

# Postgraduate Diploma

## Veterinary Oncologic and Reproductive Pharmacology





## Postgraduate Diploma

### Veterinary Oncologic and Reproductive Pharmacology

Course Modality: **Online**

Duration: **6 months.**

Certificate: **TECH Technological University**

Official N° of Hours: **450 h.**

Website: [www.techtute.com/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-veterinary-oncologic-reproductive-pharmacology](http://www.techtute.com/veterinary-medicine/postgraduate-diploma/postgraduate-diploma-veterinary-oncologic-reproductive-pharmacology)

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01

# Introduction

Given the importance of oncological, reproductive and endocrine system pharmacology in animal health, livestock production, and veterinary law, this program has been developed with a holistic approach, starting with the physiology of both systems, listing the hormones secreted by them and determining the pathologies derived from their possible dysfunction: a complete education of the highest value for the most up-to-date veterinary professional.





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*A comprehensive, up-to-date and high-quality review of Veterinary Oncologic and Reproductive Pharmacology for professionals who aspire to excellence in their field"*

Throughout this Postgraduate Diploma, we will identify the therapeutic groups and their mechanisms of action and we will discuss, throughout the module, hormones and their therapeutic, regulatory, diagnostic and even fraudulent use.

The pharmacology of reproduction, gestation and parturition in different species, both production and domestic, will be discussed.

Anti-infective pharmacology is characterized by the study of drugs that have to act on cells other than those of the veterinary patient, which are intended to be eliminated in their entirety. They are capable of destroying or inhibiting the development of live germs that cause infections by acting through different pharmacological targets.

Antineoplastic pharmacology can act by destroying or inhibiting the development of tumor cells. TECH considers this module of great interest, due to the increasing incidence of neoplastic diseases in animals, with a greater emphasis on small animals.

This **Postgraduate Diploma in Veterinary Oncologic and Reproductive Pharmacology** contains the most complete and up-to-date educational program on the market. The most important features include:

- ♦ Innovative and up-to-date diagnostic techniques in infectious diseases and their application in daily clinical practice, including the use of cytology as a diagnostic tool in these diseases.
- ♦ The most frequent and not so frequent pathologies of infectious origin in dogs from a practical and completely up-to-date point of view
- ♦ Infectious Pathologies oriented to the Feline Species, dealing extensively with all those of this species.
- ♦ Vision "One Health", in which Zoonoses and their implications for public health will be reviewed
- ♦ Most frequent Infectious Pathologies of Dogs and Cats in the Tropics, with focus on Latin America. At present, there are no more exotic diseases and they should be included by the clinician in the differential diagnosis when the epidemiology allows to suspect them
- ♦ Prevention and management of all infectious diseases, including clinical, home and community settings



*A complete education in the use of veterinary drugs in cases of reproductive and oncological diseases"*

“

*A revolutionary program for its ability to reconcile the highest quality of learning with the most complete online Education”*

Its teaching staff includes professionals belonging to the field of Veterinary Medicine, who bring to this training the experience of their work, as well as renowned specialists from reference societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive training programmed to train in real situations.

This program is designed around Problem-Based Learning, whereby the specialist 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 psychology experts.

*A great opportunity for the veterinary medicine professional to advance his or her competencies and catch up on all the latest developments in pharmacological approaches.*

*Learn efficiently with a real qualification objective, with this Postgraduate Diploma, unique for its quality and price, in the online teaching market.*



# 02 Objectives

The objective of the Postgraduate Diploma is to provide the student with the required competencies in relation to preclinical or clinical research of drugs used in veterinary medicine, and their application in the therapeutic use of drugs so that the students can integrate into the professional field.







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*Acquire the knowledge and skills necessary for the practical application of new techniques in the use of pharmacology in cancer and animal reproduction, in an education created for excellence”*



## General Objectives

- ♦ Examine Pharmacology in relation to reproduction and metabolism
- ♦ Identify each pharmacological group with its uses and applications
- ♦ Prescribe drugs in a reasonable manner
- ♦ Examine and explain the main pharmacological properties of the anti-infective drug groups
- ♦ Identify the different pharmacological targets involved in anti-infective agents
- ♦ Recognize the main pharmacological characteristics (mechanism of action, pharmacokinetics, and therapeutic and toxic effects) of groups of anti-infective drugs
- ♦ Examine and explain the main pharmacological properties of the antineoplastic drug groups
- ♦ Identify the different pharmacological targets involved in antineoplastic agents
- ♦ Know the main toxic effects of antineoplastic drugs.



