

Title (en)  
MANUFACTURING MULTI-DOSE INJECTION READY DENDRITIC CELL VACCINES

Title (de)  
HERSTELLUNG VON INJEKTIONSFERTIGEN MEHRFACHDOSIS-IMPFUNGEN AUS DENDRITISCHEN ZELLEN

Title (fr)  
FABRICATION DE VACCINS MULTIDOSES PRÊTS À INJECTER À BASE DE CELLULES DENDRITIQUES

Publication  
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Application  
**EP 16800434 A 20160305**

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Abstract (en)  
[origin: WO2016190940A1] The present embodiments relate to an FDA- approved injectable multi-dose antigen pulsed dendritic cell (DC) vaccine. In one embodiment, the activated antigen-loaded DC vaccine comprises an initial immunizing dose and multiple "booster"doses. Also provided is a method of blocking both HER-2 and HER-3 as a treatment in causing permanent tumor senescence in HER-2 expressing breast cancers. Also provided is combination anti-estrogen therapy and anti-HER2 dendritic cell vaccination for ERpos/HER2pos DCIS breast cancer patients.

IPC 8 full level  
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Citation (search report)  
• [Y] US 5846538 A 19981208 - CHEEVER MARTIN A [US], et al  
• [IDP] WO 2015139003 A1 20150917 - CZERNIECKI BRIAN J [US]  
• [YP] WO 2016011347 A1 20160121 - UNIV PENNSYLVANIA [US], et al  
• [E] WO 2016153761 A1 20160929 - CZERNIECKI BRIAN J [US]  
• [E] WO 2016154508 A1 20160929 - UNIV PENNSYLVANIA [US]  
• [E] WO 2016154625 A1 20160929 - CZERNIECKI BRIAN J [US]  
• [X] B. J. CZERNIECKI ET AL: "Targeting HER-2/neu in Early Breast Cancer Development Using Dendritic Cells with Staged Interleukin-12 Burst Secretion", CANCER RESEARCH, vol. 67, no. 4, 15 February 2007 (2007-02-15), & 102ND ANNUAL MEETING OF THE AMERICAN ASSOCIATION-FOR-CANCER-RESEARCH (AACR); ORLANDO, FL, USA; APRIL 02 -06, 2011, pages 1842 - 1852, XP055269484, ISSN: 0008-5472, DOI: 10.1158/0008-5472.CAN-06-4038  
• [Y] MITTENDORF E A: "HER-2 Pulsed Dendritic Cell Vaccine Can Eliminate HER-2 Expression and Impact Ductal Carcinoma In Situ Sharma A, Koldovsky U, Xu S, et al (Rena Rowan Breast Ctr, Philadelphia, PA; et al)Cancer118:4354-4362, 2012\$", BREAST DISEASES: A YEAR BOOK QUARTERLY, MOSBY, ST. LOUIS, MO, US, vol. 24, no. 1, 15 March 2013 (2013-03-15), pages 55 - 56, XP029001806, ISSN: 1043-321X, DOI: 10.1016/J.BREASTDIS.2013.01.029  
• [T] LEA LOWENFELD ET AL: "Dendritic Cell Vaccination Enhances Immune Responses and Induces Regression of HER2 pos DCIS Independent of Route: Results of Randomized Selection Design Trial", CLINICAL CANCER RESEARCH, vol. 23, no. 12, 15 June 2017 (2017-06-15), US, pages 2961 - 2971, XP055521767, ISSN: 1078-0432, DOI: 10.1158/1078-0432.CCR-16-1924  
• See also references of WO 2016190940A1

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