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(71) Applicant: **ARCELLX, INC.** [US/US]; 25 West Watkins Mill Road, Suite A, Gaithersburg, MD 20878 (US).

(72) Inventor: **HILBERT, David, M.**; c/o of Arcellx, Inc., 25 West Watkins Mill Road, Suite A, Gaithersburg, MD 20878 (US).

(74) Agent: **GASZNER, Miklos**; Nixon & Vanderhye P.C., 901 North Glebe Road, 11th Floor, Arlington, VA 22203-1808 (US).

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(54) Title: MULTIFUNCTIONAL IMMUNE CELL THERAPIES

(57) Abstract: Provided herein are multi-functional chimeric antigen receptor (CAR)-based compositions and their use in directing immune responses to target cells. The compositions have uses that include treating hyperproliferative disorders such as cancer. The provided methods generally include the use of a CAR cell in combination with an Adapter. The Adapter confers the ability to modulate, alter, and/or redirect CAR cell- mediated immune response *in vitro* and *in vivo*. In some embodiments, the CAR cell comprises a genetic modification to reduce or eliminate the expression of a targeted antigenic determinant.

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