CLAIMS:

1. Conjugate for transferring an effector molecule from outside a cell into said cell, the conjugate comprising at least one effector molecule to be transferred into the cell, at least one single-domain antibody (sdAb) and at least one saponin, covalently bound to each other, directly or via at least one linker, wherein the at least one saponin is a mono-desmosidic triterpene glycoside or is a bi-desmosidic triterpene glycoside, and wherein the sdAb is capable of binding to a cell-surface molecule of said cell.

2. Conjugate of claim 1, comprising at least one sdAb which is any one or more of: a V_H domain derived from a heavy chain of an antibody, preferably of immunoglobulin G origin, preferably of human origin; a V_L domain derived from a light chain of an antibody, preferably of immunoglobulin G origin, preferably of human origin; a V_{HH} domain such as derived from a heavy-chain only antibody (HCAb) such as from *Camelidae* origin or *Ig-NAR* origin such as a variable heavy chain new antigen receptor (V_{NAR}) domain, preferably the HCAb is from *Camelidae* origin; and preferably the at least one sdAb is a V_{HH} domain derived from an HCAb from *Camelidae* origin (camelid V_H) such as derived from an HCAb from camel, lama, alpaca, dromedary, vicuna, guanaco and Bactrian camel.

3. Conjugate of claim 1 or 2, comprising at least two sdAbs with a single first sdAb covalently bound to one of the at least one effector molecule and/or to one of the at least one saponin, or with two or more sdAbs of which at least one sdAb is bound to the at least one effector molecule and/or of which at least one sdAb is bound to the at least one saponin, or with all of the at least two sdAbs each bound separately to either an effector molecule of the at least one effector molecule or to a saponin of the at least one saponin, or both.

4. Conjugate of any one of the claims 1-3, wherein the at least one sdAb comprises at least two sdAbs, which are the same sdAbs, preferably two to eight sdAbs, more preferably two – four sdAbs, or wherein the at least one sdAbs are at least two sdAbs which are biparatopic, preferably two sdAbs which are biparatopic.

5. Conjugate of any one of the claims 1-4, comprising one – eight sdAbs, capable of binding to a same binding site on a cell-surface molecule, wherein the at least one effector molecule and/or the at least one saponin is/are bound to a single first sdAb of the one – eight sdAbs or wherein the at least one effector molecule and/or the at least one saponin is/are bound to two or more of the sdAbs, if present, wherein the at least one effector molecule and the at least one saponin are bound to the same sdAb or are bound to different sdAbs, wherein preferably each of the at least one effector molecule is bound to a separate sdAb and/or each of the at least one saponin is bound to a separate sdAb, wherein an effector molecule and a saponin are bound to the same sdAb or are bound to separate sdAbs.

6. Conjugate of any one of the claims 1-5, wherein the at least one sdAb is a single sdAb or are at least two, preferably two sdAbs, wherein the sdAb(s) is/are capable of binding to a cell-surface molecule of

the cell such as HIVgp41 or wherein the sdAb(s) is/are capable of binding to a cell-surface receptor of the cell, such as a tumor-cell surface receptor of the cell, preferably a tumor-cell specific receptor, more preferably to a receptor selected from any one or more of: CD71, CA125, EpCAM(17-1A), CD52, CEA, CD44v6, FAP, EGF-IR, integrin, syndecan-1, vascular integrin alpha-V beta-3, HER2, EGFR, CD20, CD22, Folate receptor 1, CD146, CD56, CD19, CD138, CD27L receptor, prostate specific membrane antigen (PSMA), CanAg, integrin-alphaV, CA6, CD33, mesothelin, Cripto, CD3, CD30, CD239, CD70, CD123, CD352, DLL3, CD25, ephrinA4, MUC-1, Trop2, CEACAM5, CEACAM6, HER3, CD74, PTK7, Notch3, FGF2, C4.4A, FLT3, CD38, FGFR3, CD7, PD-L1, CTLA-4, CD52, PDGFRA, VEGFR1, VEGFR2, c-Met (HGFR), EGFR1, RANKL, ADAMTS5, CD16, CXCR7 (ACKR3), glucocorticoid-induced TNFR-related protein (GITR), most preferably selected from: HER2, c-Met, VEGFR2, CXCR7, CD71, EGFR and EGFR1.

