We claim:

1. A composition comprising a dendrimer complexed or covalently conjugated with one or more immunomodulatory agents in an amount effective to suppress or inhibit one or more immunosuppressive cells associated with a tumor in a subject in need thereof.

2. The composition of claim 1, wherein the dendrimer is a hydroxyl- terminated dendrimer, optionally wherein the dendrimer is a generation 4, generation 5, or generation 6 PAMAM dendrimer.

3. The composition of claim 1 or 2, wherein the immunomodulatory agents are one or more selected from the group consisting of STING agonists, CSF1R inhibitors, PARP inhibitors, VEGFR tyrosine kinase inhibitors, MEK inhibitors, glutaminase inhibitors, TIE II antagonists, CXCR2 inhibitors, CD73 inhibitors, arginase inhibitors, PI3K inhibitors, TLR4 agonists, TLR7 agonists, SHP2 inhibitors, cytotoxic agents, and combinations thereof.

4. The composition of claim 3, wherein the immunomodulatory agent is a STING agonist, optionally wherein the STING agonist is a cyclic dinucleotide GMP-AMP or DMXAA.

5. The composition of claim 3, wherein the immunomodulatory agent is a CSF1R inhibitor, optionally wherein the CSF1R inhibitor is selected from the group consisting of PLX3397, PLX108-01, ARRY-382, PLX7486, BLZ945, JNJ-40346527, and GW 2580.

6. The composition of claim 3, wherein the immunomodulatory agent is a PARP inhibitor, optionally wherein the PARP inhibitor is selected from the group consisting of Olaparib, Veliparib, Niraparib, and Rucaparib.

7. The composition of claim 3, wherein the immunomodulatory agent is a VEGFR tyrosine kinase inhibitor, optionally wherein the VEGFR tyrosine kinase inhibitor is selected from the group consisting of sunitinib, sorafenib, pazopanib, vandetanib, axitinib, cediranib, vatalanib, dasatinib, nintedanib, and motesanib.

8. The composition of claim 7, wherein the VEGFR tyrosine kinase inhibitor is sunitinib, or a derivative or didesethyl sunitinib.

9. The composition of claim 3, wherein the immunomodulatory agent is a MEK inhibitor, optionally wherein the MEK inhibitor is selected from the group consisting of Trametinib, Cobimetinib, Binimetinib, Selumetinib, PD325901, PD035901, PD032901, and TAK-733.

10. The composition of claim 3, wherein the immunomodulatory agent is a glutaminase inhibitor, optionally wherein the glutaminase inhibitor is selected from the group consisting of

Bis-2-(5-phenylacetimido-l,2,4- thiadiazol-2-yl)ethyl sulfide (BPTES), azaserine, acivicin, and CB-839.

11. The composition of claim 3, wherein the immunomodulatory agent is a TIE II antagonist.

12. The composition of claim 3, wherein the immunomodulatory agent is a CXCR2 inhibitor, optionally wherein the CXCR2 inhibitor is Navarixin, SB225002, or SB332235.

13. The composition of claim 3, wherein the immunomodulatory agent is a CD73 inhibitor, optionally wherein the CD73 inhibitor is APCP, quercetin, or tenofovir, or a derivative, analogue thereof.

14. The composition of claim 3, wherein the immunomodulatory agent is an arginase inhibitor, optionally wherein the arginase inhibitor is a derivative or analogue of 2-(S)-amino-6-boronohexanoic acid.

15. The composition of claim 3, wherein the immunomodulatory agent is a PI3K inhibitor, optionally wherein the PI3K inhibitor is alpelisib, serabelisib, pilaralisib, WX-037, dactolisib, prexasertib, voxtalisib, PX-866, ZSTK474, buparlisib, pictilisib, copanlisib, or a derivative, analogue thereof.

16. The composition of claim 3, wherein the immunomodulatory agent is a TLR4 agonist or a TLR7 agonist.

17. The composition of claim 3, wherein the immunomodulatory agent is a SHP2 inhibitor.

18. The composition of claim 3, wherein the immunomodulatory agent is a cytotoxic agent, optionally wherein the cytotoxic agent is Auristatin E or Mertansine.

