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(54) Title: CYTOTOXIC INNATE LYMPHOID CELL AND USES THEREOF

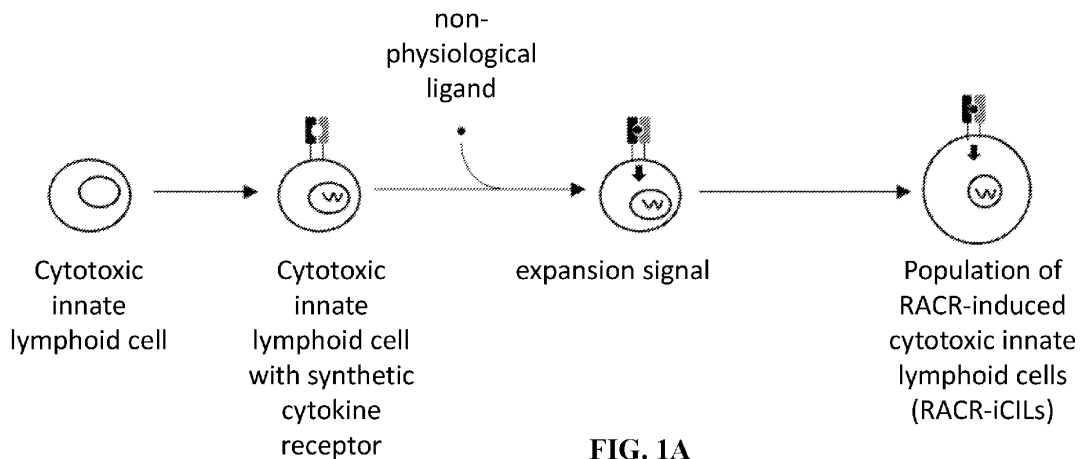


FIG. 1A

(57) **Abstract:** Provided are compositions and methods for a cell population comprising engineered cytotoxic innate lymphoid cells engineered for controlled expansion and/or activity, the engineered cytotoxic innate lymphoid cells comprising a synthetic cytokine receptor for a non-physiological ligand. The cytokine receptor may comprise a synthetic gamma chain polypeptide as a first dimerization domain, a first transmembrane domain, and an interleukin-2 receptor subunit gamma (IL-2RG) intracellular domain and a synthetic beta chain polypeptide as a second dimerization domain, a second transmembrane domain, and an intracellular domain selected from an interleukin-2 receptor subunit beta (IL-2RB) intracellular domain, an interleukin-7 receptor subunit beta (IL-7RB) intracellular domain, and/or an interleukin-21 receptor subunit beta (IL-21RB) intracellular domain. The non-physiological ligand activates the synthetic cytokine receptor in the cytotoxic innate lymphoid cells to induce expansion and/or activation of the engineered cytotoxic innate lymphoid cells.

[Continued on next page]

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