

POLYMORPHISM OF HOST DEFENSE NLRP12 GENE TO PATHOGENS AND EVALUATED THE RELATION IN FUNGAL PULMONARY INFECTION

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ABSTRACT : Contagious pneumonia is an irresistible cycle in the lungs brought about by at least one endemic or artful growths. The NLRP12 gene encodes a member of the cytoplasmic proteins. The encoded protein, , functions as an attenuating factor of inflammation by suppressing inflammatory responses in activated monocytes. Mutations in this gene cause familial cold auto inflammatory. This study aimed to decipher the polymorphism in NLRP12 gene and evaluated the relation in fungal pulmonary infection. DNA was extract from peripheral blood of 15 patients severing from lung complication, Amplification of exon of NLRp12 and sequenced. The results shown two SNP one of them Valid SNP: rs141245482 G>A and many heterozygous alleles in patient samples. The results indication preliminary roles of functional deficiency in NLRP12 gene play as risk factor in lung infection.

Key words : Polymorphism, NLRP12 gene, lung diseases.

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INTRODUCTION

Contagious pneumonia is an irresistible cycle in the lungs brought about by at least one endemic or artful growths. microbial contamination happens following the inward breath of fungal spores, after the inward breath of conidia, or by the reactivation of an inert disease (Brown *et al*, 2012). Elevated consciousness of contagious lung disease and suitable utilization of the accessible analytic modalities, will allow fitting treatment of these significant clinical contaminations in invulnerable traded off people (Denning and Bromley, 2015).

NLR (Nucleotide-binding domain and Leucine rich Repeat containing) family of intracellular microbial sensors. Lower respiratory plot diseases stay the main source of overall irresistible infection bleakness and medical care costs (Mizgerd, 2006). The Gram-negative extracellular bacterium, *Klebsiella pneumoniae*, initiates lung annihilation and various abscesses in the lung even with little inoculums. Concerning part of NLRP12 in bacterial acknowledgment, a new report has shown that NLRP12 is essential to add to antibacterial safeguard against *Yesinia pestis* following subcutaneous or intravenous test (Vladimer *et al*, 2012). The outcomes

likewise show that NLRP12-inadequate creatures had diminished endurance and improved bacterial weight in the spleen, along with lessened creation of IL-18, IL-1 β , and IFN- γ after *Y. pestis* contamination Vladimer *et al* (2012).

Today, it is widely accepted that NLR proteins are critical to the regulation of the innate immune response and hence were progressively appreciated for their critical role in host defense to pathogens. Members of this family garnered interest as pattern-recognition receptors able to trigger inflammatory responses against pathogens. Prado *et al* (2020) described a novel role for NLRP12 as a checkpoint inhibitor of Th17 cell differentiation, which controls the severity of experimental arthritis.

The current knowledge demonstrates that NLRs play ancillary roles against group for the recognition of fungi, This study will assess the current knowledge of selected NLRs in the pathogenesis of fungal infection, in particular how defects in host signaling and immune evasion tactics allow fungal pathogens to thrive in the host.

The NLRP12 gene encodes a member of the cytoplasmic proteins. The encoded protein, functions as an attenuating factor of inflammation by suppressing