

# Postgraduate Certificate

## Medication Allergy in Children





## Postgraduate Certificate Medication Allergy in Children

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

Website: [www.techtute.com/us/medicine/postgraduate-certificate/medication-allergy-children](http://www.techtute.com/us/medicine/postgraduate-certificate/medication-allergy-children)

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# 01

# Introduction

Medicine allergy in children and adolescents is infrequent, being exceptional in children under 3 or 4 years of age. However, it does exist and for this reason Pediatric specialists must know in detail the latest news regarding its manifestations and treatments, in order to be able to intervene even more quickly and conscientiously. That is why TECH and its team of experts in Pediatric Allergology have designed this very complete program, focused on the professional can improve their knowledge in the diagnosis of this immunological reaction and expand them based on their specific requirements more modern. It is an online degree that will provide you with the necessary tools to perfect your medical skills in less than 180 hours.



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*You have before you the perfect qualification  
to get you up to date on Medication Allergy in  
Children in just 180 hours”*



Medication allergies in infantile and juvenile patients can present themselves in various forms, the most predominant being skin allergies, while the risk of anaphylaxis, although to a lesser extent, also exists. The latter causes great concern in families who, sometimes, in order to avoid reactions, prefer not to use certain medications such as beta-lactam antibiotics in the treatment of frequent pathologies such as infection in its different forms.

That is why the medical specialists must demonstrate that they have a broad and advanced knowledge in the handling of acute and severe clinical pictures due to allergic reactions, being able to intervene for the benefit of their patients based on the most innovative strategies in the sector. For this reason, this program is perfect for all those professionals who are looking to get up to date on this subject, as well as to perfect their skills through an intensive, multidisciplinary and perfectly compatible with their working day in the practice.

In addition, this 100% online program includes hours of additional material in different formats that will help you delve deeper into the aspects of the syllabus that you consider most relevant to your medical performance. All the content will be available in the Virtual Classroom from the beginning of the academic experience and can be downloaded to any device with an internet connection, thus guaranteeing that it can be consulted whenever the graduate needs it, even after completing the program.

This **Postgraduate Certificate in Medication Allergy in Children** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ◆ The development of practical cases presented by experts in Pediatrics and Allergology
- ◆ 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
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Its special emphasis on innovative 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



*You will be able to delve into the mechanisms of hypersensitivity to drugs and how they act as allergens, in order to better identify their symptoms"*

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*Thanks to the course of this program you will have the most current information that will allow you to know in detail the peculiarities of medication reactions in children"*

The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

Its multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersion education programmed to learn in real situations.

The design of this program focuses on Problem-Based Learning, by means of which the professional must try to solve the different professional practice situations that are presented throughout the academic course. For this purpose, the student will be assisted by an innovative interactive video system created by renowned experts.

*The team of experts who have participated in the preparation of this Postgraduate Certificate has placed special emphasis on the recommendations to avoid the use of penicillin in allergies to beta-lactams.*

*In the 6 weeks in which this Postgraduate Certificate is distributed, you will find the most updated information on non-steroidal anti-inflammatory medication allergies.*



02

# Objectives

Despite the low prevalence of drug allergies in children and adolescents, the medical professional must know in detail the latest scientific evidence on the subject. That is why the objective of this Postgraduate Certificate is to provide you with the most advanced and sophisticated academic tools that will allow you to get up to date through the course of a single, but very complete degree, delving into the specificities of each immune response and the novelties regarding their treatments.







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*You will be able to combine the course of this program with the day to day of your practice thanks to its convenient 100% online format and the facilities that TECH has included in this Postgraduate Certificate”*



## General Objectives

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- ◆ Know in detail the latest developments in the management of pediatric patients with medication allergy
- ◆ Know how to safely diagnose a medication allergy and know the most effective treatments according to the degree of hypersensitivity of the patient



*In the syllabus you will find an exhaustive classification of the different hypersensitivity reactions to different medications"*





## Specific Objectives

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- ◆ Delve into the different mechanisms of hypersensitivity to drugs and their clinical manifestations
- ◆ Analyze how medications act as allergens
- ◆ Know the technique and interpretation of in vivo medication tests: skin tests, intradermal tests, patch test
- ◆ Analyze the main reasons for suspicion of drug allergy in pediatrics
- ◆ Know how to make a correct diagnosis of NSAID allergy
- ◆ Know the difference between allergy and idiosyncrasy, and their peculiarities
- ◆ Delve into the alternatives that exist in pediatrics as anti-inflammatory drugs in patients allergic to NSAIDs
- ◆ Know how to diagnose other antibiotics frequently used in pediatrics
- ◆ Delve into the bases and indications to perform desensitization to drugs, knowing the existing protocols for its realization and how to assess the risk to which we expose the patient
- ◆ Perform an etiological diagnostic approach in severe reactions



03

# Course Management

TECH considers the quality of its content as relevant as the quality of the teaching staff of each of its programs. For this reason, the university has taken into account only the profile of those professionals who could demonstrate a long and extensive work experience in the pediatric management of medication allergy, as well as a real commitment to the profession and teaching.



