

KANOKPORN TEERARANGSIKUL : EFFECTS OF CAFFEINE ON CONTRACTION OF THE ISOLATED RAT VAS DEFERENS. THESIS ADVISOR : ASSO.PROF.RATREE SUDSUANG, Ph.D., ASSIST.PROF.PONGSAK KANLUAN, ASSO.PROF.PRASAN DHUMMA-UPAKORN, Ph.D., 56 PP. ISBN 974-578-800-7

Caffeine is a compound in methylxanthine group (1,3,7-trimethylxanthine). The purpose of this study was to determine the effect of caffeine on contraction of rat vas deferens induced by potassium chloride (KCl), barium chloride ($BaCl_2$), serotonin (5-HT) and noradrenaline (NE).

Caffeine (3,6 and 10 mM) inhibited both phasic and tonic contraction of KCl and NE. Every concentration of caffeine (1,3,6 and 10 mM) suppressed phasic and rhythmic contraction of 5-HT. Rhythmic contraction of $BaCl_2$ was blocked by 3 mM caffeine. However, the effect on phasic response of $BaCl_2$ need higher dose (10 mM) to suppress.

Results presented in this study demonstrate that the action of caffeine was nonspecific Ca antagonist and its inhibitory effect may involve in reduction of Ca-permeability and stimulation of intracellular calcium binding.