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# بسم الله الرحمن الرحيم

مركز الشبكات وتكنولوجيا المعلومات

قسم التوثيق الإلكتروني



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التوثيق الإلكتروني والميكروفيلم

## قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها  
على هذه الأقراص المدمجة قد أعدت دون أية تغييرات





# **Ragweed Allergy in Patients with Respiratory Allergic Diseases: Prevalence and Phenotyping**

*Thesis*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سبحانك لا علم لنا  
إلا ما علمتنا إنك أنت  
العليم العظيم

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# List of Abbreviations

Abb.	Full term
AERD .....	Aspirin-exacerbated respiratory disease
AR .....	Allergic rhinitis
ARIA .....	Allergic Rhinitis and its Impact on Asthma
ATS .....	American Thoracic Society
EAST .....	Enzyme allegro-sorbent test
ERS .....	European Respiratory Society
FENO .....	ExhaLed nitric oxide
FEV1 .....	Forced expiratory volume in 1 second
GERD .....	Gastroesophageal reflux disease
ICS .....	Inhaled corticosteroids
ICS-LABA .....	ICS and long acting beta2 agonist bronchodilator combination
ICSs .....	Inhaled corticosteroids
IgE .....	Immunoglobulin E
INCS .....	Intranasal corticosteroids
LTRA .....	Leukotriene receptor antagonists
mDC .....	Myeloid-derived dendritic cells
NSAIDs .....	Non steroidal anti-inflammatory drugs
PAR2 .....	Protease-activated receptor 2
PEF .....	Peak expiratory flow
PFAS .....	Pollen-food allergy syndrome
PFTs .....	Pulmonary Function tests
pMDI .....	Pressurized dose meter inhaler
RM .....	Rhinitis medicamentosa
SABA .....	Short acting beta 2 agonists bronchodilators
SCIT .....	Subcutaneous immunotherapy
sIgE .....	Specific IgE
SLIT .....	Sublingual immunotherapy
SPT .....	Skin prick test
Th2 .....	Helper T cell
TSLP .....	Thymic stromal lymphopoietin

## INTRODUCTION

**R**espiratory allergic airway diseases mainly include allergic rhinitis and bronchial asthma. Allergic rhinitis is an inflammation in the nasal mucosa characterized by sneezing, nasal itching and discharge. It is an IgE mediated immune reaction characterized by sensitization of mast cells upon exposure to certain allergens and release of multiple allergy mediators. Severe allergic rhinitis has been associated with significant impairments in quality of life and work performance (*Hasan and Timothy, 2016*).

Bronchial asthma has become widespread with an increasing rate of prevalence. It is a heterogenic, complex, chronic inflammatory and obstructive lung disease, which can be associated with many comorbidities (*Heck et al., 2017*).

The increase in allergies is a phenomenon that is being observed in all developing countries. For a long time, science has taken as a starting point that only a genetic predisposition is a precondition for the development of an allergy. Today, knowledge of environmental factors that can alter genes or the transcription of genes in the cells, has improved. Epidemiological studies have identified several environmental factors that have a protective or supporting effect on allergy development, one of these factors are pollens (*Traidl, 2017*).

Pollens study is highly valuable for allergen avoidance and thus raising the quality of life of persons concerned by pollen allergies (*Bastl et al., 2017*).

Ragweed pollen is one of the common weed pollens. Weed pollen allergic patients are frequently poly-sensitized to diverse plant sources, thus molecule-based approaches are especially valuable for precise diagnosis (*Stemeseder et al., 2014*).

Ambrosia allergy has become important health problem in recent years. Ambrosia pollen can lead to type I hypersensitivity reactions in late summer and autumn. Ragweed pollen sensitization can result into respiratory diseases such as allergic rhinitis, asthma and allergic conjunctivitis and less skin symptoms (*Chen et al., 2018*). High exposure to pollen or increased pollen concentration over a certain period of time results into high sensitization rate and symptoms (*Chen et al., 2018*).

## AIM OF THE WORK

The aim of this study is to estimate prevalence of Ragweed Allergy in adult patients with respiratory allergy and to predict phenotyping of patients with Ragweed Allergy.