# BCMA-DIRECTED CELLULAR IMMUNOTHERAPY COMPOSITIONS AND METHODS


## ABSTRACT

Provided for herein in several embodiments are anti-BCMA binding moieties. These anti-BCMA binding moieties may be used in BCMA-directed chimeric antigen receptors (CARs). Also disclosed herein are immune cell-based compositions comprising the anti-BCMA binding moieties and BCMA-directed CARs. In several embodiments, the immune-cell based compositions also target an additional tumor marker and/or an additional epitope of BCMA. In several embodiments, the BCMA-directed CAR is expressed in a Natural Killer cell. In several embodiments, combinations of BCMA-CAR-expressing NK cells are administered in conjunction with, for example CAR-expressing NK cells and/or CAR-expressing T cells that are directed to an additional cancer marker and/or an additional epitope of BCMA. Also provided for herein are methods and uses of the chimeric antigen receptors in immunotherapy.


Fig. 6A