*A path to achieve training and professional growth that will propel you towards a greater level of competitiveness in the employment market"*





## Specific Objectives

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### Module 1. Pharmacology of the Endocrine and Reproductive System. Reproductive Disorders

- ♦ Determine the pharmacological basis of reproductive system therapy
- ♦ Examine different drug groups' mechanisms of action, properties and pharmacokinetics
- ♦ Identify the main therapeutic groups and their indications in veterinary reproduction
- ♦ Treat the most prevalent obstetric cases
- ♦ Present reproductive biotechnologies and understand the scope of their application
- ♦ Solving individual and population reproductive problems
- ♦ Establish the different animal pathologies of the endocrine system and their treatment
- ♦ Identify the main therapeutic groups and their indications in endocrine system pathologies
- ♦ Develop the student's critical and analytical skills through the resolution of clinical cases

### Module 2. Antiseptics and Chemotherapeutics I

- ♦ Analyze the historical development of antiseptic and chemotherapeutic substances
- ♦ Point out the general principles of chemotherapy and the drugs that comprise it
- ♦ Define the concepts of antiseptic and antibiotic
- ♦ Explain the mechanisms of antibiotic resistance
- ♦ Classify antibiotics according to mechanism of action
- ♦ Describe each of the groups of antibiotics and know their mechanism of action
- ♦ Classifying antifungal and antiviral drugs
- ♦ Describe each of the groups of antifungal and antiviral drugs and their mechanism of action
- ♦ Analyze the importance of antiparasitics in Veterinary Medicine

### Module 3. Chemotherapy II: Antineoplastic Drugs

- ♦ Analyzing cancer in small animals
- ♦ Point out the general principles in the use of antineoplastic drugs
- ♦ Know the care in the application of antineoplastic drugs
- ♦ Classify the main families of chemotherapeutics
- ♦ Determine the main drugs for palliative use in neoplasms
- ♦ Consider the use of each antineoplastic according to the pathology
- ♦ Analyze the main toxicity effects of antineoplastic drugs
- ♦ Describe each of the groups of antifungal and antiviral drugs and their mechanism of action
- ♦ Analyze the importance of antiparasitics in veterinary medicine

03

# Course Management

The teaching team of this Postgraduate Diploma is made up of professionals specialized in the study of Pharmacology, both human and veterinary, with clinical experience in small and large animals. They have extensive and recognized teaching and research experience, with officially recognized six-year research periods, participation in numerous research projects and dissemination of their research both nationally and internationally in high impact journals, books and conferences.





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*A unique opportunity to learn from internationally renowned professors, with teaching, clinical and research experience”*

## Management



### Dr Santander Ballestín, Sonia

- ♦ Teaching Coordinator, Department of Pharmacology, University of Zaragoza, Spain
- ♦ Lecturer in the university course: "Introduction to Pharmacology: Principles for the Rational Use of Drugs" Basic Program of the University of Zaragoza
- ♦ Evaluation professor in: objective structured clinical evaluation of the degree in Medicine
- ♦ Degree in Biology and Biochemistry, specializing in the area of Pharmacology
- ♦ PhD with the European Degree from the University of Zaragoza
- ♦ Master's Degree in Environment and Water Management. Andalusia Business School
- ♦ Title of the doctoral program: Biochemistry and Molecular and Cellular Biology

## Professors

### Dr. García Barrios, Alberto

- ♦ Interim Professor at the University of Zaragoza
- ♦ Casetas Veterinary Clinic
- ♦ Utebo Veterinary Clinic
- ♦ Nanoscale Biomagnetics R&D Researcher
- ♦ Veterinary Clinic Utebo. Clinical Veterinarian
- ♦ PhD in Veterinary Science
- ♦ Teacher with an interim contract. University of Zaragoza
- ♦ Degree in Veterinary Medicine
- ♦ Postgraduate Veterinary Oncology (Improve International). Homologation of the qualification to work with experimental animals

