What is claimed is:

1. An immunoconjugate capable of targeting CD138 expressing cells comprising:
(a) ~~an engineered~~a targeting antibody against CD138 comprising
(i) ~~consisting essentially of antigen binding region (ABR) against CD138 of a non-human antibody, or~~an immunoglobulin heavy chain comprising a variable region comprising amino acid residues 31 to 35 (CDR1), 51 to 68 (CDR2) and 99 to 111 (CDR 3) of SEQ ID NO: 1, and
(ii) ~~comprising an antigen binding region (ABR) against CD138, wherein said antigen binding region is of a non-human antibody~~a light chain comprising a variable region comprising amino acid residues 24 to 34 (CDR1), 50 to 56 (CDR2) and 89 to 97 (CDR3) of SEQ ID NO: 2;~~,~~
~~a further antibody region, wherein at least part of said further antibody region is of a human antibody,~~ and
(b) an effector molecule for inducing cell death,
wherein ~~said immunoconjugate homogenously targets CD138 expressing cells~~ a constant region of said immunoglobulin heavy chain is an IgG4 isotype constant region.

2. The immunoconjugate of claim 1, wherein said effector molecule is attached to said ~~engineered~~ targeting antibody via a linker.

3. The immunoconjugate of claim ~~1~~2, wherein said linker is a cleavable linker, preferably comprising a disulfide bond.

4. The immunconjugate of claims 1, 2 or 3, wherein said effector molecule provides sterical hindrance between the targeting antibody and said effector molecule.

5. The immunoconjuage according to claim 1, wherein immunoconjugate has a K_D value of less than 2.6 nM.

6. The immunoconjugate of claim 1, wherein the effector molecule is at least one maytansinoid, taxane or a CC1065, or an analog thereof.

7. The immunconjugate of claim 6, wherein the effector molecule is at least one maytansinoid.

8. The immunconjugate of claim 7, wherein the at least one maytansinoid is DM1, DM3, or DM4.

9. The immunconjugate claim 4 wherein said effector molecule is DM4.

10. The immunoconjugate of claim 1, wherein said immunoconjugate binds CD138 with a targeting variation of less than 150%, 140%, 130%, 120%, 110%, 100%, 90%, 80%, 70%, 60% or 50%.

~~11. The immunoconjugate of claim 1, wherein the ABR comprises:~~

~~(a) heavy chain variable region CDR3 comprising amino acid residues 99 to 111 of SEQ ID NO: 1, and~~

~~(b) light chain variable region CDR3 comprising amino acid residues 89 to 97 of SEQ ID NO: 2, respectively.~~

~~12. The immunoconjugate of claim 11, wherein the ABR further comprises:~~

~~(a) heavy chain variable region CDR1 and CDR2 comprising amino acid residues 31 to 35 and 51 to 68 of SEQ ID NO: 1, and/or~~

~~(b) light chain variable region CDR1 and CDR 2 comprising amino acid residues 24 to 34 and 50 to 56 of SEQ ID NO: 2, respectively.~~

~~13~~11. The immunoconjugate of ~~claim 11~~any one of claims 1 to 10, wherein said ~~further~~ targeting antibody ~~region~~ further comprises:

(a) amino acid residues 123 to 448 of SEQ ID NO: 1, and/or

(b) amino acid residues 108 to 214 of SEQ ID NO: 2, respectively and mutations thereof that

(i) maintain or lower the antibody-dependent cytotoxicity and/or complement-dependent cytotoxicity of the engineered targeting antibody and/or

(ii) stabilize the engineered targeting antibody.

~~14~~12. The immunoconjugate of ~~claim 11~~any preceding claim, wherein ~~a targeting agent targeting CD138 comprising:~~

~~an isolated polypeptide comprising an amino acid sequence of an immunoglobulin heavy chain or part thereof, wherein~~ said immunoglobulin heavy chain ~~or part thereof~~ has at least 70% sequence identity with SEQ ID NO:1.

~~15. The immunoconjugate of claim 14, wherein a constant region of said immunoglobulin heavy chain or said part thereof is an IgG4 isotype constant region.~~

13. The immunoconjugate of any preceding claim wherein the targeting antibody comprises an immunoglobulin heavy chain comprising SEQ ID NO: 1 and a light chain comprising SEQ ID NO: 2.

14. An immunoconjugate according to any one of claims 1 to 13 for use in medicine.

~~16~~15. Use of an immunoconjugate of ~~claim 14~~any one of claims 1 to 13 in the manufacture of a medicament for treating multiple myeloma in a subject.

~~17. The use of claim 16, wherein said targeting agent comprises a light chain sequence having at least about 70% sequence identity with SEQ ID NO:2.~~

~~18. Use of an immunoconjugate of claim 15 in the manucature of a medicament for immunoconjugate mediated drug delivery, wherein said IgG4 isotype alleviates ADCC, complement dependent cytotoxicity and/or Fc-mediated targeting of hepatic FcR.~~

16. Use of an immunoconjugate of any one of claims 1 to 13 for the manufacture of a medicament for treating transitional cell bladder carcinoma in a subject.

