

Title (en)  
CARBAPENEM ANTIBACTERIAL COMPOUNDS, COMPOSITIONS CONTAINING SUCH COMPOUNDS AND METHODS OF TREATMENT

Title (de)  
ANTIBAKTERIELLE CARBAPENEM-VERBINDUNGEN, ZUBEREITUNGEN DIE SOLCHE VERBINDUNGEN ENTHALTEN UND BEHANDLUNGSVERFAHREN

Title (fr)  
COMPOSITIONS ANTIBACTERIENNES DE CARBAPENEM, PREPARATIONS LES CONTENANT ET METHODES DE TRAITEMENT

Publication  
**EP 1021445 A4 20010207 (EN)**

Application  
**EP 97939843 A 19970908**

Priority  
• GB 9624277 A 19961122  
• US 9715831 W 19970908  
• US 2618496 P 19960912

Abstract (en)  
[origin: WO9811108A1] The present invention relates to carbapenem antibacterial agents in which the carbapenem nucleus is substituted at the 2-position with a sulfonamide containing ring system linked to the carbapenem nucleus through a CH<sub>2</sub> group. The compounds are represented by formula (I) including pharmaceutically acceptable salts thereof, wherein: R<1> represents H or methyl; CO<sub>2</sub>M represents a carboxylic acid, a carboxylate anion, a pharmaceutically acceptable ester group or a carboxylic acid protected by a protecting group; P represents hydrogen, hydroxyl, F or hydroxyl protected by a hydroxyl-protecting group; X<1> and X<2> represent hydrogen or X<1> and X<2> taken together represent a carbonyl group; and one of AB, BC and CD represents a fused aryl, heteroaryl or heteroarylium ring, and the other variables represent R, said fused aryl, heteroaryl or heteroarylium ring being substituted with from 1-4 R groups. Pharmaceutical compositions and methods of use are also included.

IPC 1-7  
**C07D 487/04**; **A61K 31/395**

IPC 8 full level  
**C07D 487/04** (2006.01); **A61K 31/428** (2006.01); **A61K 31/4439** (2006.01); **A61K 31/497** (2006.01); **A61K 31/4995** (2006.01); **A61P 31/04** (2006.01); **C07D 477/14** (2006.01); **C07D 519/00** (2006.01)

CPC (source: EP)  
**A61P 31/04** (2017.12); **C07D 477/14** (2013.01); **Y02P 20/55** (2015.11)

Citation (search report)  
• [Y] WO 9521841 A1 19950817 - MERCK & CO INC [US], et al  
• [Y] EP 0463852 A2 19920102 - MERCK & CO INC [US]  
• [Y] EP 0472306 A1 19920226 - MERCK & CO INC [US]  
• [Y] WO 9428719 A1 19941222 - MERCK & CO INC [US], et al  
• [Y] WO 9602548 A1 19960201 - MERCK & CO INC [US], et al  
• [Y] WADDELL S T ET AL: "Benzothiazolythio Carbapenems: Potent Anti-MRSA Agents", BIOORGANIC & MEDICINAL CHEMISTRY LETTERS,GB,OXFORD, vol. 5, no. 13, 6 July 1995 (1995-07-06), pages 1427 - 1432, XP004135463, ISSN: 0960-894X  
• [Y] GEORGOPAPADAKOU,N.: "Penicilin-Binding Proteins and Bacterial Resistance to beta-Lactams", ANTIMICROB. AGENTS CHEMOTHER., vol. 37, no. 10, October 1993 (1993-10-01), DETROIT, pages 2045 - 2053, XP000944436  
• [T] WILKENING R R ET AL: "Synthesis and activity of 2-(sulfonamido)methyl-carbapenems: discovery of a novel, anti-MRSA 1,8-naphthosultam pharmacophore", BIOORGANIC & MEDICINAL CHEMISTRY LETTERS,GB,OXFORD, vol. 9, no. 5, 8 March 1999 (1999-03-08), pages 673 - 678, XP004157592, ISSN: 0960-894X  
• [T] RATCLIFFE R W ET AL: "Synthesis and properties of 2-(naphthosultamyl)methyl-carbapenems with potent anti-mrsa activity: discovery of L-786,392", BIOORGANIC & MEDICINAL CHEMISTRY LETTERS,GB,OXFORD, vol. 9, no. 5, 8 March 1999 (1999-03-08), pages 679 - 684, XP004157593, ISSN: 0960-894X  
• See references of WO 9811108A1

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

DOCDB simple family (publication)  
**WO 9811108 A1 19980319**; AU 4184497 A 19980402; CA 2264147 A1 19980319; EP 1021445 A1 20000726; EP 1021445 A4 20010207; JP 2001500862 A 20010123

DOCDB simple family (application)  
**US 9715831 W 19970908**; AU 4184497 A 19970908; CA 2264147 A 19970908; EP 97939843 A 19970908; JP 51374698 A 19970908