7. Conjugate of any one of the claims 1-6, wherein the at least one sdAb is a single sdAb or are at least two, preferably two, wherein the sdAb(s) is/are selected from: an anti-CD71 sdAb, an anti-HER2 sdAb, an anti-CD20 sdAb, an anti-CA125 sdAb, an anti-EpCAM (17-1A) sdAb, an anti-EGFR sdAb, an anti-CD30 sdAb, an anti-CD33 sdAb, an anti-vascular integrin alpha-v beta-3 sdAb, an anti-CD52 sdAb, an anti-CD22 sdAb, an anti-CEA sdAb, an anti-CD44v6 sdAb, an anti-FAP sdAb, an anti-CD19 sdAb, an anti-CanAg sdAb, an anti-CD56 sdAb, an anti-CD38 sdAb, an anti-CA6 sdAb, an anti-IGF-1R sdAb, an anti-integrin sdAb, an anti-syndecan-1 sdAb, an anti-CD79b, an anti-c-Met sdAb, an anti-EGFR1 sdAb, an anti-VEGFR2 sdAb, an anti-CXCR7 sdAb, an anti-HIVgp41, wherein the sdAb(s) is/are preferably V_{HH}(s), more preferably camelid V_H(s).

8. Conjugate of any one of the claims 1-7, wherein the at least one sdAb comprises an sdAb that is capable of binding to HER2, CD71, HIVgp41 and/or EGFR, wherein said sdAb is preferably a V_{HH}, more preferably a camelid V_H.

9. Conjugate of any one of the claims 1-8, wherein the at least one sdAb comprises an sdAb for binding to HER2 selected from: sdAb produced by clone 11A4, clone 18C3, clone 22G12, clone Q17 or clone Q17-C-tag; or comprises an sdAb for binding to EGFR and produced by clone anti-EGFR Q86-C-tag; or comprises an sdAb for binding to CD71 and produced by clone anti-CD71 Q52-C-tag; or comprises an sdAb for binding to HIVgp41 and produced by clone anti-HIVgp41 Q8C-tag; or comprises an sdAb encoded by a cDNA of any one of the SEQ ID NO: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29 and 31; or comprises any one of the sdAbs with an amino-acid sequence of SEQ ID NO: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36-72, or comprises a tandem of two sdAb's with an amino-acid sequence of SEQ ID NO: 74 or comprises V_{HH} 7D12 with the amino-acid sequence as depicted as SEQ ID NO: 75 and/or V_{HH} 9G8 with the amino-acid sequence as depicted as SEQ ID NO: 76, wherein optionally the conjugate further comprises a further sdAb, different from the at least one sdAb, the further sdAb for binding to albumin, such as any one or more of the further sdAbs with an amino-acid sequence of SEQ ID NO: 33, 34 and 35, preferably the further sdAb is a V_{HH}, more preferably a camelid V_H.

10. Conjugate of any one of the claims 1-9, wherein the effector molecule comprises or consists of at least one of a small molecule such as a drug molecule, a toxin such as a protein toxin, an oligonucleotide such as a BNA, a xeno nucleic acid or an siRNA, an enzyme, a peptide, a protein, or any combination thereof.

11. Conjugate of any one of the claims 1-10, wherein the at least one effector molecule is selected from any one or more of a vector, a gene, a cell suicide inducing transgene, deoxyribonucleic acid (DNA), ribonucleic acid (RNA), anti-sense oligonucleotide (ASO, AON), short interfering RNA (siRNA), anti-microRNA (anti-miRNA), DNA aptamer, RNA aptamer, mRNA, mini-circle DNA, peptide nucleic acid (PNA), phosphoramidate morpholino oligomer (PMO), locked nucleic acid (LNA), bridged nucleic acid (BNA), 2'-deoxy-2'-fluoroarabino nucleic acid (FANA), 2'-O-methoxyethyl-RNA (MOE), 3'-fluoro hexitol nucleic acid (FHNA), a plasmid, glycol nucleic acid (GNA) and threose nucleic acid (TNA), or a derivative thereof, more preferably a BNA, for example a BNA for silencing HSP27 protein expression or a BNA for silencing apolipoprotein B expression.

