalies
- ♦ Determine the genetic anomalies that give rise to hereditary dermatoses
- ♦ Develop detailed knowledge of the type of tests that should be used to confirm endocrine-metabolic dermatoses
- ♦ Analyze the most important cutaneous genodermatoses and the availability of genetic tests for the detection of carriers
- ♦ Examine the different types of generalized and localized disorders related to seborrhea, hyperkeratosis and all desquamation disorders
- ♦ Develop specialized knowledge and skills in the care of patients with behavioral problems and dermatological manifestations or patients with a dermatological process that may be aggravated by a behavioral process
- ♦ Examine cutaneous neoplasms and pseudo-neoplasms from dermatologists' point of view
- ♦ Reach the diagnosis of the cell lineage and its approximate assessment with respect to the degree of malignancy, knowing how to assess the pathology and knowing the limits that may lead us to refer the case to an oncologist





- ◆ Generate specialized knowledge for the oncological therapeutic management of cutaneous neoplasms
- ◆ Analyze and manage one of the most frequent pathologies in dermatology such as External Otitis
- ◆ Delve into the Dermatoses that require special attention due to their particular anatomical and differential situation
- ◆ Examine skin pathologies and their annexes in specific areas that require special attention such as the ear, eyelids, claws, nose, footpads and anal area
- ◆ Compile the pathologies of these structures that will help us search for and locate the systemic diseases that cause them
- ◆ Establish normality in each animal species, small mammals, birds, reptiles and amphibians
- ◆ Analyze dermatological clinical signs associated with diseases according to whether they are handling problems (environmental, nutritional, etc.), skin problems or systemic diseases
- ◆ Determine the diagnostic methods adapted to exotic animals
- ◆ Establish specific treatment guidelines for each species



## Specific Objectives

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### Module 1. The Skin as an Organ Characteristics and Diagnostic Approach

- ◆ Specify the working methodology when the presence of a cutaneous autoimmune or immunemediated disease is suspected
- ◆ Identify the differences between the various groups of autoimmune and immunemediated diseases
- ◆ Establish the differential diagnoses of auto-immune and immune-mediated diseases according to their injury pattern and clinical presentation
- ◆ Examine the classification of autoimmune and immune-mediated diseases
- ◆ Establish the most relevant autoimmune and immunemediated diseases in the canine and feline species
- ◆ Update the therapeutic approach to immune-mediated and autoimmune diseases

### Module 2. Cutaneous Dysbiosis or Alterations of the Microbiome (Bacteria and Fungi)

- ◆ Design the office where dermatology is performed, within the clinic
- ◆ Planning the logistics of engaging in this specialty
- ◆ Develop expertise in skin pathophysiology
- ◆ Analyze the cutaneous manifestations of different noxas
- ◆ Examine study methods to address them
- ◆ Determine diagnostic methods
- ◆ Develop advanced knowledge of general dermatological therapy







### Module 3. Dermatoses of Parasitic Origin

- ♦ Analyze the importance of the skin barrier
- ♦ Determine the fundamental role of cytology in the diagnostic approach
- ♦ Establish the differential diagnoses of superficial and deep pyodermas
- ♦ Analyze the use of the antibiogram and its correct reading in pyodermas
- ♦ Gain in-depth knowledge of current studies on resistant pyodermas and define the most appropriate treatments
- ♦ Addressing the rational use of antibiotics in pyodermas
- ♦ Recognize the clinical features and differential diagnosis of canine and feline mycoses
- ♦ Examine the different diagnostic methods for canine and feline mycoses
- ♦ Select the most appropriate therapies for the control of canine and feline mycoses
- ♦ Identify the dermatological and systemic symptoms of canine leishmaniasis
- ♦ Select the most appropriate diagnostic techniques in each case for protozoal dermatoses
- ♦ Define the most current and appropriate treatments to control canine leishmaniasis
- ♦ Identify the symptomatology and the most up-to-date treatment of the less common dermatoses covered in the module

03

# Course Management

This program's teaching staff includes leading experts in Dermatitis Due to Microbiome Disorders and External Agents, who bring their work experience to this course. They are world-renowned veterinarians from different countries with proven theoretical and practical professional experience.

A close-up, angled view of a white, textured surface, possibly a piece of paper or a slide. The word "Leishnr" is printed in a large, bold, dark blue font, partially cut off on the right side. The surface shows some minor dust or imperfections. A teal-colored geometric shape is visible in the bottom-left corner of the overall image.