### Ms. Luesma Bartolomé, María José

- ♦ Veterinarian. Study Group on Prion Diseases, Vectorial Diseases and Emerging Zoonoses at the University of Zaragoza.
- ♦ Study group of the University Research Institute
- ♦ Professor of Film and Anatomy. University degree: Complementary Academic Activities
- ♦ Professor of Anatomy and Histology University degree: Graduate in Optics and Optometry. University of Zaragoza
- ♦ Professor of Final Degree Project University Degree, Bachelor's Degree in Medicine
- ♦ Professor of Morphology. Development Biology University degree: Professional Master's Degree in Initiation to Research in Medicine. University of Zaragoza
- ♦ Doctor of Veterinary Medicine. Official Doctorate Program in Veterinary Sciences. University of Zaragoza
- ♦ Degree in Veterinary Medicine. University of Zaragoza

### Ms. Arribas Blázquez, Marina

- ♦ Degree in Biology. Specialty in Fundamental Biology and Biotechnology by the University of Salamanca
- ♦ Bill and Melinda Gates Foundation: teaching and postdoctoral research employment contract
- ♦ Institute of Biomedical Research: Alberto Sols Labor researcher and teacher
- ♦ Complutense de Madrid University: postdoctoral teaching and research labor contract
- ♦ Complutense de Madrid University: teaching and research employment contract
- ♦ Molecular Biology Center Severo Ochoa: teaching and predoctoral researcher labor contract
- ♦ Complutense University of Madrid: Predoctoral teaching and research labor contract
- ♦ Category B qualification in Protection of animals used for experimental and other scientific purposes
- ♦ Master in Neurosciences
- ♦ Doctorate in Neuroscience from the Complutense University of Madrid
- ♦ Postgraduate Certificate in Culture Room Standards for the use of viral and other pathogenic biological agents at Instituto de Investigaciones Biomédicas de Madrid

# 04

## Structure and Content

This Postgraduate Diploma provides all the necessary knowledge to be able to practice Pharmacology in Veterinary Medicine in the best possible way. It is important to take into account that the contents allow the student to obtain specialized knowledge of pharmacology, as well as the ability to deal with different solutions for veterinary pathologies. A complete and accessible education path that will make a difference in the student's career progression.





