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## **rs9263726 is a sensitive and specific marker for allopurinol-induced severe cutaneous adverse reactions in Chinese patients**

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**Purpose:** The goal of the current study is to determine whether an easily detectable biomarker can be used to replace HLA-B\*5801 allele testing for the prediction of allopurinol-induced Severe Cutaneous Adverse Reactions (SCARs) in a cohort of Chinese patients.

**Methods:** Six SNPs (including rs9263726) and the HLA-B\*5801 were analyzed in 17 patients with allopurinol-induced SCARs and in 151 control patients (including 31 allopurinol-tolerant patients and 120 healthy subjects). SNPs were analyzed by pyrosequencing and HLA-B\*5801 was evaluated by sequencing-based techniques. Consistency between sequencing-based HLA-B\*5801 testing and pyrosequencing-based rs9263726 testing were further evaluated in 75 individuals that possessed a copy of the HLA-B\*5801 allele and 187 individuals that did not possess the allele.

**Results:** A significant association with allopurinol-induced SCARs were found at rs9263726 (OR=108.8) and HLA-B\*5801 (OR=108.8), and the occurrence of these was found to be in absolute linkage disequilibrium ( $D'=1.0$ ,  $r^2=0.92$ ). The Kappa values between sequencing-based HLA-B\*5801 testing and pyrosequencing-based rs9263726 testing was 0.96 ( $>0.75$ ), demonstrating that the two methods were well coincident with each other.

**Conclusion:** The ease of typing rs9263726 makes it an efficient surrogate for HLA-B\*5801 allele testing in the screening of patients at high risk for developing allopurinol-induced SCAR.

### **Biography**

Zhiyao Chen has completed his PhD from Nanjing University in China. He has been a Clinical Pharmacist in The First Affiliated Hospital of Soochow University from 2013. He has nearly 10 years research experience in Pharmacogenomics and has published more than 10 papers in reputed journals.

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