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The effect of Zataria multiflora boiss on β ٢-adrenoceptors of guinea pig tracheal cahins

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Abstract

The effect of aqueous-ethanolic extract of Zataria multiflora Boiss (Labiatae), on β-adrenoceptors was examined on tracheal chains of guinea pigs. The effects of three concentrations of aqueous-ethanolic extract (٠,٠٥, ٠,١ and ٠,٢ mg/mL), ١٠ nM propranolol, and saline on β-adrenoceptors were tested (n=٨). The results showed clear leftward shifts in isoprenaline curves obtained in the presence of all concentration of the extract compared with that of saline. The EC٥٠ (the effective concentration of isoprenaline, causing ٥٠٪ of maximum response) obtained in the presence of all concentrations of the extract was significantly lower compared to saline ($p<٠,٠٥$ to $p<٠,٠٠١$). The maximum responses obtained in the presence of all three concentrations of the extract were not significantly different compared with that of saline. All values of (CR-١ = (EC٥٠ obtained in the presence of active substances/EC٥٠, obtained in the presence of saline) -١) obtained in the presence of concentrations of extract were negative and there were significant differences in this value between propranolol and those obtained in the presence of extract ($p<٠,٠١$ for all three cases). The results indicated a relatively potent stimulatory effect of the extract from Zataria multiflora Boiss on β٢-adrenoceptors.

Reaxys Database Information

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Author keywords

β ٢-adrenoceptors; Guinea pig; Stimulatory effect; Trachea; Zataria multiflora Boiss

Indexed Keywords

EMTREE drug terms: beta ٢ adrenergic receptor; isoprenaline; plant extract; propranolol; sodium chloride; unclassified drug; Zataria multiflora boiss extract

EMTREE medical terms: animal tissue; article; concentration response; controlled study; guinea pig; nonhuman; plant; trachea; Zataria multiflora boiss

Chemicals and CAS Registry Numbers: isoprenaline, ٢٩٩-٩٥-٦, ٥١-٣٠-٩, ٦٧٠٠-٣٩-٦, ٧٦٨٣-٥٩-٢; propranolol, ١٣٠١٣-١٧-٧, ٣١٨-٩٨-٩, ٣٥٠٦-٠٩-٠, ٤١٩٩-٠٩-١, ٥٢٥-٦٦-٦; sodium chloride, ٧٦٤٧-١٤-٥

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