WHAT IS CLAIMED IS:

1. Use of ~~A method of treating an individual having acute myeloid leukemia by administering an effective amount of~~ a cell population comprising natural killer cells in the manufacture of a medicament for treating an individual having acute myeloid leukemia, wherein the cell population comprising natural killer cells is produced by a method comprising the steps of:

(a) culturing hematopoietic stem or progenitor cells in a first medium comprising a stem cell mobilizing agent and thrombopoietin (Tpo) to produce a first population of cells;

(b) culturing the first population of cells in a second medium comprising a stem cell mobilizing agent and interleukin-15 (IL-15), and lacking Tpo, to produce a second population of cells; and

(c) culturing the second population of cells in a third medium comprising IL-2 and IL-15, and lacking a stem cell mobilizing agent and LMWH, to produce a third population of cells;

wherein the third population of cells comprises natural killer cells that are CD56+, CD3-, CD16– or CD16+, and CD94+ or CD94-, and wherein at least 80% of the natural killer cells are viable;

wherein the cell population comprising natural killer cells is to be administered to the indivisual in combination with an effective amount of IL-2~~method of treatment additionally comprises administering to the patient an effective amount of IL-2~~.

2. Use of a cell population comprising natural killer cells in the manufacture of a medicament for ~~A method of~~ treating an individual having multiple myeloma ~~by administering an effective amount of a cell population comprising natural killer cells~~, wherein the cell population comprising natural killer cells is produced by a method comprising the steps of:

(a) culturing hematopoietic stem or progenitor cells in a first medium comprising a stem cell mobilizing agent and thrombopoietin (Tpo) to produce a first population of cells;

(b) culturing the first population of cells in a second medium comprising a stem cell mobilizing agent and interleukin-15 (IL-15), and lacking Tpo, to produce a second population of cells; and

(c) culturing the second population of cells in a third medium comprising IL-2 and IL-15, and lacking a stem cell mobilizing agent and LMWH, to produce a third population of cells;

wherein the third population of cells comprises natural killer cells that are CD56+, CD3-, CD16– or CD16+, and CD94+ or CD94-, and wherein at least 80% of the natural killer cells are viable;

wherein the ~~method of treatment additionally comprises administering to the patient~~ cell population comprising natural killer cells is to be administered to the individual in combination with an effective amount of IL-2.

~~3. The method of claim 1 or 2, wherein the effective amount of IL-2 is an effective amount of recombinant human IL-2 (rhIL-2).~~

4~~3~~. The ~~method~~use of any one of claims 1-~~3~~2, wherein said hematopoietic stem cells are CD34+ hematopoietic stem cells, or ~~.~~

~~5. The method of any one of claims 1-4,~~ wherein said hematopoietic stem cells are placental hematopoietic stem cells.

6~~4~~. The ~~method~~use of claim ~~5~~3, wherein said placental hematopoietic stem cells are obtained from, or obtainable from, human placental perfusate, or ~~.~~

~~7. The method of claim 5,~~ wherein said placental hematopoietic stem cells are obtained from, or obtainable from, nucleated cells isolated from human placental perfusate.

~~8. The method of any one of claims 1-3, wherein said Tpo is present in the first medium at a concentration of from 1 ng/mL to 50 ng/mL.~~

~~9. The method of claim 8, wherein said Tpo is present in the first medium at a concentration of from 20 ng/mL to 30 ng/mL.~~

~~10. The method of claim 8, wherein said Tpo is present in the first medium at a concentration of about 25 ng/mL.~~

~~11. The method of any one of claims 1-3, wherein said IL-15 is present in said second medium at a concentration of from 1 ng/mL to 50 ng/mL.~~

~~12. The method of any one of claims 1-3, wherein said IL-15 is present in said second medium at a concentration of from 10 ng/mL to 30 ng/mL.~~

~~13. The method of any one of claims 1-3, wherein said IL-15 is present in said second medium at a concentration of about 20 ng/mL.~~