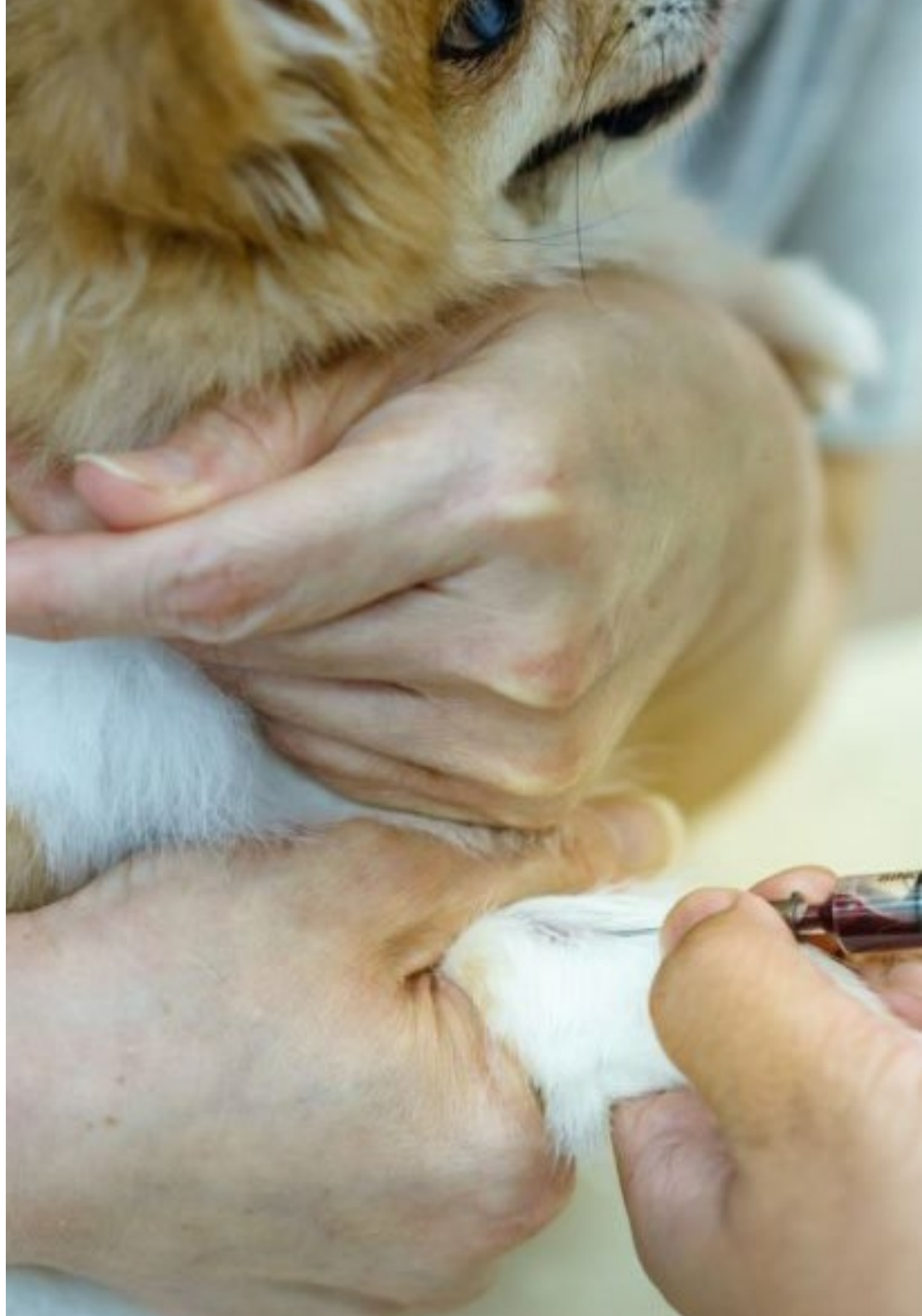


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*A complete educational program that will provide you with the comprehensive education necessary to intervene as a specialist in the theoretical and practical aspects of Veterinary Oncologic and Reproductive Pharmacology”*

**Module 1.** Pharmacology of the Endocrine and Reproductive System.  
Reproductive Disorders

- 1.1. Endocrine System Pharmacology
  - 1.1.1. Introduction
  - 1.1.2. Classification of Hormones of Pharmacological Interest
  - 1.1.3. Mechanisms of Action
  - 1.1.4. General Information on Hormone Therapeutics
- 1.2. Hormones Involved in Metabolism and Electrolyte Balance
  - 1.2.1. Adrenal Pharmacology: Mineralocorticoids and Glucocorticoids
  - 1.2.2. Pharmacological Actions
  - 1.2.3. Therapeutic Uses
  - 1.2.4. Side effects:
- 1.3. Thyroid and Parathyroid Pharmacology
  - 1.3.1. Thyroid Hormones
  - 1.3.2. Antithyroid Drugs
  - 1.3.3. Calcemia Regulation
    - 1.3.3.1. Calcitonin
    - 1.3.3.2. Parathormone
- 1.4. Pharmacology of the Pancreas
  - 1.4.1. Insulin
  - 1.4.2. Oral Hypoglycemic Agents
  - 1.4.3. Glucagon
- 1.5. Hormones Involved in Reproduction
  - 1.5.1. Introduction
  - 1.5.2. Gonadotropin-Releasing Hormone
  - 1.5.3. Pituitary and Non-pituitary Gonadotropins
- 1.6. Sex Hormones
  - 1.6.1. Androgens
  - 1.6.2. Estrogens
  - 1.6.3. Progestogens
  - 1.6.4. Actions in the Organism
  - 1.6.5. Clinical Uses
  - 1.6.6. Toxicity