12. Conjugate of any one of the previous claims, wherein the at least one effector molecule is an oligonucleotide selected from any one or more of a(n): short interfering RNA (siRNA), short hairpin RNA (shRNA), anti-hairpin-shaped microRNA (miRNA), single-stranded RNA, aptamer RNA, double-stranded RNA (dsRNA), anti-microRNA (anti-miRNA, anti-miR), antisense oligonucleotide (ASO), mRNA, DNA, antisense DNA, locked nucleic acid (LNA), bridged nucleic acid (BNA), 2'-O,4'-aminoethylene bridged nucleic Acid (BNA^{NC}), BNA-based siRNA, and BNA-based antisense oligonucleotide (BNA-AON).

13. Conjugate of any one of the previous claims, wherein the at least one effector molecule is an oligonucleotide selected from any one of an anti-miRNA, a BNA-AON or an siRNA, such as BNA-based siRNA, preferably selected from chemically modified siRNA, metabolically stable siRNA and chemically modified, metabolically stable siRNA.

14. Conjugate of any one of the previous claims, wherein the at least one effector molecule is an oligonucleotide that is capable of silencing a gene, when present in a cell comprising such gene, wherein the gene is any one of genes: apolipoprotein B (apoB), transthyretin (TTR), proprotein convertase subtilisin/kexin type 9 (PCSK9), delta-aminolevulinate synthase 1 (ALAS1), antithrombin 3 (AT3), glycolate oxidase (GO), complement component C5 (CC5), X gene of hepatitis B virus (HBV), S gene of HBV, alpha-1 antitrypsin (AAT) and lactate dehydrogenase (LDH), and/or is capable of targeting an aberrant miRNA when present in a cell comprising such aberrant miRNA.

15. Conjugate of any one of the previous claims, wherein the effector molecule is an oligonucleotide that is capable of targeting an mRNA, when present in a cell comprising such mRNA, wherein the mRNA is involved in expression of any one of proteins: apoB, TTR, PCSK9, ALAS1, AT3, GO, CC5, expression product of X gene of HBV, expression product of S gene of HBV, AAT and LDH, or is capable of

antagonizing or restore an miRNA function such as inhibiting an oncogenic miRNA (onco-miR) or suppression of expression of an onco-miR, when present in a cell comprising such an miRNA.

16. Conjugate of any one of the claims 1-15, wherein the at least one effector molecule comprises or, when dependent on any one of the claims 1-9, consists of at least one proteinaceous molecule, preferably selected from any one or more of a peptide, a protein, an enzyme and a protein toxin.

17. Conjugate of any one of the claims 1-16, wherein the at least one effector molecule comprises or, when dependent on any one of the claims 1-9, consists of at least one of: urease and Cre-recombinase, a proteinaceous toxin, a ribosome-inactivating protein, a protein toxin, a bacterial toxin, a plant toxin, more preferably selected from any one or more of a viral toxin such as apoptin; a bacterial toxin such as Shiga toxin, Shiga-like toxin, Pseudomonas aeruginosa exotoxin (PE) or exotoxin A of PE, full-length or truncated diphtheria toxin (DT), cholera toxin; a fungal toxin such as alpha-sarcin; a plant toxin including ribosome-inactivating proteins and the A chain of type 2 ribosome-inactivating proteins such as dianthin *e.g.* dianthin-30 or dianthin-32, saporin *e.g.* saporin-S3 or saporin-S6, bouganin or de-immunized derivative debouganin of bouganin, shiga-like toxin A, pokeweed antiviral protein, ricin, ricin A chain, modeccin, modeccin A chain, abrin, abrin A chain, volkensin, volkensin A chain, viscumin, viscumin A chain; or an animal or human toxin such as frog RNase, or granzyme B or human angiogenin, or any toxic fragment or toxic derivative thereof; preferably the protein toxin is dianthin and/or saporin.

18. Conjugate of any one of the claims 1-17, wherein the at least one effector molecule comprises or, when dependent on any one of the claims 1-9, consists of at least one payload.

