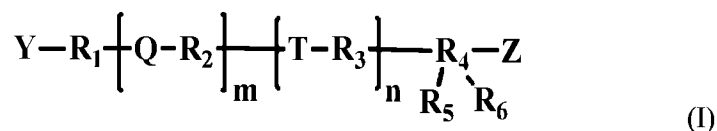


AUXILIARY REQUEST 6 (clean)**CLAIMS:**

1. A hydrophilic linker of the formula (I)



wherein:

Y represents a functional group that enables reaction with a cell-binding agent, and Y is selected from the group consisting of N-hydroxysuccinimide esters, p-nitrophenyl esters, dinitrophenyl esters, pentafluorophenyl esters, pyridyldisulfides, nitropyridyldisulfides, maleimides, haloacetates and carboxylic acid chlorides;

Q and T are either $-P(=O)(OM)-$, or $-S(O_2)-$, or $-S(O)-$;

m and n are integer from 0 to 5, but not 0 at the same time; in addition, when $m = 1$, $n = 0$, Q is not $-P(=O)(OM)-$; or when $n = 1$, $m = 0$, T is not $-P(=O)(OM)-$;

Z represents a functional group that enables linkage of a cytotoxic drug via a disulfide, thioether, thioester, peptide, hydrazone, ether, ester, carbamate, carbonate, amine (secondary, tertiary, or quaternary), imine, cycloheteroalkyl, heteroaromatic, alkoxime or amide bond, the said functional group Z being selected from thiol, disulfide, amino, carboxy, aldehydes, maleimido, haloacetyl, hydrazines and hydroxy;

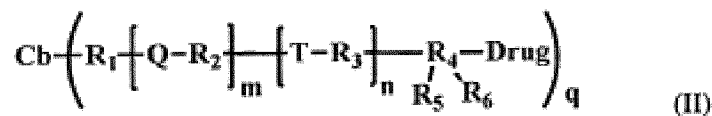
R_5 and R_6 , are the same or different and are H, linear alkyl having from 1-6 carbon atoms, branched or cyclic alkyl having from 3 to 6 carbon atoms, linear, branched or cyclic alkenyl or alkynyl, or 1-6 carbon atoms of esters, ether, amide, or polyethyleneoxy unit of formula $(OCH_2CH_2)_p$, wherein p is an integer from 0 to 1000, or combination thereof;

R_1 , R_2 , R_3 , R_4 are the same or different and are H, linear alkyl having from 1-6 carbon atoms, branched or cyclic alkyl having from 3 to 6 carbon atoms, linear, branched or cyclic alkenyl or alkynyl, or 1-6 carbon atoms of esters, ether, amide, or polyethyleneoxy unit of formula $(OCH_2CH_2)_p$, wherein p is an integer from 1 to 1000, or combination thereof;

or R_1 , R_2 , R_3 and R_4 covalently connect the cell-surface binding ligand, the phosphinate or sulfonyl group, the conjugated drug and among themselves (R_1 , R_2 , R_3 and R_4), and wherein the said atoms in the hydrophilic linker are combined forming alkylene, alkenylene, alkynylene, ethers, polyoxyalkylene, esters, amines, imines, polyamines, hydrazines, hydrazones, amides, ureas, semicarbazides, carbazides, alkoxyamines, alkoxyamines, urethanes, amino acids, peptides, acyloxylamines, hydroxamic acids or combinations thereof;

M is H, or Na, or K, or $N^+R_1R_2R_3$ or a pharmaceutical salt, wherein R_1 , R_2 and R_3 are as described hereinabove.

2. A cell-binding agent-drug conjugate of formula (II)



wherein:

Cb represents a cell-binding agent/molecule;

“Drug” represents a cytotoxic drug linked to the cell-binding agent via the hydrophilic linker by a disulfide, thioether, thioester, peptide, hydrazone, ether, ester, carbamate, carbonate, cycloheteroalkane, heteroaromatic, alkoxime or amide bond; and wherein the “Drug” is selected from:

Chemotherapeutic agents: a). Alkylating agents: selected from Nitrogen mustards (chlorambucil, chlornaphazine, cyclophosphamide, dacarbazine, estramustine, ifosfamide, mechlorethamine, mechlorethamine oxide hydrochloride, mannomustine, mitobronitol, melphalan, mitolactol, pipobroman, novembichin, phenesterine, prednimustine, thiotepa, trofosfamide, uracil mustard); CC-1065 (including its synthetic analogues of adozelesin, carzelesin and bizelesin); duocamycin (including its synthetic analogues, KW-2189 and CBI-TMI); benzodiazepine dimers (selected from dimmers of pyrrolbenzodiazepine (PBD) or tomaymycin, indolinbenzodiazepines, imidazobenzothiadiazepines, or oxazolidinobenzodiazepines); Nitrosoureas (carmustine, lomustine, chlorozotocin, fotemustine, nimustine, ranimustine); Alkylsulphonates (busulfan, treosulfan, improsulfan and piposulfan); Triazines (dacarbazine); Platinum containing compounds: (carboplatin, cisplatin, oxaliplatin); aziridines (benzodopa, carboquone, meturedopa, and uredopa); ethylenimines and methylamelamines including altretamine, triethylenemelamine, trietylenephosphoramidate, triethylenethiophosphoramidate and trimethylolomelamine; b). Plant Alkaloids selected from: Vinca alkaloids (vincristine, vinblastine, vindesine, vinorelbine, navelbin); Taxoids (paclitaxel, docetaxol) and their synthetic analogs, Maytansinoids (DM1, DM2, DM3, DM4, DM5, DM6, DM7, maytansine and ansamitocins) and their synthetic analogs, cryptophycins (cryptophycin 1 and cryptophycin 8); epothilones, eleutherobin, discodermolide, bryostatins, dolostatins, auristatins, tubulysins, cephalostatins; pancratistatin; a sarcodictyin; spongistatin; c). DNA Topoisomerase Inhibitors selected from Epipodophyllins (9-aminocamptothecin, camptothecin, crisnatol, daunomycin, etoposide, etoposide phosphate, irinotecan, mitoxantrone, novantrone, retinoic acids (retinols), teniposide, topotecan, 9-nitrocamptothecin (RFS 2000)); mitomycins (mitomycin C); d). Anti-metabolites selected from: [Anti-folate which is selected from: DHFR inhibitors methotrexate, trimetrexate, denopterin, pteropterin, aminopterin (4-aminopteroic acid); IMP dehydrogenase Inhibitors (mycophenolic acid, tiazofurin, ribavirin, EICAR); Ribonucleotide reductase Inhibitors (hydroxyurea, deferoxamine); Pyrimidine analogs selected from Uracil analogs