- 1.7. Luteolytic Drugs
  - 1.7.1. Prostaglandins
  - 1.7.2. Oxytocic Drugs: Oxytocin
  - 1.7.3. Pharmacology of Lactation
- 1.8. Diagnostic Hormones in Veterinary Medicine
  - 1.8.1. Diagnostic Tests
    - 1.8.1.1. Hormones of Diagnostic Utility in Large Animals: Production Animals
    - 1.8.1.2. Testosterone
    - 1.8.1.3. Estrogens
    - 1.8.1.4. Progesterone
    - 1.8.1.5. Iodothyronines
  - 1.8.2. Hormones of Diagnostic Utility in Companion Animals
    - 1.8.2.1. Reproductive Hormones
    - 1.8.2.2. Metabolic Hormones
- 1.9. Pharmacology of the Reproductive System
  - 1.9.1. Introduction
  - 1.9.2. Classification of Hormones of Pharmacological Interest
  - 1.9.3. Mechanisms of action
  - 1.9.4. Therapeutics in General
- 1.10. Pharmacology of Reproductive Disorders
  - 1.10.1. Main Reproductive Disorders
    - 1.10.1.1. Large Animals: Production Animals
    - 1.10.1.2. Companion Animals
  - 1.10.2. Estrous Cycle Control
  - 1.10.3. Melatonin

## Module 2. Antiseptics and Chemotherapeutics I

- 2.1. Introduction. Definition of Antiseptic and Chemotherapeutic. Antiseptics
  - 2.1.1. Introduction
  - 2.1.2. Antiseptic and Disinfectant Concept
  - 2.1.3. Factors Affecting the Potency of Antiseptics and Disinfectants
  - 2.1.4. Characteristics of an Ideal Antiseptic and Disinfectant
  - 2.1.5. Classification of Disinfectants and Antiseptics
  - 2.1.6. Main Antiseptics and Disinfectants for Clinical Use
    - 2.1.6.1. Alcohol
    - 2.1.6.2. Biguanides
    - 2.1.6.3. Halogenated Products
    - 2.1.6.4. Peroxygens
    - 2.1.6.5. Other Antiseptics
- 2.2. Introduction to Antimicrobial Therapy. Types of Antibiotics. Rational Use
  - 2.2.1. Introduction
  - 2.2.2. Historical Review of Antimicrobial Therapy
  - 2.2.3. Side Effects:
  - 2.2.4. Principles of Antibiotherapy
  - 2.2.5. Resistance: Types and Mechanisms of Occurrence
  - 2.2.6. Waiting Times
  - 2.2.7. Requirements for an Antimicrobial
  - 2.2.8. Classification of Antimicrobials
    - 2.2.8.1. According to its Spectrum
    - 2.2.8.2. According to its Effect
    - 2.2.8.3. According to its Mechanism of Action
    - 2.2.8.4. According to its Chemical Group
    - 2.2.8.5. Depending on the Microorganism Affected
  - 2.2.9. Criteria to be Followed in the Selection of a Drug

- 2.3. Antimicrobials that Act Against the Bacterial Wall. Antibiotics that Inhibit Protein Synthesis
  - 2.3.1. Antibiotics Acting Against the Bacterial Wall
    - 2.3.1.1. General Aspects
    - 2.3.1.2. Betalactams (b-lactams)
      - 2.3.1.2.1. Penicillin
      - 2.3.1.2.2. Cephalosporins
      - 2.3.1.2.3. Vancomycin and Bacitracin
  - 2.3.2. Antibiotics that Inhibit Protein Synthesis
    - 2.3.2.1. Aminoglycosides
    - 2.3.2.2. Tetracyclines
    - 2.3.2.3. Chloramphenicol and Derivatives
    - 2.3.2.4. Macrolides and Lincosamides
  - 2.3.3.  $\beta$ -Lactamase Inhibitors
- 2.4. Antibiotics that Act on the Synthesis of Nucleic Acids. Antibiotics Acting on the Bacterial Membrane
  - 2.4.1. Fluroquinolones
  - 2.4.2. Nitrofurans
  - 2.4.3. Nitroimidazoles
  - 2.4.4. Sulfamides
  - 2.4.5. Polymyxins and Thyrotracins
- 2.5. Antifungal
  - 2.5.1. General Description of the Mycotic Structure
  - 2.5.2. Classification of Antifungal Agents by Chemical Structure
  - 2.5.3. Systemic Antifungals
  - 2.5.4. Topical Antifungals
- 2.6. Antivirals
  - 2.6.1. Objective of Antiviral Chemotherapy
  - 2.6.2. Groups of Antivirals According to their Origin, Chemistry, Pharmacological Action, Pharmacokinetics, Pharmacodynamics, Posology, Therapeutic Uses, Adverse Reactions, Contraindications, Interactions and Pharmaceutical Forms
    - 2.6.2.1. Inhibitors of RNA and DNA Synthesis
    - 2.6.2.2. Purine Analogs
    - 2.6.2.3. Pyrimidine Analogs