Leishnr



maniasis

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*Our team of teachers, with expertise in small animal dermatology, will help you reach success in your profession”*

## International Guest Director

Dr. Domenico Santoro is an eminence in the field of **Veterinary Dermatology**. He is the **only specialist in his field to hold dual certification**, one granted by the American College of Veterinary Microbiologists (ACVM) in Bacteriology/Micology and Immunology, and the other by the Board of the American College of Veterinary Dermatology.

His career has been marked by the study of host-microbe interactions that occur in **Canine Atopic Dermatitis**. As a result of these analyses, he has developed the **evaluation of skin defense peptides**, quantifying at the molecular and protein level the expression of these products in the skin of healthy and affected dogs.

Santoro is a highly respected leader in the scientific community whose main commitment is to **continuous innovation** to promote excellence in veterinary dermatology. In the course of his clinical work, he has deepened his knowledge of the **cutaneous immune response** of dogs with Leishmaniasis, aerobic bacteria and other pathologies caused by allergens. He has also mastered cutaneous cryotherapy and laser skin surgery in pets.

In his career he also stands out for being **one of the three main researchers** in charge of the direction of the Laboratory of Comparative Dermatology of the University of Florida. From this **study center he promotes the “One Health” perspective** that investigates the development of simultaneous defenses between dogs and humans for dermatological diseases.

At the same time, he has been part of animal research departments at the **prestigious North American universities** of North Carolina and Illinois. Through his experiences, he became one of the founding members of the **International Committee for Allergic Diseases in Animals (ICADA)**. As a result, he has several dozen scientific publications in some of the most prestigious veterinary journals.

Position: Principal Investigator in the Laboratory of Comparative Dermatology at the University of Florida.





## Dr. Santoro, Domenico

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- Veterinarian at the University of Florida Veterinary Hospital
- Assistant Professor at the University of Florida College of Veterinary Medicine
- Doctor of Veterinary Science from the University of Illinois at Urbana-Campaign
- Residency Veterinary Residency at North Carolina State University
- Veterinary Degree at the University of Naples "Federico II"
- Member of: American College of Veterinary Microbiologists, American College of Veterinary Dermatology, European College of Veterinary Dermatology

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

## Address



### Dr. Machicote Goth, Gustavo

- Clinical Veterinarian Dermatologist at Clínica Vilanova
- Head of the Dermatology Reference Service DERMASET
- Member and former Secretary of the Scientific Committee of GEDA (Dermatology Group of AVEPA)
- Dermatology Certificate by the ESAVS in Vienna
- Master in Small Animal Oncology by AEVA, Miguel de Cervantes University

## Professors

### Dr. Saló Mur, Eduard

- Veterinary Technical Director Veterinary Clinic Gran Vía Mivet
- Veterinary Director Veterinary Clinic Gran Vía
- Veterinary Director Veterinary Center University of Barcelona
- Accredited in Veterinary Dermatology by AVEPA
- Dermatology Clinic Veterinary Hospital UAB
- Responsible and speaker of the continuing education programs in dermatology of AVEPA

### Dr. Sancho Forreland, Pedro Javier

- Director Veterinary Clinic
- Doctores Sancho Director and Owner Veterinary Clinic Doctores Sancho in Sant Boi de Llobregat (Barcelona)
- Head of DERMASANTBOI Veterinary Dermatology Service
- Member of the Scientific Committee of GEDA Member of the ESVD, AVEPA and GEDA, Accredited in dermatology by AVEPA





# 04

# Structure and Content

The structure of the content has been designed by the best professionals in the Dermatology in Small Animals sector, with extensive experience and recognized prestige in the profession, backed by the volume of cases reviewed, studied, and diagnosed, and with extensive knowledge of new technologies applied to veterinary medicine.







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*This Postgraduate Diploma contains the most complete and up-to-date scientific program on the market"*