~~19. An *in vitro* method for inhibiting, delaying and/or preventing the growth of tumor cells in a cell culture comprising~~

~~administering to said cell culture a growth of tumor cells inhibiting, delaying and/or preventing effective amount of the immunoconjugate of claim 1, 4 or claim 14.~~

~~20. The method of claim 19, wherein said effective amount induces cell death or continuous cell cycle arrest in CD138 expressing tumor cells and, optionally, auxiliary cells that do not express CD138, in particular tumor stroma cells.~~

~~21. The method of claim 19, wherein said cells in said cell culture are obtained from a cancer patient and wherein, after administration of said effective amount of said immunoconjugate, the cells of said cell culture are to be reimplanted into said cancer patient.~~

~~22. The method of claim 19, wherein the cells in said cell culture were isolated from a patient suffering from an hematologic malignancy and/or a solid tumor comprising CD138 expressing cells.~~

~~23. The method of claim 21, wherein said cancer patient is suffering from one of the following: multiple myeloma, ovarian carcinoma, kidney carcinoma, gall bladder carcinoma, breast carcinoma, prostate cancer, lung cancer, colon carcinoma, Hodgkin's and non-Hodgkin's lymphoma, chronic lymphocytic leukemia (CLL), acute lymphoblastic leukemia (ALL), acute myeloblasts leukemia (AML), a solid tissue sarcoma or a colon carcinoma.~~

~~24. The method of claim 23, wherein said patient is suffering from multiple myeloma.~~

~~25~~17. Use of an immunoconjugate of claims ~~1, 4 or 14~~any one of claims 1 to 13 for the manufacture of a medicament for inhibiting, delaying and/or preventing the growth of a tumor comprising CD138 tumor cells and/or spread of tumor cells of such a tumor in a patient in need thereof~~,~~

~~wherein said immunoconjugate inhibits, delays or prevents the growth and/or spread of said tumor cells~~.

~~26~~18. The use of claim ~~25~~17, wherein said patient suffers from a hematologic malignancy and/or a solid tumor comprising CD138 expressing cells.

~~27~~19. The use of claim ~~26~~18, wherein said patient suffers from one of the following: multiple myeloma, ovarian carcinoma, kidney carcinoma, gall bladder carcinoma, breast carcinoma, prostate cancer, lung cancer, colon carcinoma, Hodgkin's and non-Hodgkin's lymphoma, chronic lymphocytic leukemia (CLL), acute lymphoblastic leukemia (ALL), acute myeloblasts leukemia (AML), solid tissue sarcoma or colon carcinoma.

~~28~~20. The use of claim ~~27~~19, wherein the disease is multiple myeloma.

~~29~~21. The use of ~~claim 25~~any one of claims 15 to 20, wherein said effector molecule of said immunoconjugate is a toxin, cytotoxic enzyme, low molecular weight cytotoxic drug, a pore-forming agent, biological response modifier, prodrug activating enzyme, an antibody, cytokine or a radionuclide.

~~30~~22. The use of ~~claim 25~~any one of claims 15 to 21, wherein said immunoconjugate is to be administered in a single dose of 5 mg/m^2 to about 300 mg/m^2.

~~31~~23. The use of ~~claim 25~~any one of claims 15 to 21, wherein said immunoconjugate is to be administered in at least two doses of about 5 mg/m^2 to about 300 mg/m^2, optionally at hourly, daily, weekly intervals or combinations thereof.

~~32~~24. Use of an immunoconjugate of ~~claims 1, 4 or 14~~any one of claims 1 to 13 ~~and a further cytotoxic agent~~ for the manufacture of a ~~combined preparation for simultaneous, separate or sequential use~~medicament for inhibiting, delaying and/or preventing the growth of a tumor and/or spread of malignant tumor cells comprising CD138 expressing cells in a patient, wherein the patient has been treated with one or more cytotoxic agents and/or radiation in an amount to reduce tumor load.

~~33~~25. The use of claim ~~32~~24, wherein ~~(a) and (b) are~~the immunoconjugate is to be administered ~~performed~~ consecutively with the one or more cytotoxic agents and/or radiation in two consecutive treatment regimes.

~~34~~26. The use of claim ~~32~~24, wherein the immunoconjugate ~~of (a) and~~is to be co-administered with the at least one cytotoxic agent ~~of (b) are co-administered~~.

~~35~~27. The use of any one of claims ~~32, 33 or 34,~~ 24 to 26 wherein the cytotoxic agent is mephalan, vincristine, doxorubicin, dexamethasone, cyclophosphamide, etoposide, cytarabine, cisplatin, thalidomide, ~~prendisone,~~prednisone ~~thalidomide,~~ bortezomib, lenalidomide, sorafenib, romidepsin or combinations thereof.

~~36~~28. The use of any one of claims ~~32, 33 or 34,~~24 to 26 wherein the cytotoxic agent is antibody based.

