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(54) **METHODS OF TREATING PANCREATIC CANCER**

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CPC ***A61K 31/337*** (2013.01); ***A61K 9/5169*** (2013.01); ***A61K 31/7068*** (2013.01)

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CPC combination set(s) only.
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,439,686 A 8/1995 Desai et al.
5,498,421 A 3/1996 Grinstaff et al.
5,505,932 A 4/1996 Grinstaff et al.
5,508,021 A 4/1996 Grinstaff et al.
5,512,268 A 4/1996 Grinstaff et al.
5,560,933 A 10/1996 Soon-Shiong et al.
5,635,207 A 6/1997 Grinstaff et al.
5,639,473 A 6/1997 Grinstaff et al.
5,650,156 A 7/1997 Grinstaff et al.
5,916,596 A 6/1999 Desai et al.
5,997,904 A 12/1999 Magdassi et al.
6,096,331 A 8/2000 Desai et al.
6,506,405 B1 1/2003 Desai et al.
6,528,067 B1 3/2003 Magdassi et al.
6,537,579 B1 3/2003 Desai et al.
6,565,842 B1 5/2003 Desai et al.
6,652,884 B2 11/2003 Falciani
6,749,868 B1 6/2004 Desai et al.
6,753,006 B1 6/2004 Desai et al.
7,758,891 B2 7/2010 Desai et al.
7,771,751 B2 8/2010 Desai et al.
7,780,984 B2 8/2010 Desai et al.
7,820,788 B2 10/2010 Desai et al.
7,923,536 B2 4/2011 Desai et al.
7,981,445 B2 7/2011 De et al.
8,034,375 B2 10/2011 Desai et al.
8,034,765 B2 10/2011 De et al.
8,137,684 B2 3/2012 Desai et al.
8,138,229 B2 3/2012 Desai et al.
8,257,733 B2 9/2012 Desai et al.
8,268,348 B2 9/2012 Desai et al.
8,314,156 B2 11/2012 Desai et al.
8,735,394 B2 5/2014 Desai et al.
8,846,771 B2 9/2014 Desai et al.
8,853,260 B2 10/2014 Desai et al.
8,911,786 B2 12/2014 Desai et al.
8,927,019 B2 1/2015 Desai et al.
8,999,396 B2 4/2015 Desai et al.
9,012,518 B2 4/2015 Desai et al.
9,012,519 B2 4/2015 Desai et al.
9,061,014 B2 6/2015 Seward et al.
9,101,543 B2 8/2015 Desai et al.
9,149,455 B2 10/2015 Desai et al.
2006/0263434 A1 11/2006 Desai et al.
2007/0082838 A1 4/2007 De et al.
2007/0166388 A1 7/2007 Desai et al.
2010/0048499 A1 2/2010 Desai et al.
2010/0310507 A1* 12/2010 Trieu et al. 424/85.2
2011/0118342 A1 5/2011 De et al.
2011/0151012 A1 6/2011 Desai et al.
2012/0070502 A1 3/2012 Desai et al.
2012/0076862 A1 3/2012 Desai et al.
2012/0128732 A1 5/2012 Trieu et al.
2012/0189701 A1 7/2012 Desai et al.
2012/0283205 A1 11/2012 Desai et al.
2012/0308612 A1 12/2012 De et al.
2013/0005678 A1 1/2013 Sandvold et al.

(Continued)

FOREIGN PATENT DOCUMENTS

AU 2012201568 A1 3/2012
WO WO-94/18954 A1 9/1994

(Continued)

OTHER PUBLICATIONS

US 8,968,752, 03/2015, Desai et al. (withdrawn)
Altmayer, P. et al. (Oct. 1995). "Propofol Binding to Human Blood Proteins," *Arzneimittelforschung/Drug Research* 45(II):1053-1056.
Carter, D.C. et al. (1994). "Structure of Serum Albumin," *Adv. Protein Chem.* 45:153-203.
Curry, S. et al. (Sep. 1998). "Crystal Structure of Human Serum Albumin Complexed With Fatty Acid Reveals an Asymmetric Distribution of Binding Sites," *Natl. Struct. Biol.* 5(9):827-835.
Eisenhauer, E.A. et al. (Jan. 2009). "New Response Evaluation Criteria in Solid Tumours: Revised RECIST Guideline (Version 1.1)," *Eur. J. Cancer* 45(2):228-247.

(Continued)

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(57) **ABSTRACT**

Provided herein are methods for the treatment of metastatic pancreatic cancer comprising administration of a composition comprising nanoparticles comprising a taxane (such as paclitaxel) and a carrier protein in combination with gemcitabine.

34 Claims, 8 Drawing Sheets