~~14. The method of any one of claims 1-3, wherein said IL-2 is present in said third medium at a concentration of from 10 U/mL to 10,000 U/mL and said IL-15 is present in said third medium at a concentration of from 1 ng/mL to 50 ng/mL.~~

~~15. The method of any one of claims 1-3, wherein said IL-2 is present in said third medium at a concentration of from 300 U/mL to 3,000 U/mL and said IL-15 is present in said third medium at a concentration of from 10 ng/mL to 30 ng/mL.~~

~~16. The method of any one of claims 1-3, wherein said IL-2 is present in said third medium at a concentration of about 1,000 U/mL and said IL-15 is present in said third medium at a concentration of about 20 ng/mL.~~

~~17. The method of any of claims 1-16, wherein said Tpo, IL-2, and IL-15 are not comprised within an undefined component of the first medium, second medium or third medium.~~

~~18. The method of any of claims 1-16, wherein said Tpo, IL-2, and IL-15 are not comprised within serum.~~

~~19~~5. The ~~method~~use of any of claims 1-~~16~~4, wherein said stem cell mobilizing agent is an aryl hydrocarbon receptor inhibitor.

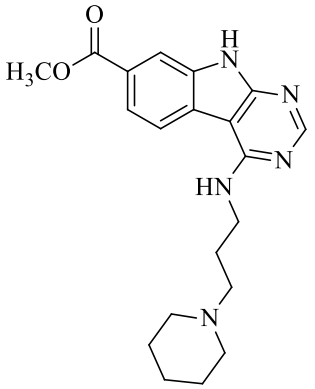
~~20~~6. The ~~method~~use of claim ~~19~~5, wherein said aryl hydrocarbon receptor inhibitor is StemRegenin-1 (SR-1) (4-(2-(2-(benzo[b]thiophen-3-yl)-9-isopropyl-9H-purin- 6-ylamino)ethyl)phenol)~~,~~ .

~~21. The method of claim 19,~~ wherein said aryl hydrocarbon receptor inhibitor is resveratrol~~,~~.

~~22. The method of claim 19,~~ wherein said aryl hydrocarbon receptor inhibitor is the compound CH223191 (1-Methyl-N-[2-methyl-4-[2-(2-methylphenyl)diazenyl]phenyl-1H-pyrazole-5-carboxamide].

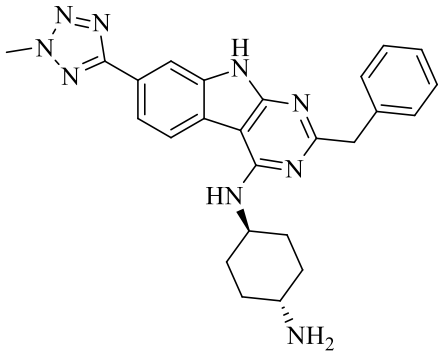
~~23~~7. The ~~method~~use of any claims 1-~~18~~6, wherein the stem cell mobilizing agent is a pyrimido(4,5-b)indole derivative, preferably~~.~~

~~24. The method of claim 24~~, wherein said pyrimido(4,5-b)indole derivative has the chemical structure



(UM729).

~~25~~8. The ~~method~~use of claim ~~24~~7, wherein said pyrimido(4,5-b)indole derivative has the chemical structure



(UM171).

~~26~~9. The ~~method~~use of any of claims 1-~~25~~8, wherein said first medium additionally comprises one or more of Low Molecular Weight Heparin (LMWH), Flt-3 Ligand (Flt-3L), stem cell factor (SCF), IL-6, IL-7, granulocyte colony-stimulating factor (G-CSF), or granulocyte-macrophage-stimulating factor (GM-CSF), or ~~.~~

~~27. The method of claim 26,~~ wherein said first medium comprises each of LMWH, Flt-3L, SCF, IL-6, IL-7, G-CSF, and GM-CSF.