19. The composition of any one of claims 1-18, wherein the immunomodulatory agent is covalently conjugated to the dendrimer, optionally wherein the immunomodulatory agent is covalently conjugated to the dendrimer via a linker or spacer moiety.

20. The composition of claim 19, wherein the linker or spacer moiety is bound to the dendrimer via a linkage selected from the group consisting of an ether, ester, and amide linkage.

21. The composition of claim 19 or 20, wherein the linker or spacer moiety is bound to the dendrimer via an ether linkage.

22. The composition of any one of claims 19-21, wherein the linker or spacer moiety is bound to the immunomodulatory agent via a linkage selected from the group consisting of an ether, ester, and amide linkage.

23. The composition of any one of claims 19-22, wherein the linker or spacer moiety is bound to the immunomodulatory agent via an amide or ether linkage.

24. The composition of any one of claims 1-23, wherein the dendrimer is further complexed or conjugated with one or more chemotherapeutic agents, optionally wherein the one or more chemotherapeutic agents are selected from the group consisting of amsacrine, bleomycin, busulfan, camptothecin, capecitabine, carboplatin, carmustine, chlorambucil, cisplatin, cladribine, clofarabine, crisantaspase, cyclophosphamide, cytarabine, dacarbazine, dactinomycin, daunorubicin, docetaxel, doxorubicin, epipodophyllo toxins, epirubicin, etoposide, etoposide phosphate, fludarabine, fluorouracil, gemcitabine, hydroxycarb amide, idarubicin, ifosfamide, innotecan, leucovorin, liposomal doxorubicin, liposomal daunorubicin, lomustine, mechlorethamine, melphalan, mercaptopurine, mesna, methotrexate, mitomycin, mitoxantrone, oxaliplatin, paclitaxel, pemetrexed, pentostatin, procarbazine, raltitrexed, satraplatin, streptozocin, tegafur-uracil, temozolomide, teniposide, thiotepa, tioguanine, topotecan, treosulfan, vinblastine, vincristine, vindesine, vinorelbine, vorinostat, taxol, trichostatin A and derivatives thereof, trastuzumab, cetuximab, rituximab, bevacizumab, and combinations thereof.

25. The composition of any one of claims 1-24, in an amount effective to suppress or inhibit the one or more immunosuppressive cells associated with a tumor in a subject in need thereof.

26. The composition of any one of claims 1-25, wherein the dendrimer is further complexed or conjugated with one or more diagnostic or labelling agents in an amount effective to diagnose or label the one or more immunosuppressive cells associated with a tumor in a subject in need thereof.

27. The composition of any one of claims 1-26, wherein the immunosuppressive cells are myeloid-derived suppressor cells and/or tumor-associated macrophages (M2 macrophages).

28. A pharmaceutical composition comprising an effective amount of the composition of any one of claims 1-27.

29. Use of the pharmaceutical composition of claim 28 in the manufacture of a medicament for the treatment of cancer in a subject in need thereof, wherein an effective amount of the pharmaceutical composition is to be administered to the subject.

30. The use of claim 29, wherein the cancer is breast cancer, ovarian cancer, uterine cancer, prostate cancer, testicular germ cell tumor, brain cancer, gastric cancer, esophagus cancer, lung cancer, liver cancer, renal cell cancer, or colon cancer.

31. The use of claim 29 or 30, wherein the effective amount is effective to reduce tumor size.

32. Use of the pharmaceutical composition of claim 28 in the manufacture of a medicament for reducing or inhibiting one or more immunosuppressive cells at a site of tumor in a subject identified as having cancer, wherein an effective amount of the pharmaceutical composition is to be administered to the subject.

33. The use of claim 32, wherein the immunosuppressive cells are myeloid-derived suppressor cells and/or tumor-associated macrophages (M2 macrophages).

34. Use of the pharmaceutical composition of claim 28 in the manufacture of a medicament for enhancing tumour-specific cytotoxic T cell responses in a subject identified as having cancer, wherein an effective amount of the pharmaceutical composition is to be administered to the subject.