- 2.6.2.4. Reverse Transcriptase Inhibitors
- 2.6.2.5. Interferons.
- 2.7. Antiparasitics II
  - 2.7.1. Introduction to Antiparasitic Therapy
  - 2.7.2. Importance of Dewormers in Veterinary Medicine
  - 2.7.3. General Concepts: Antinematodic, Anticestodic, Antitrematodic, Antiprotozoal, Ectoparasiticide and Endectocide.
- 2.8. Antiparasitics for Internal or Endoparasitic Use
  - 2.8.1. Antinematodes
  - 2.8.2. Antistatics
  - 2.8.3. Antitrematodic
  - 2.8.4. Antiprotozoals
- 2.9. Antiparasitics for External or Ectoparasitic Use
  - 2.9.1. Introduction to External Parasites
  - 2.9.2. Antiparasitics II
- 2.10. Antiparasitics for Internal and External Use or Endectocides
  - 2.10.1. Introduction
  - 2.10.2. Macrocyclic Lactones
  - 2.10.3. Main Combinations of Endectocide Use

### Module 3. Chemotherapy II: Antineoplastic Drugs

- 3.1. Introduction to Antineoplastic Therapy
  - 3.1.1. Cancer in Veterinary Medicine: Pathophysiology and Etiology of Cancer
  - 3.1.2. Antineoplastic Treatment Approach: Drug Posology
  - 3.1.3. Administration of Chemotherapy Drugs
    - 3.1.3.1. Care in the Application of Chemotherapeutic Agents
    - 3.1.3.2. Standards and Instructions for Chemotherapy Application: Preparation During Preparation/Administration of Cytotoxic Drugs
- 3.2. Palliative Antineoplastic Pharmacology Introduction to Special Antineoplastic Pharmacology
  - 3.2.1. Introduction to Palliative Antineoplastic Pharmacology: oncologic pain control/ evaluation. Pharmacological Principles for Palliative Pain Management. Nutritional Management of the Oncology Patient
  - 3.2.2. Non-Steroidal Analgesics
  - 3.2.3. Opioids

