



## Protective Effects of Ginsenoside Rb3 on Acute Myocardial Ischemia in Rats Through Inhibition of the Sympathetic-Adrenal Medulla System

Jiao SUN<sup>1,2</sup> §, Huali XU<sup>1</sup> §, Xiaofeng YU<sup>1</sup>, Shaochun QU<sup>1</sup>, Dayun SUI<sup>1</sup> \* & Li WANG<sup>3\*\*</sup>

<sup>1</sup> Department of Pharmacology, School of Pharmacy, Jilin University, Changchun, 130021, PR China.

<sup>2</sup> School of Nursing, Jilin University, Changchun, 130021, PR China.

<sup>3</sup> First Hospital of Jilin University, Changchun, 130021, PR China.

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**SUMMARY.** Our purpose was to investigate the effects of ginsenoside Rb3 (G-Rb3) on sympathetic nervous system and the RAS in acute myocardial infarction (AMI) rat. The AMI model was constructed by ligation of the anterior descending coronary artery in rats. Subsequently, the myocardial infarction size (MIS) the serum creatine kinase (CK), aspartate aminotransferase (AST), lactate dehydrogenase (LDH), plasma renin (R), and angiotensin-converting enzyme (ACE) activities, and the serum epinephrine (E), norepinephrine (NE), endothelin (ET) and angiotensin II (Ang II) levels were measured. G-Rb3 (10 and 20 mg/kg) significantly decreased the MIS, serum CK, AST, LDH, ACE and plasma renin activities, and the serum NE and epinephrine, and plasma ET and Ang II levels within 24 h after AMI in rats. These results suggested that G-Rb3 had significant protective effects in AMI rats. This action may be related with inhibition of sympathetic-adrenal medulla hyperexcitation, catecholamine (CA) secretion and RAS activation.

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**KEY WORDS:** Acute myocardial infarction, Angiotensin-converting enzyme, Ginsenoside Rb3, Sympathetic neurotransmitter, Renin.

\* Authors to whom correspondence should be addressed. *E-mail:* suidy@jlu.edu.cn (Dayun Sui), wangli\_1956@yahoo.com.cn (Li Wang).

§ Contributed equally to this paper.