



## Enhanced Vasorelaxation of *BanhabackchulChunma-tang-1* and Involved Mechanism

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This study was designed to potentiate the vasodilation effect of BCT by change of mixture. Six different BCT compositions were made according to mixture and adding of herbs. The vascular relaxation effects of 6 different BCT compositions were examined on phenylephrine-precontracted rat thoracic aorta. The BCT-1 composition exerted the best relaxation effect.

The BCT-1 revealed significant relaxation on phenylephrine- or KCl-contracted rat thoracic aorta. In addition, its relaxation was endothelium-independent in both phenylephrine- and KCl- induced contraction.

Treatment of glibenclamide or tetraethylammonium(TEA) did not affect the relaxation of BCT. Vasorelaxation efficacy of BCT was also not influenced by low(25mM) or high(50mM, 80mM) KCl-induced contraction. Furthermore, the contraction by increasing  $Ca^{2+}$  concentrations(0.3-10.0mM) to a  $Ca^{2+}$ -free high  $K^+$ (60mM) was significantly reduced. It suggests that the relaxation effect of BCT is related with block of  $Ca^{2+}$  influx via  $Ca^{2+}$  channel.

The relaxant effects were not inhibited by pretreatment of rat aorta with L-NAME, MB, indomethacin and atropine. These results confirm that BCT may exert its vasodilation effect by endothelium-independent manner.

Key words: *BanhabackchulChunma-tang*, Vasorelaxation,  $Ca^{2+}$  influx, rat aorta