- 3.2.4. Others: NMDA Antagonists, Bisphosphonates, Tricyclic Antidepressants, Anticonvulsants, Nutraceuticals, Cannabidiol
- 3.2.5. Introduction to Special Antineoplastic Pharmacology. Main Families of Antineoplastic Drugs
- 3.3. Family 1: Alkylating Agents
  - 3.3.1. Introduction
  - 3.3.2. Nitrogen Mustards: Cyclophosphamide, Chlorambucil and Melphalan
  - 3.3.3. Nitrosoureas: Lomustine/Procarbazine
  - 3.3.4. Others: Hydroxyurea
  - 3.3.5. Main Uses in Veterinary Medicine
- 3.4. Family 2: Antimetabolites
  - 3.4.1. Introduction
  - 3.4.2. Folic Acid Analogs (antifolates): Methotrexate
  - 3.4.3. Purine Analogues: Azathioprine
  - 3.4.4. Pyrimidine Analogues: Cytosine Arabinoside, Gentamicin, 5-Fluorouracil
  - 3.4.5. Main Uses in Veterinary Medicine
- 3.5. Family 3: Antibiotics
  - 3.5.1. Introduction
  - 3.5.2. Anthracycline-Derived Antibiotics (doxorubicin/other anthracyclines) and Non-Anthracycline-Derived Antibiotics (actinomycin-d, mitoxantrone, bleomycin)
  - 3.5.3. Main Uses in Veterinary Medicine
- 3.6. Family 4: Antineoplastics of Plant Origin
  - 3.6.1. Introduction
  - 3.6.2. Alkaloids: History/Antitumor Activity. Vinca Alkaloids
  - 3.6.3. Epipododiphyllotoxin-Derived Ligands
  - 3.6.4. Camptothecin Alkaloid Analogs
  - 3.6.5. Main Uses in Veterinary Medicine
- 3.7. Family 5: Tyrosine Kinase Inhibitors
  - 3.7.1. Introduction
  - 3.7.2. Protein Kinases: Non-Receptor Tyrosine Kinase Proteins (NRTK; Receptor Tyrosine Kinase RTK)
  - 3.7.3. Toseranib
  - 3.7.4. Masitinib
  - 3.7.5. Main Uses in Veterinary Medicine
- 3.8. Platinum Derivatives
  - 3.8.1. Introduction
  - 3.8.2. Carboplatin
  - 3.8.3. Cisplatin
  - 3.8.4. Main Uses in Veterinary Medicine
- 3.9. Miscellaneous. Monoclonal Antibodies. Nanotherapy. L-asparaginase
  - 3.9.1. Introduction
  - 3.9.2. L-asparaginase
  - 3.9.3. Monoclonal Antibodies
  - 3.9.4. Tigylanol Toglata (stelfonta)
  - 3.9.5. Immunotherapy
  - 3.9.6. Metronomic Therapy
- 3.10. Toxicity of Antineoplastic Drugs
  - 3.10.1. Introduction
  - 3.10.2. Hematological Toxicity
  - 3.10.3. Gastrointestinal Toxicity
  - 3.10.4. Cardiotoxicity
  - 3.10.5. Urinary Toxicity
  - 3.10.6. Specific Toxicities: Hepatic, Neurological, Cutaneous, Hypersensitivity, Breed/Species Associated.
  - 3.10.7. Pharmacological Interactions



*This program will allow you to advance in your career comfortably"*

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.



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*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 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 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, in an attempt to recreate the actual conditions in a 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 manage to assimilate concepts, but also develop their mental capacity through exercises to evaluate real situations and knowledge application
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. 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.



## 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.



*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 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 65,000 veterinarians have been trained with unprecedented success in all clinical specialties, regardless of the surgical load. Our teaching method is developed in a highly demanding environment, where the students have a high socio-economic profile and an average age of 43.5 years.

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



### Latest Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current and procedures of veterinary 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

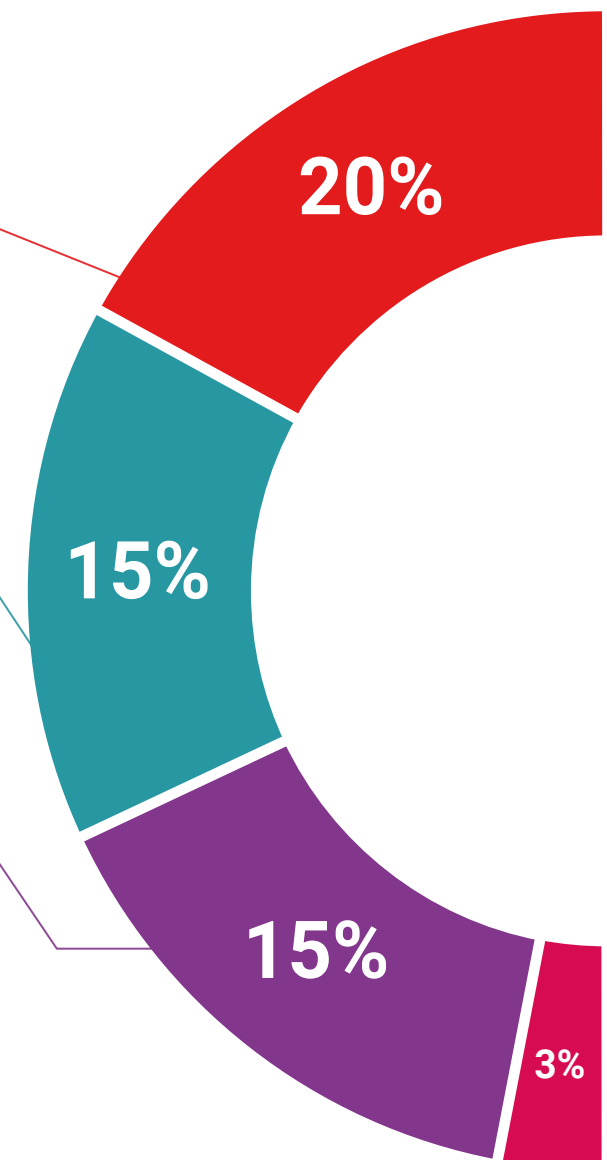
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