(ancitabine, azacitidine, 6-azauridine, capecitabine (Xeloda), carmofur, cytarabine, dideoxyuridine, doxifluridine, enocitabine, 5-Fluorouracil, floxuridine, ratitrexed(Tomudex)); Cytosine analogs (cytarabine, cytosine arabinoside, fludarabine); Purine analogs (azathioprine, fludarabine, mercaptopurine, thiamiprine, thioguanine); folic acid replenisher, (frolinic acid); e). Hormonal therapies selected from Receptor antagonists which is selected from: Anti-estrogen: (megestrol, raloxifene, tamoxifen); LHRH agonists(goscrelin, leuprolide acetate); Anti-androgens (bicalutamide, flutamide, calusterone, dromostanolone propionate, epitiostanol, goserelin, leuprolide, mepitiostane, nilutamide, testolactone, trilostane and other androgens inhibitors); Retinoids/Deltoids which is selected from: Vitamin D3 analogs (CB 1093, EB 1089 KH 1060, cholecalciferol, ergocalciferol); Photodynamic therapies (verteporfin, phthalocyanine, photosensitizer Pc4, demethoxy-hypocrellin A); Cytokines (Interferon-alpha, Interferon-gamma, tumor necrosis factor (TNFs), human proteins containing a TNF domain); f). Kinase inhibitors selected from BIBW 2992 (anti-EGFR/Erb2), imatinib, gefitinib, pegaptanib, sorafenib, dasatinib, sunitinib, erlotinib, nilotinib, lapatinib, axitinib, pazopanib, vandetanib, E7080 (anti-VEGFR2), mubritinib, ponatinib (AP24534), bafetinib (INNO-406), bosutinib (SKI-606), cabozantinib, vismodegib, iniparib, ruxolitinib, CYT387, axitinib, tivozanib, sorafenib, bevacizumab, cetuximab, Trastuzumab, Ranibizumab, Panitumumab, ispinesib; g). antibiotics selected from the enediyne antibiotics (including calicheamicins, calicheamicin γ 1, δ 1, α 1 and β 1; dynemicin, including dynemicin A and deoxydynemicin; esperamicin, kedarcidin, C-1027, maduropeptin, neocarzinostatin chromophore and related chromoprotein enediyne antiobiotic chromomophores), aclacinomysins, actinomycin, aethramycin, azaserine, bleomycins, cactinomycin, carabacin, carminomycin, carzinophilin; chromomycins, dactinomycin, daunorubicin, detorubicin, 6-diazo-5-oxo-L-norleucine, doxorubicin, morpholino-doxorubicin, cyanomorpholino-doxorubicin, 2-pyrrolino-doxorubicin and deoxydoxorubicin, epirubicin, esorubicin, idarubicin, marcellomycin, nitomycins, mycophenolic acid, nogalamycin, olivomycins, peplomycin, potfiromycin, puromycin, quelamycin, rodorubicin, streptonigrin, streptozocin, tubercidin, ubenimex, zinostatin, zorubicin; f). Others: selected from Polyketides (acetogenins), bullatacin and bullatacinone; gemcitabine, epoxomicins (carfilzomib), bortezomib, thalidomide, lenalidomide, pomalidomide, tosedostat, zybrestat, PLX4032, STA-9090, Stimuvax, allovectin-7, Xegeva, Provenge, Yervoy, Isoprenylation inhibitors (including Lovastatin), Dopaminergic neurotoxins (including 1-methyl-4-phenylpyridinium ion), Cell cycle inhibitors (including staurosporine), Actinomycins (including Actinomycin D, dactinomycin), Bleomycins (bleomycin A2, bleomycin B2, peplomycin), Anthracyclines (daunorubicin, doxorubicin (adriamycin), idarubicin, epirubicin, pirarubicin, zorubicin, mttoxantrone, MDR inhibitors (verapamil), Ca^{2+} ATPase inhibitors (thapsigargin), Histone deacetylase inhibitors (Vorinostat, Romidepsin, Panobinostat, Valproic acid, Mocetinostat (MGCD0103), Belinostat, PCI-24781, Entinostat, SB939, Resminostat, Givinostat, AR-42, CUDC-101, sulforaphane, Trichostatin A) ; Thapsigargin, Celecoxib, glitazones, epigallocatechin gallate, Disulfiram, Salinosporamide A.; Anti-adrenals, selected from

aminoglutethimide, mitotane, trilostane; aceglatone; aldophosphamide glycoside; aminolevulinic acid; amsacrine; arabinoside, bestabucil; bisantrene; edatraxate; defofamine; demecolcine; diaziquone; eflomithine (DFMO), elfomithine; elliptinium acetate, etoglucid; gallium nitrate; gacytosine, hydroxyurea; ibandronate, lentinan; lonidamine; mitoguazone; mitoxantrone; mopidamol; nitracrine; pentostatin; phenamet; pirarubicin; podophyllinic acid; 2-ethylhydrazide; procarbazine; PSK[●]; razoxane; rhizoxin; sizofiran; spirogermanium; tenuazonic acid; triaziquone; 2, 2',2"-trichlorotriethylamine; trichothecenes (especially T-2 toxin, verrucarins A, roridin A and anguidine); urethane, siRNA, antisense drugs, and the pharmaceutically acceptable salts, or acids of any of the above drugs

Q and T are either $-P(=O)(OM)-$, or $-S(O_2)-$, or $-S(O)-$;

m and n are integers from 0 to 5, but not 0 at the same time; in addition, when $m = 1$, $n = 0$, Q is not $-P(=O)(OM)-$; or when $n = 1$, $m = 0$, T is not $-S(O)-$; $-P(=O)(OM)-$; q is an integer from 1 to 20;