19. Conjugate of any one of the claims 1-18, wherein the at least one effector molecule comprises or, when dependent on any one of the claims 1-9, consists of at least one of: a toxin targeting ribosomes, a toxin targeting elongation factors, a toxin targeting tubulin, a toxin targeting DNA and a toxin targeting RNA, more preferably any one or more of emtansine, pasudotox, maytansinoid derivative DM1, maytansinoid derivative DM4, monomethyl auristatin E (MMAE, vedotin), monomethyl auristatin F (MMAF, mafodotin), a Calicheamicin, N-Acetyl-γ-calicheamicin, a pyrrolobenzodiazepine (PBD) dimer, a benzodiazepine, a CC-1065 analogue, a duocarmycin, Doxorubicin, paclitaxel, docetaxel, cisplatin, cyclophosphamide, etoposide, docetaxel, 5-fluorouracyl (5-FU), mitoxantrone, a tubulysin, an indolinobenzodiazepine, AZ13599185, a cryptophycin, rhizoxin, methotrexate, an anthracycline, a camptothecin analogue, SN-38, DX-8951f, exatecan mesylate, truncated form of *Pseudomonas aeruginosa* exotoxin (PE38), a Duocarmycin derivative, an amanitin, α-amanitin, a spliceostatin, a thailanstatin, ozogamicin, tesirine, Amberstatin269 and soravtansine, or a derivative thereof.

20. Conjugate of any one of the claims 1-19, wherein the conjugate comprises an antibody-drug conjugate (ADC), such as an ADC comprising at least one sdAb derived from: gemtuzumab ozogamicin, brentuximab vedotin, trastuzumab emtansine, inotuzumab ozogamicin, moxetumomab pasudotox and polatuzumab vedotin, and/or comprising at least one effector molecule which is a toxin present in any

one or more of: gemtuzumab ozogamicin, brentuximab vedotin, trastuzumab emtansine, inotuzumab ozogamicin, moxetumomab pasudotox and polatuzumab vedotin, and/or selected from dianthin and saporin.

21. Conjugate of any one of the previous claims, wherein the at least one saponin comprises an aglycone core structure selected from:

2alpha-hydroxy oleanolic acid;
16alpha-hydroxy oleanolic acid;
hederagenin (23-hydroxy oleanolic acid);
16alpha,23-dihydroxy oleanolic acid;
gypsogenin;
quillaic acid;
protoaescigenin-21(2-methylbut-2-enoate)-22-acetate;
23-oxo-barringtogenol C-21,22-bis(2-methylbut-2-enoate);
23-oxo-barringtogenol C-21(2-methylbut-2-enoate)-16,22-diacetate;
digitogenin;
3,16,28-trihydroxy oleanan-12-en;
gypsogenic acid; or
a derivative thereof,

preferably, the at least one saponin comprises an aglycone core structure selected from quillaic acid and gypsogenin, more preferably the at least one saponin comprises aglycone core structure quillaic acid.

22. Conjugate of any one of the previous claims, wherein the at least one saponin comprises one or both of: a first saccharide chain bound to the C_3 atom or to the C_{28} atom of the aglycone core structure of the at least one saponin, preferably bound to the C_3 atom, and a second saccharide chain bound to the C_{28} atom of the aglycone core structure of the at least one saponin, and preferably the at least one saponin comprises the first and the second saccharide chain.

23. Conjugate of claim 22, wherein

- the at least one saponin comprises the first saccharide chain selected from:

GlcA-,
Glc-,
Gal-,
Rha-(1→2)-Ara-,
Gal-(1→2)-[Xyl-(1→3)]-GlcA-,
Glc-(1→2)-[Glc-(1→4)]-GlcA-,
Glc-(1→2)-Ara-(1→3)-[Gal-(1→2)]-GlcA-,
Xyl-(1→2)-Ara-(1→3)-[Gal-(1→2)]-GlcA-,
Glc-(1→3)-Gal-(1→2)-[Xyl-(1→3)]-Glc-(1→4)-Gal-,