## Module 1. The Skin as an Organ Characteristics and Diagnostic Approach

- 1.1. Structure and Function of the Skin
  - 1.1.1. Epidermis
  - 1.1.2. Dermis
  - 1.1.3. Cutaneous Appendages
  - 1.1.4. Hypodermis
  - 1.1.5. Vascularization and Innervation
- 1.2. Dermatological Consultation
  - 1.2.1. Material for Sample Collection
  - 1.2.2. Material for Clinical Examination
  - 1.2.3. Material for Complementary Tests
- 1.3. Relationship with the Owner
  - 1.3.1. Objectives
  - 1.3.2. Personalized Care
  - 1.3.3. Allocation of Sufficient Time
- 1.4. Diagnostic Protocol
  - 1.4.1. Dermatological Record
  - 1.4.2. General Medical Records
  - 1.4.3. Dermatological Medical Records
- 1.5. General and Dermatological Examination
  - 1.5.1. Primary Skin Lesions
  - 1.5.2. Secondary Skin Lesions
  - 1.5.3. Clinical Patterns
- 1.6. Differential Diagnoses
  - 1.6.1. Most Common Dermatoses
  - 1.6.2. Least Common Dermatoses
- 1.7. Complementary Diagnostic Tests
  - 1.7.1. Skin Scraping
  - 1.7.2. Trichogram
  - 1.7.3. Hair Brushing
  - 1.7.4. Adhesive Tape
  - 1.7.5. Imprint
  - 1.7.6. Cultivation Methods
  - 1.7.7. Skin biopsy:
- 1.8. Skin Cytology
  - 1.8.1. Sample Collection
  - 1.8.2. Processing and Staining
  - 1.8.3. Interpretation
- 1.9. Cutaneous histopathology
  - 1.9.1. Inflammatory Patterns
  - 1.9.2. Atrophic Patterns
  - 1.9.3. Neoplasm Patterns
- 1.10. Treatments. Overview
  - 1.10.1. Topical:
    - 1.10.1.1. Shampoo
    - 1.10.1.2. Solution
    - 1.10.1.3. Foams
    - 1.10.1.4. Wipes
  - 1.10.2. Systemic
    - 1.10.2.1. Oral
    - 1.10.2.2. Parenteral Route

## Module 2. Cutaneous Dysbiosis or Alterations of the Microbiome: (Bacteria and Fungi)

- 2.1. Bacterial Dysbiosis
  - 2.1.2. Surface Pyodermas
  - 2.1.3. Superficial Pyodermas
  - 2.1.4. Deep Pyodermas
    - 2.1.4.1. Cytological Differences of the Different Pyodermas
    - 2.1.4.2. Localized Deep Pyodermas
    - 2.1.4.3. Deep Pyoderma in German Shepherds
  - 2.1.5. Antibiotic Therapy
    - 2.1.5.1. Antibigram Reading
    - 2.1.5.2. MRS Bacterial Strains Diagnostic and Therapeutic Strategies
- 2.2. Rare Bacteria Mycobacteria
  - 2.2.1. Mycobacterium tuberculosis
  - 2.2.2. Mycobacterium Lepraemurium
  - 2.2.3. Saprophytic Mycobacteriosis in Immunocompetent Hosts
  - 2.2.4. Mycobacteriosis in Immunodeficient Hosts
- 2.3. Folliculitis Complex Furunculosis-Cellulitis
  - 2.3.1. Pathogenesis and Clinical Characteristics
  - 2.3.2. Types of Folliculitis, Furunculosis and Cellulitis
- 2.4. Subcutaneous Abscesses
  - 2.4.1. Subcutaneous Abscesses in Dogs
  - 2.4.2. Subcutaneous Abscesses in Cats
- 2.5. Various Bacterial Infections
  - 2.5.1. Necrotizing Fasciitis
  - 2.5.2. Dermatophilosis
  - 2.5.3. Filamentous Bacteria
- 2.6. Superficial Mycotic Dysbiosis
  - 2.6.1. Dermatophytosis
    - 2.6.1.1. DTM Cultivation Characteristics of the Most Common Dermatophytes
  - 2.6.2. Yeast Dermatitis

- 2.7. Subcutaneous Mycoses, Systemic Mycoses and Other Mycoses
  - 2.7.1. Subcutaneous Mycoses Sporotrichosis
  - 2.7.2. Subcutaneous Mycoses Mycetomas and Other Subcutaneous Mycoses
  - 2.7.3. Systemic Mycoses Cryptococcosis, Blastomycosis, Coccidiomycosis, Histoplasmosis
  - 2.7.4. Candidiasis, Aspergillosis, Other Mycoses
- 2.8. Antifungal Treatments
  - 2.8.1. Topical Treatments
  - 2.8.2. Systemic Treatment
- 2.9. Dermatoses due to Algae, Rickettsia and Viruses
  - 2.9.1. Diseases caused by Algae
  - 2.9.2. Rickettsial Dermatoses Erlichiosis Mycoplasmosis
  - 2.9.3. Dermatoses caused by Virus
    - 2.9.3.1. Dermatoses caused by Virus in Cats
    - 2.9.3.2. Dermatoses caused by Virus in Dogs
- 2.10. Dermatitis due to Protozoa Leishmaniasis
  - 2.10.1. Typical Cutaneous Manifestations of Leishmaniasis
  - 2.10.2. Treatment Suggestions in Leishmaniasis

