

Title (en)
VIRAL AND ONCOVIRAL NUCLEASE TREATMENT

Title (de)
VIRALE UND ONKOVIRALE NUKLEASEBEHANDLUNG

Title (fr)
TRAITEMENT AU MOYEN D'UNE NUCLÉASE VIRALE ET ONCOVIRALE

Publication
EP 3420077 A4 20191225 (EN)

Application
EP 17757316 A 20170224

Priority
• US 201662299792 P 20160225
• US 201662299839 P 20160225
• US 2017019390 W 20170224

Abstract (en)
[origin: WO2017147446A1] Compositions and methods for treating infection-associated cancer include the use of a nuclease that cuts nucleic acid of an oncovirus in combination with an adjunct chemo therapeutic that treats cancerous cells. For example, a Cas9 endonuclease and a guide RNA that matches a target in a viral genome without having any corresponding match in the human genome can be delivered along with an anti-apoptotic inhibitor. Embodiments treat a viral infection and use a nuclease and an inhibitor that prevents DNA repair, such as a CRISPR-associated nuclease and a small molecule that inhibits an enzyme of a repair pathway. Under guidance of a targeting sequence, the nuclease cuts viral nucleic acid without cutting the patient's genome. The cut ends of the viral nucleic acid are not repaired because the inhibitor prevents a repair mechanism.

IPC 8 full level
C12N 9/22 (2006.01); **A61K 9/127** (2006.01); **A61P 31/12** (2006.01); **C07H 21/04** (2006.01); **C12N 15/09** (2006.01); **C12N 15/113** (2010.01); **C12N 15/12** (2006.01); **G01N 33/574** (2006.01)

CPC (source: EP)
A61P 31/12 (2017.12); **C12N 9/22** (2013.01); **C12N 15/09** (2013.01); **C12N 15/102** (2013.01); **C12N 15/1131** (2013.01); **G01N 33/5308** (2013.01); **G01N 33/569** (2013.01); **G01N 33/574** (2013.01); **C12N 2310/20** (2017.04); **C12N 2320/30** (2013.01); **C12N 2320/32** (2013.01); **G01N 2333/922** (2013.01)

Citation (search report)
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• [A] WO 2015184259 A1 20151203 - UNIV LELAND STANFORD JUNIOR [US]
• [A] R. H. WIJDEVEN ET AL: "Genome-Wide Identification and Characterization of Novel Factors Conferring Resistance to Topoisomerase II Poisons in Cancer", CANCER RESEARCH, vol. 75, no. 19, 10 August 2015 (2015-08-10), US, pages 4176 - 4187, XP055642176, ISSN: 0008-5472, DOI: 10.1158/0008-5472.CAN-15-0380
• [AP] YI LANG ET AL: "CRISPR-Cas9 therapeutics in cancer: promising strategies and present challenges", BBA - REVIEWS ON CANCER, ELSEVIER SCIENCE BV, AMSTERDAM, NL, vol. 1866, no. 2, 15 September 2016 (2016-09-15), pages 197 - 207, XP029826231, ISSN: 0304-419X, DOI: 10.1016/J.BBCAN.2016.09.002
• [T] VARIOUS: "Abstracts, 20th Annual Meeting of the American-Society-of-Gene-and-Cell-Therapy (ASGCT); Washington, DC, USA; May 10 -13, 2017", MOLECULAR THERAPY, vol. 25, 1 May 2017 (2017-05-01), pages 1 - 363, XP055466872, ISSN: 1525-0016, DOI: 10.1016/j.ymthe.2017.04.025
• See references of WO 2017147446A1

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