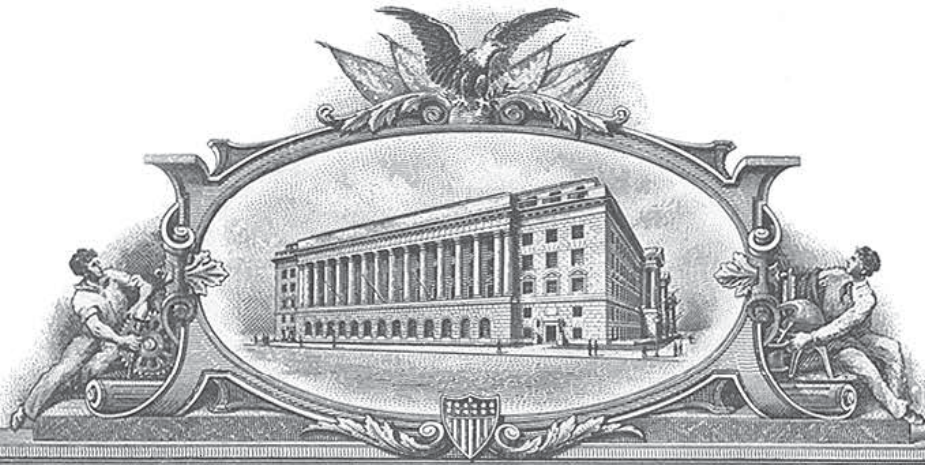


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APPLICATION NUMBER: *13/938,923*
FILING DATE: *July 10, 2013*
PATENT NUMBER: *8911993*
ISSUE DATE: *December 16, 2014*



Certified by

Under Secretary of Commerce
for Intellectual Property
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In re Application of: Carl H. June et al.	Confirmation No.: 9898
Application No.: 13/938,923	Group Art Unit: 1633
Filed: July 10, 2013	Examiner: Burkhart, Michael D.
Title: Compositions for Treatment of Cancer	Attorney Docket No. 046483-6001US2 (00169)

AMENDMENT

This Amendment responds to the final Office Action dated March 28, 2014, sent in connection with the above-identified application.

A Petition for a three month extension of time and associated fee is included herewith which extends the time for the response to the Office Action through and to September 28, 2014.

A Request for Continued Examination (RCE) and associated fee is being filed simultaneously herewith.

A Certification and Request for Prioritized Examination under 37 C.F.R. 1.102(e) (Track I) and associated fee is being filed simultaneously herewith.

A Supplemental Information Disclosure Statement and Form 1449 is being filed simultaneously herewith.

A Request for Examiner Interview in person at the USPTO with the Examiner and his Supervising Examiner, is being filed simultaneously herewith.

A Declaration of Dr. Carl June is being filed simultaneously herewith.

U.S. Application No. 13/938,923
Amendment in response to final Office Action dated March 28, 2014

Please charge the any underpayment of fee, or credit any overpayment, to Deposit
Account No. 50-4364.

Amendments to the claims begin on page 3 of this paper.

Remarks begin on page 6 on this paper.

In the Claims:

The listing of the claims will replace all prior versions, and listings, of claims in the application.

1 to 89. (canceled)

90. (currently amended) A pharmaceutical composition comprising an anti-tumor effective amount of a population of ~~modified autologous~~ human T cells, wherein the T cells comprise a nucleic acid sequence that encodes a chimeric antigen receptor (CAR), wherein the CAR comprises a CD19 antigen binding domain comprising the amino acid sequence of SEQ ID NO: 20, a CD8 α hinge domain, a CD8 α transmembrane domain, a 4-1BB costimulatory signaling region, and a CD3 zeta signaling domain comprising the amino acid sequence of SEQ ID NO:24, ~~wherein the anti-tumor effective amount of T cells is 10^4 to 10^9 cells per kg body weight of a human in need of such cells~~, wherein the T cells are T cells of a human having a cancer.

91. (canceled)

92. (currently amended) The composition of claim 90, wherein the anti-tumor effective amount of T cells is 10^4 to 10^9 ~~10^5 to 10^6~~ cells per kg body weight of ~~the a~~ a human in need of such cells.

93 to 95. (canceled)

97. (previously presented) The composition of claim 90, wherein the CD8 α transmembrane domain comprises the amino acid sequence of SEQ ID NO: 22.

98. (previously presented) The composition of claim 90, wherein the CD8 α hinge domain comprises the amino acid sequence of SEQ ID NO: 21.

99. (previously presented) The composition of claim 90, wherein the 4-1BB costimulatory signaling region comprises the amino acid sequence of SEQ ID NO: 23.

100. (canceled)

101. (currently amended) The composition of claim [[96]] 90, wherein the ~~scFv~~ CD19 antigen binding domain is encoded by a nucleic acid sequence comprising SEQ ID NO: 14.

102. (previously presented) The composition of claim 97, wherein the CD8 α transmembrane domain is encoded by a nucleic acid sequence comprising SEQ ID NO: 16.

103. (previously presented) The composition of claim 98, wherein the CD8 α hinge domain is encoded by a nucleic acid sequence comprising SEQ ID NO: 15.

104. (previously presented) The composition of claim 99, wherein the 4-1BB costimulatory signaling region is encoded by a nucleic acid sequence comprising SEQ ID NO: 17.

105. (currently amended) The composition of claim [[100]] 90, wherein the CD3 zeta signaling domain is encoded by a nucleic acid sequence comprising SEQ ID NO: 18.

106. (new) The composition of claim 97, wherein the 4-1BB costimulatory signaling region comprises the amino acid sequence of SEQ ID NO:23.

107. (new) The composition of claim 106, wherein the 4-1BB costimulatory signaling region of the CAR is encoded by a nucleic acid sequence comprising SEQ ID NO:17.

108. (new) The composition of claim 98, wherein the 4-1BB costimulatory signaling region comprises the amino acid sequence of SEQ ID NO:23.

109. (new) The composition of claim 108, wherein the 4-1BB costimulatory signaling region is encoded by a nucleic acid sequence comprising SEQ ID NO:17.

110. (new) A pharmaceutical composition comprising an anti-tumor effective amount of a population of human T cells, wherein the T cells comprise a nucleic acid sequence that encodes a

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