~~28. The method of claim 26 or claim 27, wherein in the first medium the LMWH is present at a concentration of from 1U/mL to 10U/mL; the Flt-3L is present at a concentration of from 1 ng/mL to 50 ng/mL; the SCF is present at a concentration of from 1 ng/mL to 50 ng/mL; the IL-6 is present at a concentration of from 0.01 ng/mL to 0.1 ng/mL; the IL-7 is present at a concentration of from 1 ng/mL to 50 ng/mL; the G-CSF is present at a concentration of from 0.01 ng/mL to 0.50 ng/mL; and the GM-CSF is present at a concentration of from 0.005 ng/mL to 0.1 ng/mL.~~

~~29. The method of claim 26 or claim 27, wherein in the first medium the LMWH is present in the first medium at a concentration of from 4U/mL to 5U/mL; the Flt-3L is present at a concentration of from 20 ng/mL to 30 ng/mL; the SCF is present at a concentration of from 20 ng/mL to 30 ng/mL; the IL-6 is present at a concentration of from 0.04 ng/mL to 0.06 ng/mL; the IL-7 is present at a concentration of from 20 ng/mL to 30 ng/mL; the G-CSF is present at a concentration of from 0.20 ng/mL to 0.30 ng/mL; and the GM-CSF is present at a concentration of from 0.005 ng/mL to 0.5 ng/mL.~~

~~30. The method of claim 26 or claim 27, wherein in the first medium the LMWH is present in the first medium at a concentration of about 4.5U/mL; the Flt-3L is present at a concentration of about 25 ng/mL; the SCF is present at a concentration of about 27 ng/mL; the IL-6 is present at a concentration of about 0.05 ng/mL; the IL-7 is present at a concentration of about 25 ng/mL; the G-CSF is present at a concentration of about .25 ng/mL; and the GM-CSF is present at a concentration of about 0.01 ng/mL.~~

~~31~~10. The ~~method~~use of any of claims 1-~~30~~9, wherein said second medium additionally comprises one or more of LMWH, Flt-3, SCF, IL-6, IL-7, G-CSF, and GM-CSF, or~~.~~

~~32. The method of any of claims 1-31,~~ wherein said second medium additionally comprises each of LMWH, Flt-3, SCF, IL-6, IL-7, G-CSF, and GM-CSF.

~~33. The method of claim 31 or claim 32, wherein in the second medium the LMWH is present at a concentration of from 1U/mL to 10U/mL; the Flt-3L is present at a concentration of from 1 ng/mL to 50 ng/mL; the SCF is present at a concentration of from 1 ng/mL to 50 ng/mL; the IL-6 is present at a concentration of from 0.01 ng/mL to 0.1 ng/mL; the IL-7 is present at a concentration of from 1 ng/mL to 50 ng/mL; the G-CSF is present at a concentration of from 0.01 ng/mL to 0.50 ng/mL; and the GM-CSF is present at a concentration of from 0.005 ng/mL to 0.1 ng/mL.~~

~~34. The method of claim 31 or claim 32, wherein in the second medium the LMWH is present in the second medium at a concentration of from 4U/mL to 5U/mL; the Flt-3L is present at a concentration of from 20 ng/mL to 30 ng/mL; the SCF is present at a concentration of from 20 ng/mL to 30 ng/mL; the IL-6 is present at a concentration of from 0.04 ng/mL to 0.06 ng/mL; the IL-7 is present at a concentration of from 20 ng/mL to 30 ng/mL; the G-CSF is present at a concentration of from 0.20 ng/mL to 0.30 ng/mL; and the GM-CSF is present at a concentration of from 0.005 ng/mL to 0.5 ng/mL.~~

~~35. The method of claim 31 or claim 32, wherein in the second medium the LMWH is present in the second medium at a concentration of about 4.5U/mL; the Flt-3L is present at a concentration of about 25 ng/mL; the SCF is present at a concentration of about 27 ng/mL; the IL-6 is present at a concentration of about 0.05 ng/mL; the IL-7 is present at a concentration of about 25 ng/mL; the G-CSF is present at a concentration of about 0.25 ng/mL; and the GM-CSF is present at a concentration of about 0.01 ng/mL.~~

~~36~~11. The ~~method~~use of any of claims 1-~~35~~10, wherein said third medium additionally comprises one or more of SCF, IL-6, IL-7, G-CSF, or GM-CSF, or ~~.~~

~~37. The method of claim 36,~~ wherein said third medium comprises each of SCF, IL-6, IL-7, G-CSF, and GM-CSF.