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*The teaching team has selected for this program real clinical cases so that you can perfect your intervention skills in complex situations derived from medication allergy in pediatric patients”*



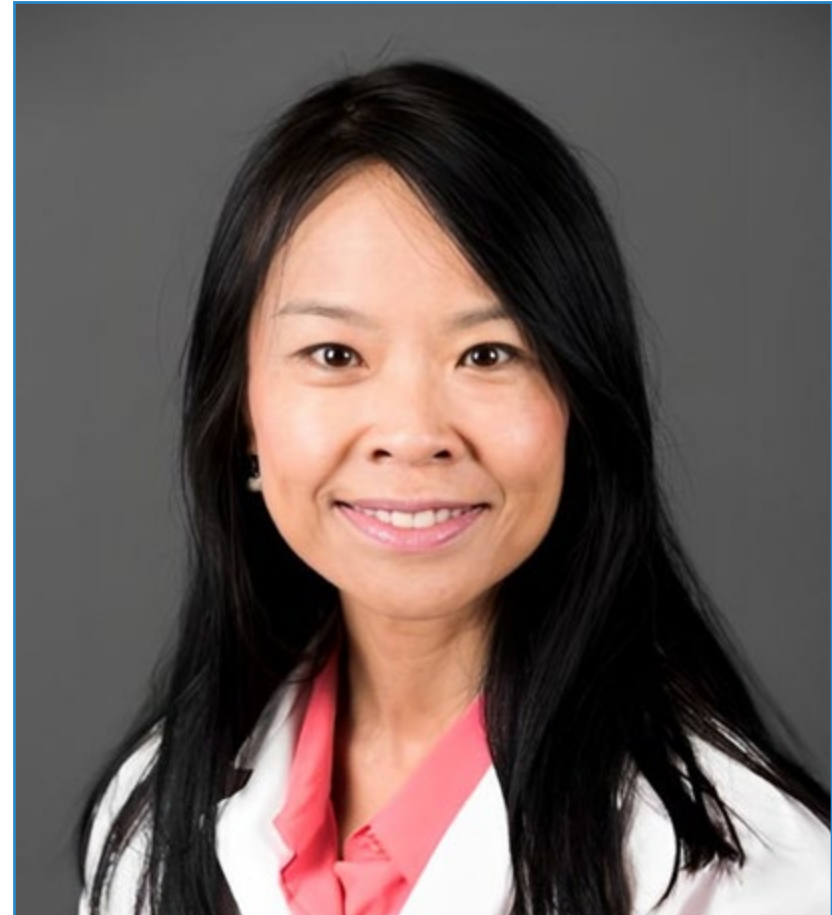
## International Guest Director

With a long and exhaustive specialization in Pediatric Immunology, Dr. Wanda Phipatanakul has dedicated her medical career to the re-education and prevention of Asthma and Allergic Diseases. Her most significant contribution to this field of health has been to promote the construction of a deep network of community relations and to carry out several studies in schools and homes directly.

With this research approach, the expert seeks to reduce the social disparity in access to early diagnosis and treatment. For this reason, her projects have received continuous funding for more than 2 decades from the National Institute of Health of the United States (NIH). Her most important current projects are an Asthma Intervention in Schools study, together with the National Institute of Allergy and Infectious Diseases (NIAID), and an evaluation of the Sleep Environment in Youth, in collaboration with the National Heart, Lung and Blood Institute (NHLBI).

On the other hand, he participates in research on the use of Omalizumab for the prevention of chronic respiratory diseases and atopic progression. She is also leading an analysis on the response to Dupilumab in asthmatic patients with a specific genetic variant. All this while serving as Director of the Immunology Research Center at Boston Children's Hospital and teaching in academic programs at Harvard Medical School.

She is also a prolific author with over 400 scientific publications in top impact journals such as JAMA and the New England Journal of Medicine. She is also an associate editor of the Journal of Allergy Clinical Immunology (JACI). She has received numerous awards from institutions such as the American Academy of Pediatrics and is an honorary member of several academic societies.



## Dra. Wanda Phipatanakul

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- Director of the Immunology Research Center at Boston Children's Hospital, United States
- Academician in the Division of Immunology and Allergy at Harvard University Medical School
- Leader of several joint research projects with the NIH, NIAID and the NHLBI
- Associate Editor of the Journal of Allergy Clinical Immunology
- Author of over 400 publications in top impact scientific journals JAMA and the New England Journal of Medicine
- Medical Degree from Loma Linda University
- Immunology Research Fellow at Johns Hopkins University  
Member of: American Academy of Pediatrics, American Academy of Allergy, Asthma and Immunology, American Society for Clinical Investigation, American Association of Physicians



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

## Management



### Dr. Troyano Rivas, Carmen

- ◆ Specialist in Pediatric Allergology
- ◆ Assistant Physician of the Pediatrics Department in the Allergy and Pediatric Pulmonology Section of the 12 de Octubre Hospital
- ◆ Researcher in research projects and clinical trials on Pediatric Allergology
- ◆ Author and co-author of several publications for scientific journals
- ◆ Teacher in university studies of Medicine
- ◆ Speaker in several Pediatric Allergology congresses