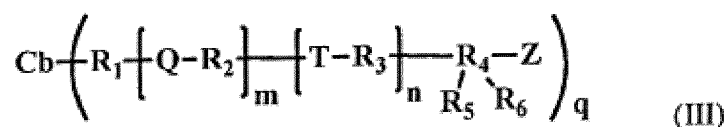
R_5 and R_6 , are the same or different and are H, linear alkyl having from 1-6 carbon atoms, branched or cyclic alkyl having from 3 to 6 carbon atoms, linear, branched or cyclic alkenyl or alkynyl, or 1-6 carbon atoms of esters, ether, amide, or polyethyleneoxy unit of formula $(OCH_2CH_2)_p$, wherein p is an integer from 0 to 1000, or combination thereof;

R_1 , R_2 , R_3 , R_4 , are the same or different and are H, linear alkyl having from 1-6 carbon atoms, branched or cyclic alkyl having from 3 to 6 carbon atoms, linear, branched or cyclic alkenyl or alkynyl, or 1-6 carbon atoms of esters, ether, amide, or polyethyleneoxy unit of formula $(OCH_2CH_2)_p$, wherein p is an integer from 1 to 1000, or combination thereof;

or R_1 , R_2 , R_3 and R_4 covalently connect the cell-surface binding ligand, the phosphinate or sulfonyl group, the conjugated drug and among themselves (R_1 , R_2 , R_3 and R_4), and wherein the said atoms in the hydrophilic linker are combined forming alkylene, alkenylene, alkynylene, ethers, polyoxyalkylene, esters, amines, imines, polyamines, hydrazines, hydrazones, amides, ureas, semicarbazides, carbazides, alkoxyamines, alkoxyamines, urethanes, amino acids, peptides, acyloxyamines, hydroxamic acids or combinations thereof;

M is H, or Na, or K, or $N^+R_1R_2R_3$ or a pharmaceutical salt, wherein R_1 , R_2 and R_3 are as described hereinabove.

3. A compound of formula (III):



wherein:

Cb represents a cell-binding agent/molecule;

Z represents a functional group that enables reaction with a cytotoxic drug;

Q and T are either $-P(=O)(OM)-$, or $-S(O_2)-$, or $-S(O)-$;

m and n are integers from 0 to 5, but not 0 at the same time; in addition, when $m = 1$, $n = 0$, Q is not $-P(=O)(OM)-$; or when $n = 1$, $m = 0$, T is not $-P(=O)(OM)-$; q is an integer from 1 to 20;

Z represents a functional group that enables linkage of a cytotoxic drug via a disulfide, thioether, thioester, peptide, hydrazone, ether, ester, carbamate, carbonate, amine (secondary, tertiary, or quaternary), imine, cycloheteroalkyl, heteroaromatic, alkoxime or amide bond;

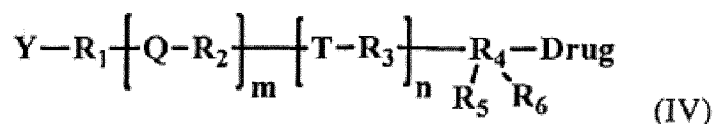
R_5 and R_6 , are the same or different and are H, linear alkyl having from 1-6 carbon atoms, branched or cyclic alkyl having from 3 to 6 carbon atoms, linear, branched or cyclic alkenyl or alkynyl, or 1-6 carbon atoms of esters, ether, amide, or polyethyleneoxy unit of formula $(OCH_2CH_2)_p$, wherein p is an integer from 0 to 1000, or combination thereof;

R_1 , R_2 , R_3 , R_4 , are the same or different and are H, linear alkyl having from 1-6 carbon atoms, branched or cyclic alkyl having from 3 to 6 carbon atoms, linear, branched or cyclic alkenyl or alkynyl, or 1-6 carbon atoms of esters, ether, amide, or polyethyleneoxy unit of formula $(OCH_2CH_2)_p$, wherein p is an integer from 0 to 1000, or combination thereof;

or R_1 , R_2 , R_3 and R_4 covalently connect the cell-surface binding ligand, the phosphinate or sulfonyl group, the conjugated drug and among themselves (R_1 , R_2 , R_3 and R_4), and wherein the said atoms in the hydrophilic linker are combined forming alkylene, alkenylene, alkynylene, ethers, polyoxyalkylene, esters, amines, imines, polyamines, hydrazines, hydrazones, amides, ureas, semicarbazides, carbazides, alkoxyamines, alkoxyamines, urethanes, amino acids, peptides, acyloxyamines, hydroxamic acids or combinations thereof;

M is H, or Na, or K, or $N^+R_1R_2R_3$ or a pharmaceutical salt, wherein R_1 , R_2 and R_3 are as described hereinabove.

