Title (en)

INTERACTION OF ALPHA-CONOTOXIN PEPTIDES WITH NEURONAL NICOTINIC ACETYLCHOLINE RECEPTORS

Title (de)

WECHSELWIRKUNG VON ALPHA-CONOTOXINPEPTIDEN MIT NEURONALEN NIKOTINISCHEN ACETYLCHOLIN REZEPTOREN

Title (fr)

INTERACTION DE PEPTIDES D'ALPHA-CONOTOXINE AVEC DES RECEPTEURS NEURAUX D'ACETYLCHOLINE NICOTINIQUE

Publication

EP 1032588 A1 20000906 (EN)

Application

EP 98953885 A 19981023

Priority

- US 9822368 W 19981023
- US 6278397 P 19971024
- US 6581497 P 19971114

Abstract (en)

[origin: WO9921878A1] This invention relates to derivatives of the conopeptide MII, an alpha -4/7 conotoxin peptide, in which amino acid residues are substituted as described herein while maintaining the basic activity of MII. The present invention also relates to the discovery of the 3-dimensional structure of MII, and the relationship of its structure to its specificity to the alpha 3 beta 2 subtype of the neuronal nicotinic acetylcholine receptor (nAChR). The present invention also relates to computer based programs for the expression of the three-dimensional structure of MII and peptide analogs, peptide mimetics or non-peptide mimetics thereof. The structural characteristics may be correlated with biological activity to enable the design of alpha -4/7 conotoxin peptide analogs and peptide mimetics which demonstrate the same specificity to neuronal nAChR. Such analogs and peptide mimetics are useful as cardiovascular agents and for treating or detecting small-cell lung carcinoma (SCLC).
[origin: WO9921878A1] This invention relates to derivatives of the conopeptide MII, an alpha -4/7 conotoxin peptide, in which amino acid residues are substituted as described herein while maintaining the basic activity of MII. The present invention also relates to the discovery of the 3-dimensional structure of MII, and the relationship of its structure to its specificity to the alpha 3 beta 2 subtype of the neuronal nicotinic acetylcholine receptor (nAChR). The present invention also relates to computer based programs for the expression of the three-dimensional structure of MII and peptide analogs, peptide mimetics or non-peptide mimetics thereof. The structural characteristics may be correlated with biological activity to enable the design of alpha -4/7 conotoxin peptide analogs and peptide mimetics which demonstrate the same specificity to neuronal nAChR. Such analogs and peptide mimetics are useful as cardiovascular agents and for treating or detecting small-cell lung carcinoma (SCLC).

IPC 1-7

C07K 7/08; G01N 24/08; G01N 33/68; G06F 17/30; G06F 19/00

IPC 8 full level

C07K 7/08 (2006.01); **C07K 14/435** (2006.01); **C12N 15/09** (2006.01); **G01N 33/566** (2006.01); **G01N 33/574** (2006.01); **G01R 33/465** (2006.01); **G06F 17/30** (2006.01); **G06F 19/00** (2006.01); A61K 38/00 (2006.01)

CPC (source: EP)

C07K 14/43504 (2013.01); **G01N 33/566** (2013.01); **G01N 33/57423** (2013.01); A61K 38/00 (2013.01); G01N 2333/43504 (2013.01); G01N 2333/4756 (2013.01); G01N 2333/70571 (2013.01)

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 9921878 A1 19990506; AU 1114399 A 19990517; CA 2308115 A1 19990506; EP 1032588 A1 20000906; EP 1032588 A4 20011128; JP 2001521042 A 20011106

DOCDB simple family (application)

US 9822368 W 19981023; AU 1114399 A 19981023; CA 2308115 A 19981023; EP 98953885 A 19981023; JP 2000517986 A 19981023