CLAIMS

1. A method of assaying the potency of a therapeutic natural killer (NK) cell, comprising (i) contacting the therapeutic NK cell with an effective amount of an exosome, (ii) detecting the amount of a cytokine produced by the therapeutic NK cell of step (i), (iii) comparing the amount of cytokine produced by the therapeutic NK cell of step (i) to a control amount of cytokine for use of a therapeutic NK cell in immunotherapy, thereby showing the effector function of the therapeutic NK cell; and (iv) selecting a potent therapeutic NK cell of step (iii) based on the amount of cytokine detected in step (ii), wherein the exosomes are purified from K562 cells that stimulate NK cells, wherein the therapeutic NK cell is contacted with an effective amount of the exosome for at least 4 hours, and wherein the exosome is provided at a concentration of 50 μg/mL to 400 μg/mL.

2. The method of claim 1, wherein the amount of a plurality of cytokines is determined.

3. The method of claim 1, wherein the exosome is a K562 cell exosome.

4. The method of claim 1, wherein the amount of cytokine is detected using an immunoassay.

5. The method of claim 1, wherein the cytokine is selected from the group comprising interleukin (IL)-2 (IL-2), IL-6, interferon (IFN)-γ (IFN-γ), B cell activating factor/ tumor necrosis factor (TNF) ligand superfamily member 13B (BAFF/TNFSF13B), TNF-α, cluster of differentiation (CD) 163 (CD163), CD30/TNFRSF8, Chitinase 3-like 1, gp130, IFN-a2, IL-6Ra, IL-8, IL-10, IL-11, IL-12(p40), IL-12(p70), IL-20, IL-22, IL-26, IL-29/IFN-l1, IL-32, IL-34, IL-35, matrix metalloproteinase-1 (MMP-1), Osteocalcin, Osteopontin (OPN), Pentraxin-3, tumor necrosis factor (TNF)- receptor 1 (TNF-R1), TNF-R2, thymic stromal lymphopoetin (TSLP), granulocyte-macrophage colony-stimulating factor (GM-CSF), leukemia inhibitory factor (LIF), and the chemokines macrophage inflammatory protein (MIP) -1α (MIP-1α), MIP-1β, RANTES, and/or TNF-related weak inducer of apoptosis (TWEAK)/TNF superfamily member 12 (TWEAK/TNFSF12).

6. The method of claim 1, wherein the therapeutic NK cell is contacted with an effective amount of the exosome for 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 30, 32, 36, 42, 48, or 60 hours.

7. The method of claim 1, wherein the exosome is provided at a concentration of 50 μg/mL, 100 μg/mL, 200 μg/mL, or 400 μg/mL.

8. A method comprising;

a. performing the method of any of claims 1-7 *ex vivo* or *in vitro* on multiple therapeutic natural killer (NK) cells, wherein the method comprises contacting the multiple therapeutic NK cells with an exosome and detecting an amount of cytokine produced by the multiple therapeutic NK cells;

b. comparing the amount of cytokine produced by the multiple therapeutic NK cells to a control amount of cytokine for use of a therapeutic NK cell in immunotherapy, thereby showing an effector function of the therapeutic NK cells of step a;

c. selecting potent therapeutic NK cells based on the amount of cytokine detected; and

d. preparing a therapeutically effective amount of the potent therapeutic NK cells suitable for administration to a subject in need thereof as an immunotherapeutic.

9. The method of claim 8, further comprising expanding at least one potent therapeutic NK cell prior to preparing a therapeutically effective amount of the potent therapeutic NK cell.

10. Use of at least one potent therapeutic NK cell selected by the method of any one of claims 1-7 for the manufacture of a medicament for treating, inhibiting, reducing, and/or ameliorating a cancer and/or metastasis in a subject.

11. The use according to claim 10, wherein the one therapeutic NK cells is to be obtained from an allogeneic or autologous donor.

12. The use according to any of claim 10 or 11, wherein the medicament comprises expanded potent therapeutic NK cells.

13. The method of any one of claims 1, 4 or 5, wherein the cytokine is selected from interferon (IFN)-γ (IFN-g) and IL-2.

14. The method of claim 1, wherein the exosome comprises IL-15, IL-21, and/or 4-1BBL on its membrane.