Rha-(1→2)-Gal-(1→3)-[Glc-(1→2)]-GlcA-,
Ara-(1→4)-Rha-(1→2)-Glc-(1→2)-Rha-(1→2)-GlcA-,
Ara-(1→4)-Fuc-(1→2)-Glc-(1→2)-Rha-(1→2)-GlcA-,
Ara-(1→4)-Rha-(1→2)-Gal-(1→2)-Rha-(1→2)-GlcA-,
Ara-(1→4)-Fuc-(1→2)-Gal-(1→2)-Rha-(1→2)-GlcA-,
Ara-(1→4)-Rha-(1→2)-Glc-(1→2)-Fuc-(1→2)-GlcA-,
Ara-(1→4)-Fuc-(1→2)-Glc-(1→2)-Fuc-(1→2)-GlcA-,
Ara-(1→4)-Rha-(1→2)-Gal-(1→2)-Fuc-(1→2)-GlcA-,
Ara-(1→4)-Fuc-(1→2)-Gal-(1→2)-Fuc-(1→2)-GlcA-,
Xyl-(1→4)-Rha-(1→2)-Glc-(1→2)-Rha-(1→2)-GlcA-,
Xyl-(1→4)-Fuc-(1→2)-Glc-(1→2)-Rha-(1→2)-GlcA-,
Xyl-(1→4)-Rha-(1→2)-Gal-(1→2)-Rha-(1→2)-GlcA-,
Xyl-(1→4)-Fuc-(1→2)-Gal-(1→2)-Rha-(1→2)-GlcA-,
Xyl-(1→4)-Rha-(1→2)-Glc-(1→2)-Fuc-(1→2)-GlcA-,
Xyl-(1→4)-Fuc-(1→2)-Glc-(1→2)-Fuc-(1→2)-GlcA-,
Xyl-(1→4)-Rha-(1→2)-Gal-(1→2)-Fuc-(1→2)-GlcA-,
Xyl-(1→4)-Fuc-(1→2)-Gal-(1→2)-Fuc-(1→2)-GlcA-, and
any derivative thereof,
and/or

- the at least one saponin comprises the second saccharide chain selected from:

Glc-,
Gal-,
Rha-(1→2)-[Xyl-(1→4)]-Rha-,
Rha-(1→2)-[Ara-(1→3)-Xyl-(1→4)]-Rha-,
Ara-,
Xyl-,
Xyl-(1→4)-Rha-(1→2)-[R1-(→4)]-Fuc- wherein R1 is 4E-Methoxycinnamic acid,
Xyl-(1→4)-Rha-(1→2)-[R2-(→4)]-Fuc- wherein R2 is 4Z-Methoxycinnamic acid,
Xyl-(1→4)-[Gal-(1→3)]-Rha-(1→2)-4-OAc-Fuc-,
Xyl-(1→4)-[Glc-(1→3)]-Rha-(1→2)-3,4-di-OAc-Fuc-,
Xyl-(1→4)-[Glc-(1→3)]-Rha-(1→2)-[R3-(→4)]-3-OAc-Fuc- wherein R3 is 4E-Methoxycinnamic acid,
Glc-(1→3)-Xyl-(1→4)-[Glc-(1→3)]-Rha-(1→2)-4-OAc-Fuc-,
Glc-(1→3)-Xyl-(1→4)-Rha-(1→2)-4-OAc-Fuc-,
(Ara- or Xyl-)(1→3)-(Ara- or Xyl-)(1→4)-(Rha- or Fuc-)(1→2)-[4-OAc-(Rha- or Fuc-)(1→4)]-(Rha- or Fuc-),
Xyl-(1→3)-Xyl-(1→4)-Rha-(1→2)-[Qui-(1→4)]-Fuc-,
Api-(1→3)-Xyl-(1→4)-[Glc-(1→3)]-Rha-(1→2)-Fuc-,
Xyl-(1→4)-[Gal-(1→3)]-Rha-(1→2)-Fuc-,
Xyl-(1→4)-[Glc-(1→3)]-Rha-(1→2)-Fuc-,
Ara/Xyl-(1→4)-Rha/Fuc-(1→4)-[Glc/Gal-(1→2)]-Fuc-,

