

ANTIANAPHYLACTIC AND ANTI-ASTHMATIC PROPERTIES OF NEW PIPERAZINYL 7-(β -HYDROXYPROPYL)- -THEOPHYLLINE DERIVATIVES IN GUINEA PIGS

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The present studies have demonstrated that new piperazinyl 7-(β -hydroxypropyl)-theophylline derivatives (R3, R6, R7) possess antihistamine, anti-anaphylactic and antiasthmatic properties. The compound R6 exerted especially pronounced selective protective action in experimental histamine asthma and provided effective prevention against anaphylactic shock in guinea pigs. The evidence was also presented that compound R6 inhibited *in vitro* mast cell degranulation induced by the preparation 48/80 liberating endogenous histamine. It was shown that the compound R6, i.e. 7-(β -hydroxypropyl)-[N1-(N4-benzyl)-piperazinyl]-theophylline efficiently competed with histamine of both endo- and exogenous origin and inhibited the mediator release from the mast cells.

Key words: *theophylline derivatives, experimental histamine asthma, anaphylactic shock*