

Title (en)
CHEMOSENSITIZER

Title (de)
CHEMOSENSIBILISATOR

Title (fr)
AGENT DE CHIMIOSENSIBILISATION

Publication
EP 1296682 A4 20041110 (EN)

Application
EP 01940915 A 20010626

Priority
• IB 0101133 W 20010626
• IN 591MU2000 A 20000628

Abstract (en)
[origin: WO0200164A2] Chemotherapeutic agents are used to treat infections caused by bacteria, virus, protozoa, parasites, and various malignant diseases like cancer. The major problem associated with use of chemotherapeutic agents is resistance to chemoptherapeutic agents. Mechanisms underlying resistance to chemotherapeutic agents include inactivation/modification of antibiotic (beta-lactams, chloramphenicol), insensitive target site (beta-lactams, glycopeptides, macrolides, tetracyclines), decreased drug accumulation in the form of enhanced efflux (tetracyclines, chloroquine, macrolides, anticancer drugs), by-pass of antibiotic sensitive step (methicillin, sulphonamides) etc. The common mechanisms underlying drug resistance is to restrict concentration of drug at the site of action usually intracellular. This can be in the form or restricting the entry of the drug into the cell by various mechanisms including altered cell wall permeability. It can also be in the form of removing the drug from site of action e.g. intracellular so that therapeutic concentration are not achieved. The drugs restoring sensitivity of chemotherapeutic agents are broadly known as chemosensitizers. Compounds belonging to a group of R-1-3-benzodioxole are found to be chemosensitizer as per the present invention. Piperine is one such compound belonging to a group of R-1-3-benzodioxole are found to be chemosensitizer as per the present invention. Piperine is one such compound belonging to R-1-3 benzodioxole group. It is found to reverse resistance to chemotherapeutic agents like rifampicin at dose which is easiyl achievable after oral ingestion of the drug.

IPC 1-7
A61K 31/445; C07D 211/16

IPC 8 full level
A61K 31/00 (2006.01); **A61K 31/4525** (2006.01)

CPC (source: EP)
A61K 31/4525 (2013.01); **Y02A 50/30** (2017.12)

Citation (search report)
• [X] EP 0650728 A1 19950503 - COUNCIL SCIENT IND RES [IN]
• [X] EP 0709098 A1 19960501 - CADILA LAB LTD [IN]
• [X] EP 0935964 A1 19990818 - PANACEA BIOTEC LTD [IN]
• [X] US 5744161 A 19980428 - MAJEED MUHAMMED [US], et al
• [XP] DATABASE CAPLUS [online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; V. BALAKRISHNAN ET AL: "Piperidine augments transcription inhibitory activity of rifampicin by severalfold in Mycobacterium smegmatis", XP002296386, retrieved from STN Database accession no. 2001:475691
• [X] MUJUMDAR A M ET AL: "EFFECT OF PIPERINE ON PENTOBARBITONE INDUCED HYPNOSIS IN RATS", INDIAN JOURNAL OF EXPERIMENTAL BIOLOGY, XX, XX, vol. 28, no. 5, 1 May 1990 (1990-05-01), pages 486 - 487, XP000672572, ISSN: 0019-5189
• [X] BANO G ET AL: "EFFECT OF PIPERINE ON BIOAVAILABILITY AND PHARMACOKINETICS OF PROPRANOLOL AND THEOPHYLLINE IN HEALTHY VOLUNTEERS", EUROPEAN JOURNAL OF CLINICAL PHARMACOLOGY, SPRINGER VERLAG, DE, vol. 41, no. 6, 1991, pages 615 - 617, XP000884122, ISSN: 0031-6970
• [X] BANO G ET AL: "THE EFFECT OF PIPERINE ON PHARMACOKINETICS OF PHENYTOIN IN HEALTHY VOLUNTEERS", PLANTA MEDICA, THIEME, STUTTGART, DE, vol. 53, no. 6, 1 December 1987 (1987-12-01), pages 568 - 569, XP000672600, ISSN: 0032-0943
• [X] DATABASE CAPLUS [online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; A. M. MUJUMDAR ET AL: "Effect of piperidine on bioavailability of oxyphenylbutazone in rats", XP002296387, retrieved from STN Database accession no. 1999:200441
• [X] DATABASE CAPLUS [online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; S. K. GUPTA ET AL: "Influence of piperidine on nimesulide-induced antinociception", XP002296388, retrieved from STN Database accession no. 1998:507236 & CURRENT SCIENCE, vol. 80, no. 10, 2001, pages 1302 - 1305 & INDIAN DRUGS, vol. 36, no. 2, 1999, pages 123 - 126 & PHYTOTHERAPY RESEARCH, vol. 12, no. 4, 1998, pages 266 - 269
• See references of WO 0200164A2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 0200164 A2 20020103; WO 0200164 A3 20021024; WO 0200164 A8 20020516; AP 2002002453 A0 20020630; AU 7440301 A 20020108; EA 005672 B1 20050428; EA 200200288 A1 20030227; EP 1296682 A2 20030402; EP 1296682 A4 20041110; RU 2002107449 A 20031120

DOCDB simple family (application)
IB 0101133 W 20010626; AP 2002002453 A 20010626; AU 7440301 A 20010626; EA 200200288 A 20010626; EP 01940915 A 20010626; RU 2002107449 A 20010626