~~38. The method of claim 36 or claim 37, wherein in the third medium the SCF is present at a concentration of from 1 ng/mL to 50 ng/mL; the IL-6 is present at a concentration of from 0.01 ng/mL to 0.1 ng/mL; the IL-7 is present at a concentration of from 1 ng/mL to 50 ng/mL; the G-CSF is present at a concentration of from 0.01 ng/mL to 0.50 ng/mL; and the GM-CSF is present at a concentration of from 0.005 ng/mL to 0.1 ng/mL.~~

~~39. The method of claim 36 or claim 37, wherein in the third medium the SCF is present at a concentration of from 20 ng/mL to 30 ng/mL; the IL-6 is present at a concentration of from 0.04 ng/mL to 0.06 ng/mL; the IL-7 is present at a concentration of from 20 ng/mL to 30 ng/mL; the G-CSF is present at a concentration of from 0.20 ng/mL to 0.30 ng/mL; and the GM-CSF is present at a concentration of from 0.005 ng/mL to 0.5 ng/mL.~~

~~40. The method of claim 36 or claim 37, wherein in the third medium the SCF is present at a concentration of about 22 ng/mL; the IL-6 is present at a concentration of about 0.05 ng/mL; the IL-7 is present at a concentration of about 20 ng/mL; the G-CSF is present at a concentration of about 0.25 ng/mL; and the GM-CSF is present at a concentration of about 0.01 ng/mL.~~

~~41~~12. The ~~method~~use of any of claims ~~26~~9-~~40~~11, wherein said LMWH, Flt-3, SCF, IL-6, IL-7, G-CSF, and/or GM-CSF are not comprised within an undefined component of the first medium, second medium or third medium, or~~.~~

~~42. The method of any of claims 26-40,~~ wherein said LMWH, Flt-3, SCF, IL-6, IL-7, G-CSF, and/or GM-CSF are not comprised within serum.

~~43~~13. The ~~method~~use of any of claims 1-~~42~~12, wherein any of said first medium, second medium or third medium comprises human serum-AB~~.~~

~~44. The method of claim 43, wherein any of said first medium, second medium or third medium comprises 1% to 20% human serum AB.~~

~~45. The method of claim 43, wherein any of said first medium, second medium or third medium comprises 5% to 15% human serum AB.~~

~~46. The method of claim 43, wherein any of said first medium, second medium or third medium comprises about 10% human serum AB.~~

~~47. The method of any of claims 1-46~~, wherein any of said first medium, second medium or third medium comprises 2-mercaptoethanol~~.~~

~~48. The method of any of claims 1-46~~, or wherein any of said first medium, second medium or third medium comprises gentamycin.

~~49~~14. The ~~method~~use of any of claims 1-~~48~~13, wherein said method comprises culturing the hematopoietic stem cells in the first medium for 7-13 days~~.~~

~~50. The method of claim 49~~, wherein said method comprises culturing the hematopoietic stem cells in the first medium for 8-12 days~~.~~

~~51. The method of claim 49~~, or wherein said method comprises culturing the hematopoietic stem cells in the first medium for about 10 days.

~~52~~15. The ~~method~~use of any of claims 1-~~48~~13, wherein said method comprises culturing said first population of cells in said second medium for 2-6 days~~.~~

~~53. The method of any of claims 1-48~~, wherein said method comprises culturing said first population of cells in said second medium for 3-5 days~~.~~

~~54. The method of any of claims 1-48~~, or wherein said method comprises culturing said first population of cells in said second medium for about 4 days.