## Module 3. Dermatitis of Parasitic Origin

- 3.1. Introduction
- 3.2. Parasitosis by Insects
  - 3.2.1. Fleas
  - 3.2.2. Lice
  - 3.2.3. Mosquitoes
  - 3.2.4. Hymenoptera
  - 3.2.5. Myiasis and Fly Dermatitis
- 3.3. Parasitosis by Arachnids
  - 3.3.1. Ticks
  - 3.3.2. Other Rare Arachnids



- 3.4. Parasitosis by Superficial Mites
  - 3.4.1. *Cheyletiella*
  - 3.4.2. *Neothrombicles*
  - 3.4.3. *Otodectes Cynotis*
- 3.5. Parasitosis by Plough/Profundus Mites
  - 3.5.1. *Sarcoptes Scabiei*
  - 3.5.2. *Notoedres Cati*
- 3.6. Parasitosis by Follicular Mites I
  - 3.6.1. Demodex
    - 3.6.1.1. History
    - 3.6.1.2. Biological/Habitat Cycle
    - 3.6.1.3. Species of Demodex
    - 3.6.1.4. Immunology and Pathogenesis of Demodicosis
  - 3.6.2. Canine Demodicosis
    - 3.6.2.1. Clinical Picture. Clinical Polymorphism
    - 3.6.2.2. Juvenile Canine Demodicosis vs. Adult
    - 3.6.2.3. Treatment and Prevention
- 3.7. Parasitosis by Follicular Mites II
  - 3.7.1. Feline Demodicosis
  - 3.7.2. *Straelensia Cynotis*
- 3.8. Parasitosis by Helminth
  - 3.8.1. Ancylostoma
  - 3.8.2. Uncinaria
  - 3.8.3. Pelodera
- 3.9. Caterpillar Larvae: Processionary
  - 3.9.1. Other Rare Ectoparasites
- 3.10. External Antiparasitic Agents Key Aspects. Pharmacokinetics
  - 3.10.1. Presentations
  - 3.10.2. Topical Action
  - 3.10.3. Systemic Action





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*Achieve professional success with this high-level training provided by prestigious professionals with extensive experience in the sector”*

05

# Methodology

This training provides you with a different way of learning. Our methodology uses a cyclical learning approach: ***Re-learning***.

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







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

## At TECH we use the Case Method

In a given clinical 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. 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 potential or because of its uniqueness or rarity. It is essential that the case be based on current professional life, trying to recreate the real conditions in the Veterinarian'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. Veterinarians who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity through exercises to evaluate real situations and the application of 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. The feeling that the effort invested is effective becomes a very important motivation for veterinarians, which translates into a greater interest in learning and an increase in the 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.



*Veterinarians 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 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 65,000 veterinarians 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 the teaching materials are specifically created for the course, by specialists who teach on the course, so that the teaching content is highly specific and precise.

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



### Latest Techniques and Procedures on Video

We bring you closer to the latest Techniques, to the latest Educational Advances, to the forefront of current Veterinary Techniques and Procedures. All this, in first person, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



### Interactive Summaries

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

This unique multimedia content presentation training system was awarded by Microsoft as a "European Success Story".



### Additional Reading

Recent articles, consensus documents, international guides. in our virtual library you will have access to everything you need to complete your training.







### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, we will present you with real case developments in which the expert will guide you through focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



### Testing & Re-Testing

We periodically evaluate and re-evaluate your knowledge throughout the program, through assessment and self-assessment activities and exercises: so that you can see how you are achieving your goals.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory and generates confidence in our future difficult decisions.



### Quick Action Guides

We offer you the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help you progress in your learning.



# 06 Certificate

The Postgraduate Diploma in Dermatitis due to Microbiome Alterations and External Agents guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Global University.



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*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 **Postgraduate Diploma in Dermatosi due to Microbiome Alterations and External Agents** 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 Dermatosi due to Microbiome Alterations and External Agents**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



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



**Postgraduate Diploma**  
Dermatosis Due to Microbiome  
Alterations and External Agents

- » Modality: online
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# Postgraduate Diploma

Dermatosis due to Microbiome Alterations and External Agents

