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Lack of association of immune-response-gene polymorphisms with susceptibility to sarcoidosis in Slovenian patients

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ABSTRACT. Sarcoidosis is a chronic inflammatory disease, characterized by granulomatous inflammation, prominently involving the respiratory system. The etiology of this disease has not yet been elucidated and the contribution of genetic is not yet completely understood. We searched for novel candidate genes, utilizing a system biology approach, based on data from published transcriptional, proteomic and linkage studies of sarcoidosis. The search revealed several new potential candidate genes involved in the pathogenesis of inflammatory lung diseases: 25-(OH)-vitamin D_3-1α-hydroxylase (*CYP27B1*), endothelin-1 (*EDN1*) and glutathione S-transferase Pi (*GSTP1*). Variants of selected polymorphisms: -1260/ C>A in *CYP27B1*, Lys198Asn in *EDN1*, and Ile105Val in *GSTP1*, were examined to determine if they confer susceptibility to sarcoidosis, based on an analysis of 180 Slovenian patients in comparison with 283 healthy controls. Polymerase chain reactions using allele-specific oligonucleotides were performed. This disease was not significantly associated with genotypes CC at -1260/ C>A polymorphism in *CYP27B1* (P = 0.68, odds ratio (OR) = 1.10, 95% confidence interval (CI) = 0.75-1.61), GG genotype at Lys198Asn polymorphism in *EDN1* (P = 1.00, OR = 0.97, 95%CI = 0.65-1.44) and AA genotypes at Ile105Val polymorphism in

GSTP1 (P = 0.53, OR = 0.87, 95%CI = 0.60-1.27). There was no association of polymorphisms in any of the genes with sarcoidosis.

Key words: Association study; CYP27B1; Genetic polymorphisms; EDN1; GSTP1; Sarcoidosis