~~37~~29. Use of an immunoconjugate of any one of claims ~~1, 4 or 14~~1 to 13 for the manufacture of a medicament for treating a subject having a condition that would benefit from the suppression of myeloma cell survival, wherein the immunoconjugate is capable of decreasing survival or growth of said myeloma cells of said subject.

~~38~~30. A pharmaceutical composition comprising the immunoconjugate of any one of claims ~~1, 4 or 14,~~1 to 13 and one or more pharmaceutical acceptable excipients, wherein the immunoconjugate is suitable for the inhibition, delay and/or prevention of the growth of tumors and/or spread of tumor cells, ~~and one or more pharmaceutical^ acceptable excipients~~.

~~39~~31. The pharmaceutical composition of claim ~~38~~ 30 further comprising the at least one cytotoxic agent.

~~40~~32. The pharmaceutical composition of claim ~~39~~31, wherein the cytotoxic agent is mephalan, vincristine, doxorubicin, dexamethasone, cyclophosphamide, etoposide, cytarabine, cisplatin, thalidomide, ~~prendisone,~~prednisone ~~thalidomide,~~ bortezomib, lenalidomide, sorafenib, romidepsin or combinations thereof.

~~41~~33. The pharmaceutical composition of claim ~~39~~31, wherein the cytotoxic agent is antibody based.

~~42~~34. A kit comprising, in separate containers, pharmaceutical compositions for use in combination to inhibit, delay and/or prevent the growth of tumors and/or spread of tumor cells, wherein one container comprises an effective amount of the pharmaceutical composition of claim ~~38~~30, and wherein, a separate container comprises a second pharmaceutical composition comprising an effective amount of a further agent, preferably a cytotoxic agent, for the inhibition, delay and/or prevention of the growth of tumors and/or spread of tumor cells, and one or more pharmaceutical^ acceptable excipients.

~~43~~35. The kit of claim ~~42~~34, wherein said agent in said second pharmaceutical composition is a selected from the group consisting of mephalan, vincristine, doxorubicin, dexamethasone, cyclophosphamide, etoposide, cytarabine, cisplatin, thalidomide, ~~prendisone,~~prednisone ~~thalidomide,~~ bortezomib, lenalidomide sorafenib, romidepsin and combinations thereof or is antibody based.

~~44. Use of an immunoconjugate of claim 1 for the manufacture of a medicament for inhibiting, delaying and/or preventing growth of a tumor comprising CD138 tumor cells and/or~~

spread of tumor cells of such a tumor in a subject wherein the engineered targeting antibody against CD138 is attached to the effector molecule via a cleavable linker, wherein said effector molecule is sterically hindered, and wherein said immunoconjugate provides a growth of a tumor inhibiting activity that exceeds that of its unhindered counterpart by about 10%, about 20%, about 30%, about 40% or more.

45. The use of claim 44, wherein a growth of a tumor inhibiting activity of an unhindered counterpart of the immunoconjugate comprising a non-cleavable linker exceeds that of the growth of a tumor inhibiting activity of its unhindered counterpart comprising a cleavable linker, by at least about 5%, at least about 10%, up to about 15%.

46. The use of one of claims 44 or 45, wherein said cleavable linker comprises a disulfide bond.

47. The use of claims 44 or 45, wherein said effector molecule is DM4.

48. The use of claims 44 or 45, wherein the immunoconjugate is administered to the subject in at least one dose in an amount from about 5 mg/m^2 to about 300 mg/m^2.
49. A use of claims 44 or 45 wherein the immunoconjugate is administered to said subject in multiple doses, wherein the so administered immunoconjugate provides a growth of a tumor inhibiting activity that exceeds that of its unhindered counterpart by about 20%, about 30%, about 40%, about 50%, about 60%, about 70%, about 80%, about 90% or more.

50. The use of claim 49, wherein said cleavable linker comprises a disulfide bond.

51. The use of claim 49, wherein said effector molecule is DM4.

52. The use of claim 49, wherein said multiple doses are administered at intervals of 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21,22, 23 hours, 1, 2, 3, 4, 5, 6, 7 days, 1, 2, 3, 4, 5, 6, 7 or 8 weeks.

53. The use of claim 49, wherein said immunoconjugate is administered in doses of about 5mg/m^{2}to about 300 mg/m^2.

54. Use of an immunoconjugate of claims 1, 4 or 14 for the manufacture of a medicament for diminishing an amount of cells in direct or indirect contact with CD138 expressing tumor cells in a subject.

55. The use of claim 54, wherein said cells in direct or indirect contact with CD138 expressing tumor cells consist of cells expressing CD138 heterogenously, non CD138 expressing cells and/or cells being inaccessible to an effective amount of said at least one immunoconjugate.

~~56. The use of claim 54, wherein said cells are cells in direct contact with or attached to CD138 expressing tumor cells.~~

~~57. An *in vitro* method for diminishing an amount of cells in direct or indirect contact with CD138 expressing tumor cells comprising:~~

~~administering to said tumor cells and said cells in direct or indirect contact with said tumor cells at least one immunoconjugate of claims 1, 4, or 14 in an amount effective to diminish the amount of said cells in direct or indirect contact with said CD138 expressing tumor cells.~~