4. A compound of formula (IV):



wherein:

Y represents a functional group that enables reaction with a cell-binding agent;

Q and T are either $-P(=O)(OM)-$, or $-S(O_2)-$, or $-S(O)-$;

m and n are integers from 0 to 5, but not 0 at the same time; in addition, when m = 1, n = 0, Q is not $-P(=O)(OM)-$; or when n = 1, m = 0, T is not $-P(=O)(OM)-$;

“Drug” represents a cytotoxic drug linked to the cell-binding agent via the hydrophilic linker by a disulfide, thioether, thioester, peptide, hydrazone, ether, ester, carbamate, carbonate, cycloheteroalkane, heteroaromatic, alkoxime or amide bond; and wherein the “Drug” is selected from:

Chemotherapeutic agents: a). Alkylating agents: selected from Nitrogen mustards (chlorambucil, chlornaphazine, cyclophosphamide, dacarbazine, estramustine, ifosfamide, mechlorethamine, mechlorethamine oxide hydrochloride, mannomustine, mitobronitol, melphalan, mitolactol, pipobroman, novembichin, phenesterine, prednimustine, thiotepa, trofosfamide, uracil mustard); CC-1065 (including its synthetic analogues of adozelesin, carzelesin and bizelesin); duocarmycin (including its synthetic analogues, KW-2189 and CBI-TMI); benzodiazepine dimers (selected from dimmers of pyrrolbenzodiazepine (PBD) or tomaymycin, indolinbenzodiazepines, imidazobenzothiadiazepines, or oxazolidinobenzodiazepines); Nitrosoureas (carmustine, lomustine, chlorozotocin, fotemustine, nimustine, ranimustine); Alkylsulphonates (busulfan, treosulfan, improsulfan and piposulfan); Triazenes (dacarbazine); Platinum containing compounds: (carboplatin, cisplatin, oxaliplatin); aziridines (benzodopa, carboquone, meturedopa, and uredopa); ethylenimines and methylamelamines including altretamine, triethylenemelamine, trietylenephosphoramidate, triethylenethiophosphoramidate and trimethylolomelamine; b). Plant Alkaloids selected from: Vinca alkaloids (vincristine, vinblastine, vindesine, vinorelbine, navelbin); Taxoids (paclitaxel, docetaxol) and their synthetic analogs, Maytansinoids (DM1, DM2, DM3, DM4, DM5, DM6, DM7, maytansine and ansamitocins) and their synthetic analogs, cryptophycins (cryptophycin 1 and cryptophycin 8); epothilones, eleutherobin, discodermolide, bryostatins, dolostatin, auristatins, tubulysins, cephalostatins; pancratistatin; a sarcodictyin; spongistatin; c). DNA Topoisomerase Inhibitors selected from Epipodophyllins (9-aminocamptothecin, camptothecin, crisnatol, daunomycin, etoposide, etoposide phosphate, irinotecan, mitoxantrone, novantrone, retinoic acids (retinols), teniposide, topotecan, 9-nitrocamptothecin (RFS 2000)); mitomycins (mitomycin C); d). Anti-metabolites selected from: [Anti-folate which is selected from: DHFR inhibitors methotrexate, trimetrexate, denopterin, pteropterin, aminopterin (4-aminopteroic acid); IMP dehydrogenase Inhibitors (mycophenolic acid, tiazofurin, ribavirin, EICAR); Ribonucleotide reductase Inhibitors (hydroxyurea, deferroxamine); Pyrimidine analogs selected from Uracil analogs (ancitabine, azacitidine, 6-azauridine, capecitabine (Xeloda), carmofur, cytarabine, dideoxyuridine, doxifluridine, enocitabine, 5-Fluorouracil, floxuridine, ratitrexed(Tomudex)); Cytosine analogs (cytarabine, cytosine arabinoside, fludarabine); Purine analogs (azathioprine, fludarabine, mercaptopurine, thiamiprine, thioguanine); folic acid replenisher, (frolinic acid); e). Hormonal therapies selected from Receptor antagonists which is selected from: Anti-estrogen: (megestrol, raloxifene, tamoxifen); LHRH agonists(goserelin, leuprolide acetate); Anti-androgens (bicalutamide, flutamide, calusterone, dromostanolone propionate, epitioestanol, goserelin, leuprolide, mepitioestane, nilutamide,

