



***MMP-9* genetic polymorphism may confer susceptibility to COPD**

S. Jiang, Z.H. Yang, Y.Y. Chen, Z. He, Y. Zhou, Y. Gao, Q. Zhang and M.Q. Tan

Second Department of Respiratory Medicine,
Shengjing Hospital of China Medical University, Shenyang, China

Corresponding author: M.Q. Tan
E-mail: tanmingqi_1021@163.com

Genet. Mol. Res. 15 (2): gmr.15026272
Received October 26, 2015
Accepted December 3, 2015
Published April 25, 2016
DOI <http://dx.doi.org/10.4238/gmr.15026272>

ABSTRACT. Correlations between genetic polymorphisms of three matrix metalloproteinase (MMP) genes and susceptibility to chronic obstructive pulmonary disease (COPD) were investigated. Relevant case-control studies were selected using rigorous inclusion and exclusion criteria. The comprehensive Meta-analysis 2.0 software was used to conduct the statistical analysis. An odds ratio with 95% confidence intervals was applied to assess the correlation between genetic polymorphisms of MMPs and susceptibility to COPD. Twelve high-quality studies were selected for inclusion in this meta-analysis. These studies included a combined total of 1533 COPD patients and 1530 healthy controls. The result of the meta-analysis showed that *MMP-9* rs3918242 C > T was significantly correlated with increased susceptibility to COPD. However, *MMP-1* rs1799750 1G > 2G and *MMP-3* rs3025058 5A > 6A were not associated with COPD risk (all P > 0.05). Based on our meta-analysis, *MMP-9* rs3918242 C > T is correlated with susceptibility to COPD, but *MMP-1* rs1799750 1G > 2G and *MMP-3* rs3025058 5A > 6A are not. These results should be further confirmed using a larger sample size.

Key words: *MMP-1*; *MMP-3*; *MMP-9*; COPD; rs3918242; rs1799750