~~55~~16. The ~~method~~use of any of claims 1-~~48~~13, wherein said method comprises culturing said second population of cells in said third medium for 10-30 days~~.~~

~~56. The method of any of claims 1-48~~, wherein said method comprises culturing said second population of cells in said third medium for 15-25 days~~.~~

~~57. The method of any of claims 1-48~~, or wherein said method comprises culturing said second population of cells in said third medium for about 21 days.

~~58. The method of any of claims 1-48, wherein said culturing in said first medium, second medium and third medium are all done under static culture conditions.~~

~~59. The method of any of claims 1-48, wherein said culturing in at least one of said first medium, second medium or third medium are done in a spinner flask.~~

~~60. The method of any of claims 1-48, wherein said culturing in said first medium and said second medium is done under static culture conditions, and said culturing in said third medium is done in a spinner flask.~~

~~61. The method of any of claims 1-60, wherein said hematopoietic cells are initially inoculated into said first medium from 1 x 10^4 to 1 x 10^5 cells/mL.~~

~~62. The method of claim 61, wherein said hematopoietic cells are initially inoculated into said first medium at about 3 x 10^4 cells/mL.~~

~~63. The method of any of claims 1-60, wherein said first population of cells are initially inoculated into said second medium from 5 x 10^4 to 5 x 10^5 cells/mL.~~

~~64. The method of any of claim 63, wherein said first population of cells is initially inoculated into said second medium at about 1 x 10^5 cells/mL.~~

~~65. The method of any of claims 1-60, wherein said second population of cells is initially inoculated into said third medium from 1 x 10^5 to 5 x 10^6 cells/mL.~~

~~66. The method of claim 65, wherein said second population of cells is initially inoculated into said third medium from 1 x 10^5 to 1 x 10^6 cells/mL.~~

~~67. The method of claim 65, wherein said second population of cells is initially inoculated into said third medium at about 5 x 10^5 cells/mL.~~

~~68. The method of claim 65, wherein said second population of cells is initially inoculated into said third medium at about 3 x 10^5 cells/mL.~~

~~69. The method of any of claims 1-68, wherein said method produces at least 5000-fold more natural killer cells as compared to the number of hematopoietic stem cells initially inoculated into said first medium.~~

~~70. The method of claim 69, wherein said method produces at least 10,000-fold more natural killer cells.~~

~~71. The method of claim 69, wherein said method produces at least 50,000-fold more natural killer cells.~~

~~72. The method of claim 69, wherein said method produces at least 75,000-fold more natural killer cells.~~

~~73~~17. The ~~method~~use of any of claims 1-~~68~~16, wherein said method produces natural killer cells that comprise at least 20% CD56+CD3– natural killer cells~~.~~

~~74. The method of any of claims 1-68~~, wherein said method produces natural killer cells that comprise at least 40% CD56+CD3– natural killer cells~~.~~

~~75. The method of any of claims 1-68~~, wherein said method produces natural killer cells that comprise at least 60% CD56+CD3– natural killer cells~~.~~

~~76. The method of any of claims 1-68~~, or wherein said method produces natural killer cells that comprise at least 80% CD56+CD3– natural killer cells.

~~77. The method of any of claims 1-68, wherein said natural killer cells exhibit at least 20% cytotoxicity against K562 cells when said natural killer cells and said K562 cells are co-cultured in vitro at a ratio of 10:1.~~

~~78. The method of claim 77, wherein said natural killer cells exhibit at least 35% cytotoxicity against the K562 cells.~~

~~79. The method of claim 77, wherein said natural killer cells exhibit at least 45% cytotoxicity against the K562 cells.~~

~~80. The method of claim 77, wherein said natural killer cells exhibit at least 60% cytotoxicity against the K562 cells.~~