testolactone, trilostane and other androgens inhibitors); Retinoids/Deltoids which is selected from: Vitamin D3 analogs (CB 1093, EB 1089 KH 1060, cholecalciferol, ergocalciferol); Photodynamic therapies (verteporfin, phthalocyanine, photosensitizer Pc4, demethoxy-hypocrellin A); Cytokines (Interferon-alpha, Interferon-gamma, tumor necrosis factor (TNFs), human proteins containing a TNF domain); f). Kinase inhibitors selected from BIBW 2992 (anti-EGFR/Erb2), imatinib, gefitinib, pegaptanib, sorafenib, dasatinib, sunitinib, erlotinib, nilotinib, lapatinib, axitinib, pazopanib, vandetanib, E7080 (anti-VEGFR2), mubritinib, ponatinib (AP24534), bafetinib (INNO-406), bosutinib (SKI-606), cabozantinib, vismodegib, iniparib, ruxolitinib, CYT387, axitinib, tivozanib, sorafenib, bevacizumab, cetuximab, Trastuzumab, Ranibizumab, Panitumumab, ispinesib; g). antibiotics selected from the enediyne antibiotics (including calicheamicins, calicheamicin γ 1, δ 1, α 1 and β 1; dynemicin, including dynemicin A and deoxydynemicin; esperamicin, kedarcidin, C-1027, maduropeptin, neocarzinostatin chromophore and related chromoprotein enediyne antiobiotic chromomophores), aclacinomysins, actinomycin, anthramycin, azaserine, bleomycins, cactinomycin, carabacin, carminomycin, carzinophilin; chromomycins, dactinomycin, daunorubicin, detorubicin, 6-diazo-5-oxo-L-norleucine, doxorubicin, morpholino-doxorubicin, cyanomorpholino-doxorubicin, 2-pyrrolino-doxorubicin and deoxydoxorubicin, epirubicin, esorubicin, idarubicin, marcellomycin, nitomycins, mycophenolic acid, nogalamycin, olivomycins, peplomycin, potfiromycin, puromycin, quelamycin, rodorubicin, streptonigrin, streptozocin, tubercidin, ubenimex, zinostatin, zorubicin; f). Others: selected from Polyketides (acetogenins), bullatacin and bullatacinone; gemcitabine, epoxomicins (carfilzomib), bortezomib, thalidomide, lenalidomide, pomalidomide, tosedostat, zybrestat, PLX4032, STA-9090, Stimuvax, allovectin-7, Xegeva, Provenge, Yervoy, Isoprenylation inhibitors (including Lovastatin), Dopaminergic neurotoxins (including 1-methyl-4-phenylpyridinium ion), Cell cycle inhibitors (including staurosporine), Actinomycins (including Actinomycin D, dactinomycin), Bleomycins (bleomycin A2, bleomycin B2, peplomycin), Anthracyclines (daunorubicin, doxorubicin (adriamycin), idarubicin, epirubicin, pirarubicin, zorubicin, mttoxantrone, MDR inhibitors (verapamil), Ca²⁺ATPase inhibitors (thapsigargin), Histone deacetylase inhibitors (Vorinostat, Romidepsin, Panobinostat, Valproic acid, Mocetinostat (MGCD0103), Belinostat, PCI-24781, Entinostat, SB939, Resminostat, Givinostat, AR-42, CUDC-101, sulforaphane, Trichostatin A) ; Thapsigargin, Celecoxib, glitazones, epigallocatechin gallate, Disulfiram, Salinosporamide A.; Anti-adrenals, selected from aminogluthethimide, mitotane, trilostane; aceglatone; aldophosphamide glycoside; aminolevulinic acid; amsacrine; arabinoside, bestabucil; bisantrene; edatraxate; defofamine; demecolcine; diaziquone; eflornithine (DFMO), elfomithine; elliptinium acetate, etoglucid; gallium nitrate; gacytosine, hydroxyurea; ibandronate, lentinan; lonidamine; mitoguazone; mitoxantrone; mopidamol; nitracrine; pentostatin; phenamet; pirarubicin; podophyllinic acid; 2-ethylhydrazide; procarbazine; PSK●; razoxane; rhizoxin; sizofiran; spirogermanium; tenuazonic acid; triaziquone; 2, 2',2" trichlorotriethylamine; trichothecenes (especially T-2 toxin, verrucaric acid, roridin A and anguidine);

