

Title (en)
MUSCARINIC RECEPTOR ANTAGONISTS

Title (de)
MUSKARINREZEPTORANTAGONISTEN

Title (fr)
ANTAGONISTES DES RECEPTEURS MUSCARINIQUES

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Abstract (en)
[origin: WO9964043A1] Disclosed are multibinding compounds which are muscarinic receptor antagonists. The multibinding compounds of this invention containing from 2 to 10 ligands covalently attached to one or more linkers. Each ligand is, independently of each other, a muscarinic receptor antagonist or an allosteric modulator provided that at least one of said ligand is a muscarinic receptor antagonist. The multibinding compounds of this invention are useful in the treatment and prevention of diseases such as chronic obstructive pulmonary disease, chronic bronchitis, irritable bowel syndrome, urinary incontinence, and the like.

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Citation (search report)
• [A] ISHIIHARA, YUJI ET AL: "Central cholinergic agents. III. Synthesis of 2-alkoxy-2,8- diazaspiro[4.5]decane-1,3-diones as muscarinic agonists", CHEM. PHARM. BULL. (1992), 40(5), 1177-85, XP000651676
• [A] WEINER, BEN ZION ET AL: "Atropine attached to polyethylene glycols", EUR. J. MED. CHEM. - CHIM. THER. (1976), 11(6), 525-6, XP002140747
• [A] BACHRACH, A. ET AL: "Attachment of drugs to polydimethylsiloxanes", EUR. POLYM. J. (1984), 20(5), 493-500, XP000196583
• [A] KOSTENIS, E. ET AL: "Allosteric effect on muscarinic M2-receptors of derivatives of the alkane-bis-ammonium compound W84. Comparison with bispyridinium-type allosteric modulators", EUR. J. MED. CHEM. (1994), 29(12), 947-53, XP002168881
• [A] DATABASE CHEMABS [online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; TOMIOKA, TATSUO: "Synthesis of hypotensive compounds. I. Synthesis of methoxy and ethoxycarbonyloxy benzoates", XP002168883, retrieved from STN Database accession no. 73:120260 & YAKUGAKU ZASSHI (1970), 90(8), 1048-51
• [A] CHEMICAL ABSTRACTS, vol. 84, no. 7, 16 February 1976, Columbus, Ohio, US; abstract no. 43492, BRAUDE, M. B. ET AL: "Chemical structure and anthelmintic activity. V. Analogs of the anthelmintics neftamon and difezil" XP002168882 & KHIM.-FARM. ZH. (1975), 9(10), 12-14
• See references of WO 9964043A1

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