



# Vascular endothelial growth factor gene polymorphisms and psoriasis susceptibility: a meta-analysis

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**ABSTRACT.** The aim of this study was to explore whether vascular endothelial growth factor (*VEGF*) polymorphisms confer susceptibility to psoriasis. Meta-analyses were conducted to examine the associations between the +405 C/G, -460 C/T, -1154 A/G, and -2578 A/C polymorphisms of *VEGF* and psoriasis using allele contrast and recessive, dominant, and additive models. Seven studies on *VEGF* polymorphisms and psoriasis involving 1956 subjects (psoriasis patients 665, controls 1291) were included in this meta-analysis. We observed no association between psoriasis and the *VEGF* +405 C allele in all study subjects (odds ratio = 0.984, 95% confidence interval = 0.754-1.285,  $P = 0.906$ ), but stratification by ethnicity indicated a significant association between the *VEGF* +405 C allele and psoriasis in Asians (odds ratio = 0.762, 95% confidence interval = 0.628-0.923,  $P = 0.005$ ). In addition, we observed a significant association between the *VEGF* -460 C allele and psoriasis in Europeans (odds ratio = 0.807, 95% confidence interval = 0.672-0.968,  $P = 0.021$ ). Meta-analyses of the -1154 A/G polymorphism also revealed a significant association with psoriasis in Europeans. However, the *VEGF* -2578 A/C polymorphism showed no

association in all subjects or in Europeans or Asians. This meta-analysis suggests the *VEGF* +405 C/G polymorphism confers susceptibility to psoriasis in Asians, and that the -460 C/T and -1154 A/G polymorphisms confer susceptibility to psoriasis in Europeans.

**Key words:** Meta-analysis; Polymorphism; Psoriasis; Vascular endothelial growth factor