urethane, siRNA, antisense drugs, and the pharmaceutically acceptable salts, or acids of any of the above drugs;

R_5 and R_6 , are the same or different and are H, linear alkyl having from 1-6 carbon atoms, branched or cyclic alkyl having from 3 to 6 carbon atoms, linear, branched or cyclic alkenyl or alkynyl, or 1-6 carbon atoms of esters, ether, amide, or polyethyleneoxy unit of formula $(OCH_2CH_2)_p$, wherein p is an integer from 0 to 1000, or combination thereof;

R_1 , R_2 , R_3 , R_4 are the same or different and are H, linear alkyl having from 1-6 carbon atoms, branched or cyclic alkyl having from 3 to 6 carbon atoms, linear, branched or cyclic alkenyl or alkynyl, or 1-6 carbon atoms of esters, ether, amide, or polyethyleneoxy unit of formula $(OCH_2CH_2)_p$, wherein p is an integer from 0 to 1000, or combination thereof;

or R_1 , R_2 , R_3 and R_4 covalently connect the cell-surface binding ligand, the phosphinate or sulfonyl group, the conjugated drug and among themselves (R_1 , R_2 , R_3 and R_4), and wherein the said atoms in the hydrophilic linker are combined forming alkylene, alkenylene, alkynylene, ethers, polyoxyalkylene, esters, amines, imines, polyamines, hydrazines, hydrazones, amides, ureas, semicarbazides, carbazides, alkoxyamines, alkoxyamines, urethanes, amino acids, peptides, acyloxyamines, hydroxamic acids or combinations thereof;

M is H, or Na, or K, or $N^+R_1R_2R_3$ or a pharmaceutical salt, wherein R_1 , R_2 and R_3 are as described hereinabove,

5. The conjugate of claim 2 or the compound of claim 3 wherein the cell binding agent/molecule is selected from antibodies, proteins, vitamins (folates), peptides, polymeric micelles, liposomes, lipoprotein-based drug carriers, nano-particle drug carriers, dendrimers, and combination thereof.

6. The conjugate of claim 2 or the compound of claim 3, wherein the cell-binding agent binds to target cells which are selected from tumor cells, virus infected cells, microorganism infected cells, parasite infected cells, autoimmune cells, activated cells, myeloid cells, activated T-cells, B cells, or melanocytes; cells expressing the CD19, CD20, CD22, CD30, CD33, CD37, CD38, CD40, CD 51, CD52, CD56, CD66, CD70, CD74, CD79, CD80, CD98, CD125, CD221, CD227, CD262, CD309, CD326, CEACAM3, CEACAM5 (carcinoembryonic antigen), DLL4 (Δ -like-4), EGFR, CTLA4, CXCR4 (CD184), Endoglin (CD105), EPCAM (epithelial cell adhesion molecule), ERBB2 (Epidermal Growth Factor Receptor 2), FCGR1, FOLR (folate receptor), GD2 ganglioside, G-28 (a cell surface antigen glycolipid), GD3 idio type, Heat shock proteins, HER1, HER2, HLA-DR10, HLA-DRB, human chorionic gonadotropin, IGF1R (insulin-like growth factor 1 receptor), IL-2 receptor (interleukin 2 receptor), IL-6R (interleukin 6 receptor), Integrins ($\alpha v\beta 3$, $\alpha 5\beta 1$, $\alpha 6\beta 4$, $\alpha 11\beta 3$, $\alpha 5\beta 5$, $\alpha v\beta 5$), MAGE-1, MAGE-2, MAGE-3, MAGE 4, anti-transferrin receptor, p97, MS4A1 (membrane-spanning 4-domains subfamily A member 1), MUC1 or MUC1-KLH, MUC16 (CA125), CEA, gp100, MART1,