## Professors

### Dr. Cortés Álvarez, Nuria

- ◆ Pediatrician expert in Pediatric Allergy
- ◆ Pediatrician attached to the Pediatric Allergy Section of the Mútua Terrassa University Hospital.
- ◆ Pediatrician on duty in Neonatology and Pediatrics at the Mútua Terrassa University Hospital.
- ◆ Pediatrician in Pediatric Allergy consultation at the Children's Hospital of Barcelona.
- ◆ Assistant Pediatric Emergency Physician at the Mataró Hospital.
- ◆ Author of several scientific publications on her specialty.
- ◆ Regular speaker at courses and conferences on Pediatrics.
- ◆ Doctor of Pediatrics from the University of Barcelona
- ◆ Master's Degree in Pediatric Immunology and Allergy at the Sant Joan de Déu Hospital



# 04

## Structure and Content

This program is presented as a unique opportunity to take a 100% online certification at the height of the importance and prestige of the medical profession. Based on this, the graduate who accesses it will find 180 hours of dynamic, attractive and current theoretical content, designed in such a way that the academic experience is as productive as possible and based on the recommendations of the teaching team. In addition, the syllabus will be accompanied by additional material in audiovisual format, complementary readings and research articles with which you will not only be able to contextualize the information developed, but also to deepen in those areas of greater interest to your professional profile.








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*You will be able to know in detail the advances in the diagnosis of severe manifestations of non-measured IgE reactions to medicines and implement in your medical praxis the newest intervention strategies in Pediatrics”*

## Module 1. MedicamentAllergies

- 1.1. Adverse Reactions to Medications
  - 1.1.1. Classification of Hypersensitivity Reactions
  - 1.1.2. Drugs as Allergens
- 1.2. Diagnostic Approximation
  - 1.2.1. Peculiarities in the Child
  - 1.2.2. Medical History
- 1.3. Allergy to Beta-Lactams
  - 1.3.1. Penicillin. Chemical Structure and Classification
  - 1.3.2. Side Chain Allergens
  - 1.3.3. Allergens by Central Core
  - 1.3.4. Medical History
  - 1.3.5. Diagnosis
  - 1.3.6. Avoidance Recommendations According to Results
  - 1.3.7. Allergy to Cephalosporins and Cross-Reactivity with Penicillin Derivatives
- 1.4. Allergy to NSAIDs
  - 1.4.1. Classification of NSAIDs
  - 1.4.2. Types of Reactions to NSAIDs
  - 1.4.3. Diagnosis
  - 1.4.4. Avoidance Recommendations
  - 1.4.5. Possible Alternative Drugs in Children
- 1.5. Allergy to Other Antibiotics
  - 1.5.1. Macrolides
  - 1.5.2. Sulfamides
  - 1.5.3. Quinolones
  - 1.5.4. Aminoglycosides
  - 1.5.5. Glycopeptides
- 1.6. Allergy to Local Anesthetics and Perioperative Anaphylaxis
  - 1.6.1. Suspicion of Perioperative Allergic Reaction
  - 1.6.2. Tests to be Performed for Screening of the Responsible Drug
  - 1.6.3. Suspicion of Allergy to Local Anesthetics



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- A close-up, profile view of a young child with light brown hair, looking down. The child is wearing a purple pacifier. The background is softly blurred, showing what appears to be a wooden surface.
- 1.7. Vaccine Allergy
    - 1.7.1. Types of Vaccine Reactions
    - 1.7.2. Vaccine Content
    - 1.7.3. Epidemiology of Vaccine Allergic Reactions
    - 1.7.4. Reactions that May Simulate Allergic Reaction After Vaccination
    - 1.7.5. Diagnosis of Allergy to Vaccines
    - 1.7.6. Vaccination Recommendations for those Allergic to any of the Following Components
  - 1.8. Drug Desensitization
    - 1.8.1. Introduction
    - 1.8.2. Desensitization Mechanism
    - 1.8.3. Risk Evaluation
    - 1.8.4. Desensitization Protocols
  - 1.9. Severe Manifestations of Non-IgE-Mediated Reactions to Drugs
    - 1.9.1. DRESS
    - 1.9.2. Lynch-Like Stevens-Johnson
    - 1.9.3. Acute Generalized Exanthematous Pustulosis
    - 1.9.4. Other Systemic Manifestations
  - 1.10. Approach to Diagnosis in Severe Non-IgE Mediated Reactions

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*You will gain a comprehensive and up-to-date knowledge of the mechanisms of drug desensitization and the most effective risk assessment protocols"*



# 05 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, 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.

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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 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.



# 06 Certificate

The Postgraduate Certificate in Medication Allergy in Children guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate 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 Certificate in Medication Allergy in Children** 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 Certificate in Medication Allergy in Children**

Modality: **online**

Duration: **6 weeks**

Accreditation: **6 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.



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