35. The use of any one of claims 29-34, wherein one or more immune checkpoint modulators selected from the group consisting of PD-1 antagonists, PD-1 ligand antagonists, and CTLA4 antagonists is to be further administered to the subject;

wherein one or more additional active agents selected from the group consisting of a chemotherapeutic agent, an anti-infective agent, and combinations thereof is to be further administered to the subject;

wherein adoptive T cell therapy, and/or a cancer vaccine is to be further administered to the subject; and/or

wherein surgery or radiation therapy is to be further administered to the subject.

36. A composition comprising a dendrimer complexed or conjugated with one or more immunomodulatory agents in an amount effective to suppress or inhibit one or more pro-inflammatory cells associated with an inflammatory disease in a subject in need thereof.

37. The composition of claim 36, wherein the dendrimer is a hydroxyl- terminated dendrimer, optionally wherein the dendrimer is a generation 4, generation 5, or generation 6 PAMAM dendrimer.

38. The composition of claim 36 or 37, wherein the immunomodulatory agents are one or more selected from the group consisting of STING antagonists, JAK1 inhibitors, anti-inflammatory agents, and combinations thereof.

39. The composition of claim 38, wherein the immunomodulatory agent is a STING antagonist, optionally wherein the STING antagonist is C-178, C-176, C18, Astin C, No2-cLA, H-151, and alpha-mangostin.

40. The composition of claim 38, wherein the immunomodulatory agent is a JAK1 inhibitor, optionally wherein the JAK1 inhibitor is selected from the group consisting of tofacitinib, ruxolitinib, baricitinib, peficitinib, decemotiniba, filgotinib, solcitinibb, itacitinib, SHR0302, upadacitinib, PF- 04965842, Target-007, and Target-006, or combinations thereof.

41. The composition of any one of claims 36-40, wherein the immunomodulatory agent is covalently conjugated to the dendrimer.

42. The composition of any one of claims 36-41, wherein the dendrimer is further complexed or conjugated with one or more diagnostic or labelling agents in an amount effective to diagnose or label one or more pro-inflammatory cells associated with an autoimmune disease in a subject in need thereof.

43. The composition of any one of claims 36-42, wherein the pro-inflammatory cells are pro-inflammatory macrophages (M1 macrophages).

44. A pharmaceutical composition comprising an effective amount of the composition of any one of claims 36-43.

45. Use of the pharmaceutical composition of claim 44 in the manufacture of a medicament for treating an inflammatory disease in a subject in need thereof, wherein an effective amount of the pharmaceutical composition is to be administered to the subject.

46. The use of claim 45, wherein the inflammatory disease is an autoimmune disease, optionally wherein the autoimmune diseases is selected from the group consisting of rheumatoid arthritis, psoriasis, psoriatic arthritis, systemic lupus erythematosus (SLE), type 1 diabetes, inflammatory bowel disease, and thyroid diseases.

47. The use of claim 45, wherein the inflammatory diseases is an inflammatory joint disease, optionally wherein the inflammatory joint disease is selected from the group consisting of osteoarthritis, rheumatoid arthritis, psoriatic arthritis, and juvenile arthritis.

48. A composition for treating a disease or disorder of the bone, comprising hydroxyl-terminated dendrimers complexed or conjugated with one or more therapeutic agents in an amount effective for treating one or more disorders of the bone, wherein the dendrimers are further covalently conjugated with alendronate.

49. The composition of claim 48, wherein the one or more therapeutic agents is covalently conjugated to the dendrimer via one or more covalent linkers.

50. Use of a composition comprising hydroxyl-terminated dendrimers complexed or conjugated with one or more therapeutic agents in the manufacture of a medicament for treating a disease or disorder of the bone in a subject in need thereof, wherein the composition is to be administered to the subject in an amount effective for treating the one or more disorders of the bone.

51. The use of claim 50, wherein the dendrimers are further covalently conjugated with alendronate.

52. The composition of any of claims 1-27, the composition of claims 36-43 or the composition of claims 48-49 for use as a medicament.