MPG, MS4A1 (membrane-spanning 4-domains subfamily A), Nucleolin, Neu oncogene product, P21, Paratope of anti-(N-glycolylneuraminic acid), PLAP-like testicular alkaline phosphatase, PSMA, PSA, ROBO4, TAG 72 (tumor associated glycoprotein 72), T cell transmembrane protein, Tie (CD202b), TNFRSF10B (tumor necrosis factor receptor superfamily member 10B), TNFRSF13B (tumor necrosis factor receptor superfamily member 13B), TPBG (trophoblast glycoprotein), TRAIL-R1 (Tumor necrosis apoptosis Inducing ligand Receptor 1), VCAM-1 (CD106), VEGF, VEGF-A, VEGF-2 (CD309), CanAg, CALLA, and cells expressing insulin growth factor receptor, or epidermal growth factor receptor.

7. The conjugate of claim 2 or the compound of claim 3, wherein the cell-binding agent is an antibody, a single chain antibody, an antibody fragment that binds to the target cell, a monoclonal antibody, a single chain monoclonal antibody, or a monoclonal antibody fragment that binds the target cell, a chimeric antibody, a chimeric antibody fragment that binds to the target cell, a domain antibody, a domain antibody fragment that binds to the target cell, a resurfaced antibody, a resurfaced single chain antibody, or a resurfaced antibody fragment that binds to the target cell, a humanized antibody or a resurfaced antibody, a humanized single chain antibody, or a humanized antibody fragment that binds to the target cell, a lymphokine, a hormone, a vitamin, a growth factor, a colony stimulating factor, or a nutrient-transport molecule.

8. The conjugate or the compound according to claim 6, wherein the tumor cells are selected from lymphoma cells, myeloma cells, renal cells, breast cancer cells, prostate cancer cells, ovarian cancer cells, colorectal cancer cells, gastric cancer cells, squamous cancer cells, small-cell lung cancer cells, testicular cancer cells, or any cells that grow and divide at an unregulated, quickened pace to cause cancers.

9. A pharmaceutical composition comprising a therapeutically effective amount of the immunoconjugate of claims 2, and a pharmaceutically acceptable salt, carrier, diluent, or excipient therefore, or a combination therefore, for the treatment or prevention of a cancer, or an autoimmune disease, or an infectious disease.

10. The conjugate of claims 2 or the compound of claim 4, wherein the drug/cytotoxic agent are selected from a toxin, a chemotherapeutic agent, a drug moiety, an antibiotic, a radioactive isotope, and a nucleolytic enzyme.

11. The conjugate of claim 2, which is an immunoconjugate wherein Drug is selected from tubulysins, maytansinoids, taxanoids (taxanes), CC-1065 analogs, daunorubicin and doxorubicin

compounds, benzodiazepine dimers (including dimers of pyrrolbenzodiazepine (PBD), tomaymycin, anthramycin, indolinobenzodiazepines, imidazobenzothiadiazepines, or oxazolidinobenzodiazepines), calicheamicins and the enediyne antibiotics, actinomycin, azaserines, bleomycins, epirubicin, tamoxifen, idarubicin, dolastatins/auristatins (selected from: monomethyl auristatin E, MMAE, MMAF, auristatin PYE, auristatin TP, Auristatins 2-AQ, 6-AQ, EB (AEB), and EFP (AEFP)), duocarmycins, thiotepa, vincristine, hemiasterlins, and esperamicins.

14. The conjugate of claims **2**, which is an immunoconjugate having in vitro, in vivo or ex vivo cell killing activity.

15. A pharmaceutical composition comprising the conjugate of claim **2**, and a pharmaceutically acceptable carrier.

16. A pharmaceutical composition comprising a therapeutically effective amount of the conjugate of claim **2**, wherein the composition is administerable concurrently with other therapeutic agents selected from chemotherapeutic agent, radiation therapy, immunotherapy agents, autoimmune disorder agents, anti-infectious agents or other immunoconjugates for synergistically effective treatment or prevention of a cancer, or an autoimmune disease, or an infectious disease.