Api-(1→3)-Xyl-(1→4)-[Glc-(1→3)]-Rha-(1→2)-[R4-(→4)]-Fuc- wherein R4 is 5-O-[5-O-Ara/Api-3,5-dihydroxy-6-methyl-octanoyl]-3,5-dihydroxy-6-methyl-octanoic acid),
Api-(1→3)-Xyl-(1→4)-Rha-(1→2)-[R5-(→4)]-Fuc- wherein R5 is 5-O-[5-O-Ara/Api-3,5-dihydroxy-6-methyl-octanoyl]-3,5-dihydroxy-6-methyl-octanoic acid),
Api-(1→3)-Xyl-(1→4)-Rha-(1→2)-[Rha-(1→3)]-4-OAc-Fuc-,
Api-(1→3)-Xyl-(1→4)-[Glc-(1→3)]-Rha-(1→2)-[Rha-(1→3)]-4-OAc-Fuc-,
6-OAc-Glc-(1→3)-Xyl-(1→4)-Rha-(1→2)-[3-OAc-Rha-(1→3)]-Fuc-,
Glc-(1→3)-Xyl-(1→4)-Rha-(1→2)-[3-OAc--Rha-(1→3)]-Fuc-,
Xyl-(1→3)-Xyl-(1→4)-Rha-(1→2)-[Qui-(1→4)]-Fuc-,
Glc-(1→3)-[Xyl-(1→4)]-Rha-(1→2)-[Qui-(1→4)]-Fuc-,
Glc-(1→3)-Xyl-(1→4)-Rha-(1→2)-[Xyl-(1→3)-4-OAc-Qui-(1→4)]-Fuc-,
Xyl-(1→3)-Xyl-(1→4)-Rha-(1→2)-[3,4-di-OAc-Qui-(1→4)]-Fuc-,
Glc-(1→3)-[Xyl-(1→4)]-Rha-(1→2)-Fuc-,
6-OAc-Glc-(1→3)-[Xyl-(1→4)]-Rha-(1→2)-Fuc-,
Glc-(1→3)-[Xyl-(1→3)-Xyl-(1→4)]-Rha-(1→2)-Fuc-,
Xyl-(1→3)-Xyl-(1→4)-Rha-(1→2)-[Xyl-(1→3)-4-OAc-Qui-(1→4)]-Fuc-,
Api/Xyl-(1→3)-Xyl-(1→4)-[Glc-(1→3)]-Rha-(1→2)-[Rha-(1→3)]-4OAc-Fuc-,
Api-(1→3)-Xyl-(1→4)-[Glc-(1→3)]-Rha-(1→2)-[Rha-(1→3)]-4OAc-Fuc-,
Api/Xyl-(1→3)-Xyl-(1→4)-[Glc-(1→3)]-Rha-(1→2)-[R6-(→4)]-Fuc- wherein R6 is 5-O-[5-O-Rha-(1→2)-Ara/Api-3,5-dihydroxy-6-methyl-octanoyl]-3,5-dihydroxy-6-methyl-octanoic acid),
Api/Xyl-(1→3)-Xyl-(1→4)-[Glc-(1→3)]-Rha-(1→2)-[R7-(→4)]-Fuc- wherein R7 is 5-O-[5-O-Ara/Api-3,5-dihydroxy-6-methyl-octanoyl]-3,5-dihydroxy-6-methyl-octanoic acid),
Api/Xyl-(1→3)-Xyl-(1→4)-[Glc-(1→3)]-Rha-(1→2)-[R8-(→4)]-Fuc- wherein R8 is 5-O-[5-O-Ara/Api-3,5-dihydroxy-6-methyl-octanoyl]-3,5-dihydroxy-6-methyl-octanoic acid),
Api-(1→3)-Xyl-(1→4)-Rha-(1→2)-[R9-(→4)]-Fuc- wherein R9 is 5-O-[5-O-Ara/Api-3,5-dihydroxy-6-methyl-octanoyl]-3,5-dihydroxy-6-methyl-octanoic acid),
Xyl-(1→3)-Xyl-(1→4)-Rha-(1→2)-[R10-(→4)]-Fuc- wherein R10 is 5-O-[5-O-Ara/Api-3,5-dihydroxy-6-methyl-octanoyl]-3,5-dihydroxy-6-methyl-octanoic acid),
Api-(1→3)-Xyl-(1→4)-Rha-(1→2)-[R11-(→3)]-Fuc- wherein R11 is 5-O-[5-O-Ara/Api-3,5-dihydroxy-6-methyl-octanoyl]-3,5-dihydroxy-6-methyl-octanoic acid),
Xyl-(1→3)-Xyl-(1→4)-Rha-(1→2)-[R12-(→3)]-Fuc- wherein R12 is 5-O-[5-O-Ara/Api-3,5-dihydroxy-6-methyl-octanoyl]-3,5-dihydroxy-6-methyl-octanoic acid)
Glc-(1→3)-[Glc-(1→6)]-Gal-, and
any derivative thereof.