~~81. The method of claim 77, wherein said natural killer cells exhibit at least 75% cytotoxicity against the K562 cells.~~

~~82. The method of any of claims 1-81, wherein viability of said natural killer cells is determined by 7-aminoactinomycin D (7AAD) staining.~~

~~83. The method of any of claims 1-81, wherein viability of said natural killer cells is determined by annexin-V staining.~~

~~84. The method of any of claims 1-81, wherein viability of said natural killer cells is determined by both 7-AAD staining and annexin-V staining.~~

~~85. The method of any of claims 1-81, wherein viability of said natural killer cells is determined by trypan blue staining.~~

~~86~~18. The ~~method~~use of any of claims 1-~~81~~17, additionally comprising cryopreserving said population of cells after step (c)~~.~~

~~87. The method of any of claims 1-81~~, additionally comprising cryopreserving said natural killer cells after step (c)~~.~~

~~88. The method of any one of claims 1-87, wherein said individual has relapsed/refractory acute myeloid leukemia.~~

~~89. The method of any one of claims 1-87, wherein said individual has acute myeloid leukemia that has failed at least one non-natural killer cell therapeutic against acute myeloid leukemia.~~

~~90. The method of any one of claims 1-87, wherein said individual is 65 years old or greater, and is in first remission.~~

~~91. The method of any one of claims 1-87, wherein said individual has been conditioned with fludarabine, cytarabine, or both prior to administering said natural killer cells.~~

~~92. The method of any one of claims 1-91~~, or wherein said natural killer cells have been cryopreserved prior to said contacting or said administering.

~~93. The method of any one of claims 1-91, wherein said natural killer cells have not been cryopreserved prior to said contacting or said administering.~~

~~94. The method of any one of claims 1-92, wherein said IL-2 is administered subcutaneously.~~

~~95. The method of any one of claims 1-94, wherein said IL-2 is administered at a dose of 6 million units every other day for a total of 6 doses.~~

~~96. The method of any one of claims 1-95, wherein acetaminophen and/or diphenhydramine is administered to said individual before said administration of IL-2 to said individual, after said administration of IL-2 to said individual, or both before and after said administration of IL-2 to said individual.~~

~~97. The method of any one of claims 1-96, wherein said individual is administered about 1 x 10^6, 3 x 10^6, 10 x 10^6, or 30 x 10^6 natural killer cells per kilogram of the individual.~~

~~98. The method of any one of claims 1-97, wherein said individual has been conditioned with fludarabine, cyclophosphamide, or both, prior to administering said natural killer cells.~~

~~99. A method of suppressing the proliferation of acute myeloid leukemia cells comprising contacting the acute myeloid leukemia cells with a plurality of natural killer cells, wherein the natural killer cells are by a method comprising the steps of:~~

~~(d) culturing hematopoietic stem or progenitor cells in a first medium comprising a stem cell mobilizing agent and thrombopoietin (Tpo) to produce a first population of cells;~~

(e) culturing the first population of cells in a second medium comprising a stem cell mobilizing agent and interleukin-15 (IL-15), and lacking Tpo, to produce a second population of cells; and

(f) culturing the second population of cells in a third medium comprising IL-2 and IL-15, and lacking a stem cell mobilizing agent and LMWH, to produce a third population of cells;

wherein the third population of cells comprises natural killer cells that are CD56+, CD3-, CD16- or CD16+, and CD94+ or CD94-, and wherein at least 80% of the natural killer cells are viable;

wherein said method of suppressing additionally comprises contacting the acute myeloid leukemia cells with IL-2.

100. The method of claim 99, additionally wherein the IL-2 used in said contacting of the acute myeloid leukemia cells is rhIL-2.

101. The method of claim 99, wherein said contacting takes place in vitro.

102. The method of claim 99, wherein said contacting takes place in vivo.

103. The method of claim 102, wherein said contacting takes place in a human individual.

104. The method of claim 103, wherein said method comprises administering said natural killer cells to said individual.

105. The method of claim 103, wherein said individual has relapsed/refractory AML.

106. The method of claim 103, wherein said individual has AML that has failed at least one non-natural killer cell therapeutic against AML.

