



## Association of liver X receptor $\alpha$ (*LXR $\alpha$* ) gene polymorphism and ischemic stroke

H.X. Wang<sup>1</sup>, K. Zhang<sup>2</sup>, L. Zhao<sup>1</sup>, J.W. Tang<sup>1</sup>, L.Y. Gao<sup>1</sup> and Z.P. Wei<sup>1</sup>

<sup>1</sup>Department of Neurology,  
The Affiliated Fourth Centre Hospital of Tianjin Medical University,  
Tianjin, China

<sup>2</sup>Department of Neurology, Binzhou Medical University Hospital,  
Shandong, China

Corresponding author: H.X. Wang  
E-mail: wanghx\_008@yeah.net

Genet. Mol. Res. 14 (1): 118-122 (2015)  
Received March 14, 2014  
Accepted July 26, 2014  
Published January 15, 2015  
DOI <http://dx.doi.org/10.4238/2015.January.15.14>

**ABSTRACT.** We examined the relationship between the liver X receptor  $\alpha$  gene (*LXR $\alpha$* ) rs12221497 polymorphism and the susceptibility to ischemic stroke in a Chinese population. The polymerase chain reaction-restriction fragment length polymorphism technique was used to detect the genotype of rs12221497 in the *LXR $\alpha$*  gene of 300 stroke patients and 300 healthy control subjects. The chi-square test was used to analyze the genotype distribution between the 2 groups. We found that the risk of stroke in carriers with the AA + GA genotype was 2.12-fold higher than that in GG genotype carriers (odds ratio = 2.12, 95% confidence interval: 1.58-2.99,  $P < 0.05$ ). The risk of stroke in carriers of the A allele increased by 1.03-fold compared to that in G allele carriers (odds ratio = 2.03, 95% confidence interval: 1.44-3.01,  $P < 0.01$ ). After adjusting for other confounding factors such as smoking, hypertension, and diabetes, the A allele was found to be an independent risk factor for stroke. Therefore, the rs12221497 polymorphism in the *LXR $\alpha$*  gene

was associated with the susceptibility to stroke in a Chinese population.

**Key words:** Gene; Liver X receptor  $\alpha$ ; Polymorphism; Stroke