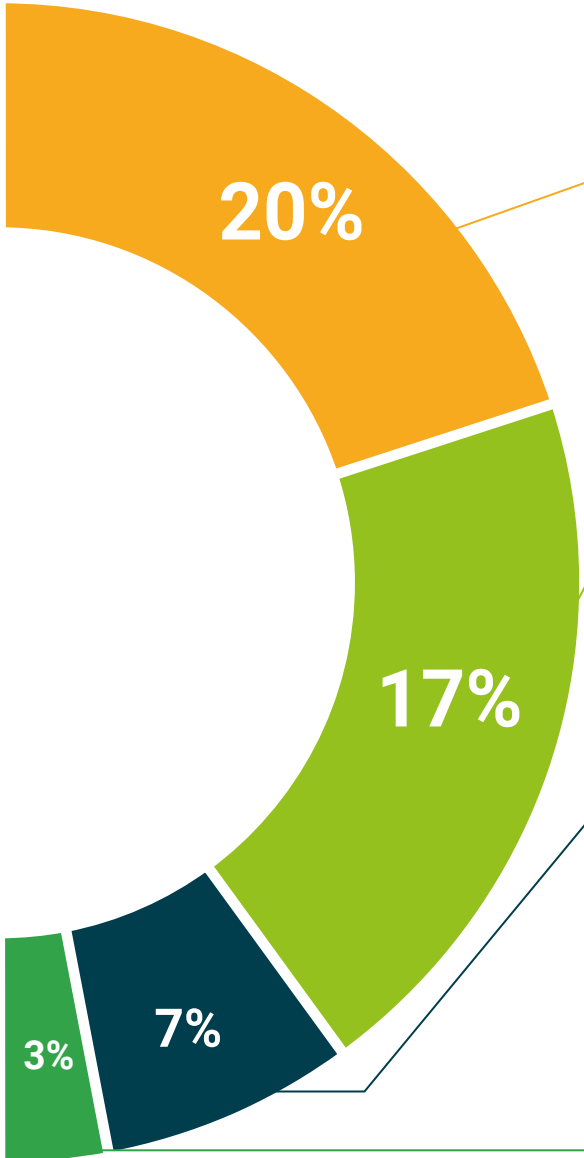
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



### 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 suggesting that observing third-party experts can be useful.  
Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

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



# 06 Certificate

The Postgraduate Diploma in Veterinary Oncologic and Reproductive Pharmacology guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Diploma issued by TECH Technological University.



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

This **Postgraduate Diploma in Veterinary Oncologic and Reproductive Pharmacology** contains the most complete and up-to-date scientific program on the market.

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

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

Title: **Postgraduate Diploma in Veterinary Oncologic and Reproductive Pharmacology**  
Official N° of Hours: **450 h.**



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



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guarantee accreditation teaching  
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community commitment  
personalized service innovation  
knowledge present quality  
development language  
virtual classroom



**Postgraduate Diploma**  
Veterinary Oncologic  
and Reproductive  
Pharmacology

Course Modality: **Online**

Duration: **6 months.**

Certificate: **TECH Technological University**

Teaching Hours: **450 h.**

# Postgraduate Diploma

## Veterinary Oncologic and Reproductive Pharmacology