107. The method of claim 103, wherein said individual is 65 years old or greater, and is in first remission.

108. The method of any of claims 103-107, wherein said individual has been conditioned with fludarabine, cytarabine, or both prior to administering said natural killer cells.

109. The method of any one of claims 103-108, wherein said IL-2 is administered subcutaneously to said individual.

110. The method of any one of claims 103-109, wherein said IL-2 is administered to said individual at a dose of 6 million units every other day for a total of 6 doses.

111. The method of any one of claims 103-110, wherein acetaminophen and/or diphenhydramine is administered to said individual before said administration of IL-2 to said

individual, after said administration of IL-2 to said individual, or both before and after said administration of IL-2 to said individual.

112. The method of any one of claims 103-111, wherein said individual is administered about 1×10^6, 3×10^6, 10×10^6, or 30×10^6 natural killer cells per kilogram of the individual.

113. The method of any one of claims 103-112, wherein said individual has been conditioned with fludarabine, cyclophosphamide, or both, prior to administering said natural killer cells.

114. The method of any of claims 99-113, wherein said natural killer cells have been cryopreserved prior to said contacting or said administering.

115. The method of any of claims 99-113, wherein said natural killer cells have not been cryopreserved prior to said contacting or said administering.

116. A method of suppressing the proliferation of multiple myeloma cells comprising contacting the multiple myeloma cells with a plurality of natural killer cells, wherein the natural killer cells are by a method comprising the steps of:

(g) culturing hematopoietic stem or progenitor cells in a first medium comprising a stem cell mobilizing agent and thrombopoietin (Tpo) to produce a first population of cells;

(h) culturing the first population of cells in a second medium comprising a stem cell mobilizing agent and interleukin-15 (IL-15), and lacking Tpo, to produce a second population of cells; and

(i) culturing the second population of cells in a third medium comprising IL-2 and IL-15, and lacking a stem cell mobilizing agent and LMWH, to produce a third population of cells;

wherein the third population of cells comprises natural killer cells that are CD56+, CD3-, CD16- or CD16+, and CD94+ or CD94-, and wherein at least 80% of the natural killer cells are viable;

wherein said method of suppressing additionally comprises contacting the multiple myeloma cells with IL-2.

117. The method of claim 116, additionally wherein the IL-2 used in said contacting of the multiple myeloma cells is rhIL-2.

118. The method of claim 116, wherein said contacting takes place in vitro.

119. The method of claim 116, wherein said contacting takes place in vivo.

~~120. The method of claim 119, wherein said contacting takes place in a human individual.~~

~~121. The method of claim 120, wherein said method comprises administering said natural killer cells to said individual.~~

~~122. The method of claim 121, wherein said individual has received an autologous stem cell transplant.~~

~~123. The method of any one of claims 120-122, wherein said IL-2 is administered subcutaneously to said individual.~~

~~124. The method of any one of claims 120-123, wherein said IL-2 is administered to said individual at a dose of 6 million units every other day for a total of 6 doses.~~

~~125. The method of any one of claims 120-124, wherein acetaminophen and/or diphenhydramine is administered to said individual before said administration of IL-2 to said individual, after said administration of IL-2 to said individual, or both before and after said administration of IL-2 to said individual.~~

~~126. The method of any one of claims 120-125, wherein said individual is administered about 1×10^6, 3×10^6, 10×10^6, or 30×10^6 natural killer cells per kilogram of the individual.~~

~~127. The method of any one of claims 120-126, wherein said individual has received melphalan, prior to administering said natural killer cells.~~

~~128. The method of any of claims 116-127, wherein said natural killer cells have been cryopreserved prior to said contacting or said administering.~~

~~129. The method of any of claims 116-127, wherein said natural killer cells have not been cryopreserved prior to said contacting or said administering.~~