

# 0900 Genetic Polymorphisms and Periodontitis in Hong Kong Chinese

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Multigenetic polymorphisms are believed to be associated with periodontitis. *Objectives:* To investigate the association between multigenetic polymorphisms and periodontitis by screening for 165 single-nucleotide polymorphisms (SNPs) in 18 genes among Hong Kong Chinese individuals attending a university dental hospital. *Methods:* 193 patients with periodontitis and 120 periodontally healthy individuals were recruited. DNA was extracted from whole blood samples and genotyped by the Sequenom MassARRAY system. The chi-square test was used to analyze the association between genotype distribution and periodontitis. Key multigenetic polymorphisms were identified and further studied. *Results:* None of the 165 SNPs studied showed a significant difference in genotype distribution between patients with periodontitis and healthy controls. Combined analysis of FCGR2A non-synonymous SNP rs1801274(C/T) and promoter region SNP rs13878(C/T) showed that the composite genotype CC or TT in rs1801274 with genotype CC in rs13878 was significantly more prevalent among patients with periodontitis than among controls ( $p=0.041$ ). Combined analysis of FCGR3A non-synonymous SNP rs396991(T/G) and promoter region SNP rs15811(A/G) showed that genotype GG in rs396991 with genotype GG in rs15811 was marginally more prevalent among patients with periodontitis ( $p=0.051$ ). *Conclusions:* Homogeneous genotypes of SNP rs1801274 with genotype CC in rs13878 in FCGR2A, and genotype GG in rs396991 with GG in rs15811 in FCGR3A seem to be associated with periodontitis in Hong Kong Chinese. (Supported by URC grant 10206094)

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11:00 AM-12:00 PM, Thursday, 29 June 2006 Brisbane Convention & Exhibition Centre Exhibit Hall 1

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