Association of variable number of tandem repeats polymorphism in the IL-4 gene with end-stage renal disease in Malaysian patients

R. Vasudevan, M.N. Norhasniza and I. Patimah

Genetic Research Group, Molecular Biology and Bioinformatics Unit, Department of Biomedical Science, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Selangor, Malaysia

Corresponding author: P. Ismail
E-mail: patimah@putra.upm.edu.my

Received September 15, 2010
Accepted November 29, 2010
Published May 24, 2011
DOI 10.4238/vol10-2gmr1066

ABSTRACT. Variable number of tandem repeats (VNTR) polymorphism in the interleukin 4 (IL-4) gene has been associated with end-stage renal disease (ESRD) subjects in many different populations, although with conflicting results. We determined the 70 bp of VNTR polymorphism at intron 3 of the IL-4 gene in Malaysian ESRD subjects. Buccal cells were collected from 160 case and 160 control subjects; genomic DNA was amplified using PCR, followed by agarose gel electrophoresis. There were significant differences in genotypes and alleles of the IL-4 gene. We conclude that VNTR polymorphism of the IL-4 gene is a risk factor for the development of ESRD among Malaysians.

Key words: Genetic polymorphism; VNTR; ESRD; Interleukin