

Title (en)

INHIBITING HEPATITIS C VIRUS PROCESSING AND REPLICATION

Title (de)

INHIBITION DER PROZESSIERUNG UND REPLIKATION DES HEPATITIS C VIRUS

Title (fr)

INHIBITION DE LA MATURATION ET DE LA REPLICATION DU VIRUS DE L'HEPATITE C

Publication

EP 1322325 A4 20040915 (EN)

Application

EP 01952780 A 20010716

Priority

- US 0122335 W 20010716
- US 21955000 P 20000720

Abstract (en)

[origin: WO0207761A1] The present invention features methods for inhibiting HCV replication and processing by targeting heat shock protein 90 (HSP90). HSP90 is a cellular chaperone protein that was found to be an essential factor in NS2/3 self-cleavage. HSP90 can be targeted using compounds inhibiting the ability of HSP90 to facilitate NS2/3 cleavage.

IPC 1-7

A61K 39/00; A61K 39/385; A01N 43/40; A01N 43/42; A61K 31/00; A61K 31/365; A61K 31/395

IPC 8 full level

G01N 33/50 (2006.01); **A61K 31/00** (2006.01); **A61K 31/365** (2006.01); **A61K 31/395** (2006.01); **A61K 45/00** (2006.01); **A61P 31/12** (2006.01); **A61P 31/14** (2006.01); **A61P 43/00** (2006.01); **C07D 225/06** (2006.01); **C07D 313/00** (2006.01); **G01N 33/15** (2006.01); **G01N 33/53** (2006.01); **G01N 33/56** (2006.01)

CPC (source: EP US)

A61K 31/00 (2013.01 - EP); **A61K 31/365** (2013.01 - EP); **A61K 31/395** (2013.01 - EP US); **A61P 31/12** (2017.12 - EP); **A61P 31/14** (2017.12 - EP); **A61P 43/00** (2017.12 - EP)

Citation (search report)

- [A] HU JIANMING ET AL: "Hsp90 is required for the activity of a hepatitis B virus reverse transcriptase", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, vol. 93, no. 3, 1996, pages 1060 - 1064, XP002287483, ISSN: 0027-8424
- [A] HU JIANMING ET AL: "Hepadnavirus assembly and reverse transcription require a multi-component chaperone complex which is incorporated into nucleocapsids", EMBO (EUROPEAN MOLECULAR BIOLOGY ORGANIZATION) JOURNAL, vol. 16, no. 1, 1997, pages 59 - 68, XP002287484, ISSN: 0261-4189
- [A] PIERONI LUISA ET AL: "In vitro study of the NS2-3 protease of hepatitis C virus", JOURNAL OF VIROLOGY, THE AMERICAN SOCIETY FOR MICROBIOLOGY, US, vol. 71, no. 9, September 1997 (1997-09-01), pages 6373 - 6380, XP002184058, ISSN: 0022-538X
- [A] DARKE P L ET AL: "INHIBITION OF HEPATITIS C VIRUS NS2/3 PROCESSING BY NS4A PEPTIDES", JOURNAL OF BIOLOGICAL CHEMISTRY, AMERICAN SOCIETY OF BIOLOGICAL CHEMISTS, BALTIMORE, MD, US, vol. 274, no. 49, 3 December 1999 (1999-12-03), pages 34511 - 34514, XP002934074, ISSN: 0021-9258
- [A] DATABASE WPI Section Ch Week 200273, Derwent World Patents Index; Class B04, AN 2002-675594, XP002287486
- [A] AN W G ET AL: "DEPLETION OF P185ERBB2, RAF-1 AND MUTANT P53 PROTEINS BY GELDANAMYCIN DERIVATIVES CORRELATES WITH ANTIPIROLIFERATIVE ACTIVITY", CANCER CHEMOTHERAPY AND PHARMACOLOGY, SPRINGER VERLAG, BERLIN, DE, vol. 40, no. 1, 1997, pages 60 - 64, XP001153415, ISSN: 0344-5704
- [A] SCHULTE T W ET AL: "THE BENZOQUINONE ANSAMYCIN 17-ALLYLAMINO-17-DEMETHOXYGELDANAMYCIN BINDS TO HSP90 AND SHARES IMPORTANT BIOLOGIC ACTIVITIES WITH GELDANAMYCIN", CANCER CHEMOTHERAPY AND PHARMACOLOGY, SPRINGER VERLAG, BERLIN, DE, vol. 42, 1998, pages 273 - 279, XP002949121, ISSN: 0344-5704
- [A] SOGA SHIRO ET AL: "KF25706, a novel oxime derivative of radicicol, exhibits in vivo antitumor activity via selective depletion of Hsp90 binding signaling molecules", CANCER RESEARCH, vol. 59, no. 12, 15 June 1999 (1999-06-15), pages 2931 - 2938, XP002287485, ISSN: 0008-5472
- [T] WAXMAN LLOYD ET AL: "Host cell factor requirement for hepatitis C virus enzyme maturation", PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES, vol. 98, no. 24, 20 November 2001 (2001-11-20), November 20, 2001, pages 13931 - 13935, XP002287099, ISSN: 0027-8424
- See references of WO 0207761A1

Citation (examination)

- SCHEIBEL T.; BUCHNER J.: "The Hsp90 complex - a super-chaperone machine as a novel drug target", BIOCHEMICAL PHARMACOLOGY, vol. 56, no. 6, 1998, pages 675 - 682
- ROE S.M. ET AL: "Structural basis for inhibition of the Hsp90 molecular chaperone by the antitumor antibiotics radicicol and geldanamycin", JOURNAL OF MEDICINAL CHEMISTRY, vol. 42, no. 2, 1999, pages 260 - 266
- VALL'E S. ET AL: "Ribavirin-induced resistance to heat shock, inhibition of the Ras-Raf-1 pathway and arrest in G1", EUROPEAN JOURNAL OF PHARMACOLOGY, vol. 404, 2000, pages 49 - 62
- NAKAGAWA S. ET AL: "Hsp90 inhibitors suppress HCV replication in replicon cells and humanized liver mice", BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, vol. 353, 2007, pages 882 - 888

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 0207761 A1 20020131; CA 2416603 A1 20030131; EP 1322325 A1 20030702; EP 1322325 A4 20040915; JP 2004504356 A 20040212

DOCDB simple family (application)

US 0122335 W 20010716; CA 2416603 A 20010716; EP 01952780 A 20010716; JP 2002513494 A 20010716