24. Conjugate of any one of the claims 1-23, wherein the at least one saponin comprises the first saccharide chain and comprises the second saccharide chain of claim 22 or 23, wherein the first saccharide chain comprises more than one saccharide moiety and the second saccharide chain comprises more than one saccharide moiety, and wherein the aglycone core structure preferably is

quillaic acid or gypsogenin, more preferably quillaic acid, wherein one, two or three, preferably one or two, of:

i. an aldehyde group in the aglycone core structure has been derivatised,

ii. a carboxyl group of a glucuronic acid moiety in the first saccharide chain has been derivatised, and

iii. at least one acetoxy (Me(CO)O-) group in the second saccharide chain has been derivatised.

25. Conjugate of any one of the claims 1-24, wherein the at least one saponin comprises:

i. an aglycone core structure comprising an aldehyde group which has been derivatised by:
- reduction to an alcohol;
- transformation into a hydrazone bond through reaction with N-ε-maleimidocaproic acid hydrazide (EMCH) wherein the maleimide group of the EMCH is optionally derivatised by formation of a thioether bond with mercaptoethanol;
- transformation into a hydrazone bond through reaction with N-[ß-maleimidopropionic acid] hydrazide (BMPH) wherein the maleimide group of the BMPH is optionally derivatised by formation of a thioether bond with mercaptoethanol; or
- transformation into a hydrazone bond through reaction with N-[κ-maleimidoundecanoic acid] hydrazide (KMUH) wherein the maleimide group of the KMUH is optionally derivatised by formation of a thioether bond with mercaptoethanol;

ii. a first saccharide chain comprising a carboxyl group, preferably a carboxyl group of a glucuronic acid moiety, which has been derivatised by transformation into an amide bond through reaction with 2-amino-2-methyl-1,3-propanediol (AMPD) or *N*-(2-aminoethyl)maleimide (AEM);

iii. a second saccharide chain comprising an acetoxy group (Me(CO)O-) which has been derivatised by transformation into a hydroxyl group (HO-) by deacetylation; or

iv. any combination of two or three derivatisations i., ii. and/or iii., preferably any combination of two derivatisations i., ii. and/or iii.

26. Conjugate of any one of the claims 1-25, wherein the at least one saponin is any one or more of: *Quillaja* bark saponin, dipsacoside B, saikosaponin A, saikosaponin D, macranthoidin A, esculentoside A, phytolaccagenin, aescinate, AS6.2, NP-005236, AMA-1, AMR, alpha-Hederin, NP-012672, NP-017777, NP-017778, NP-017774, NP-018110, NP-017772, NP-018109, NP-017888, NP-017889, NP-018108, SA1641, AE X55, NP-017674, NP-017810, AG1, NP-003881, NP-017676, NP-017677, NP-017706, NP-017705, NP-017773, NP-017775, SA1657, AG2, SO1861, GE1741, SO1542, SO1584, SO1658, SO1674, SO1832, SO1904, SO1862, QS-7, QS1861, QS-7 api, QS1862, QS-17, QS-18, QS-21 A-apio, QS-21 A-xylo, QS-21 B-apio, QS-21 B-xylo, beta-Aescin, Aescin Ia, Teaseed saponin I, Teaseedsaponin J, Assamsaponin F, Digitonin, Primula acid 1 and AS64R, or a derivative thereof, or a stereoisomer thereof, and/or any combinations thereof, preferably any one or more of QS-21 or a QS-21 derivative, SO1861 or a SO1861 derivative, SA1641 or a SA1641 derivative and GE1741 or a

GE1741 derivative, more preferably a QS-21 derivative or a SO1861 derivative, most preferably a SO1861 derivative, such as a saponin derivative of claim 24 or 25.

27. Conjugate of any one of the claims 1-26, wherein the at least one saponin is any one or more of: SO1861, SA1657, GE1741, SA1641, QS-21, QS-21A, QS-21 A-api, QS-21 A-xyl, QS-21B, QS-21 B-api, QS-21 B-xyl, QS-7-xyl, QS-7-api, QS-17-api, QS-17-xyl, QS1861, QS1862, Quillajasaponin, Saponinum album, QS-18, Quil-A, Gyp1, gypsoside A, AG1, AG2, SO1542, SO1584, SO1658, SO1674, SO1832, SO1862, SO1904, or a derivative thereof, or a stereoisomer thereof, and/or any combinations thereof, preferably the saponin derivative is a SO1861 derivative and/or a GE1741 derivative and/or a SA1641 derivative and/or a QS-21 derivative, more preferably the saponin derivative is a SO1861 derivative or a QS21 derivative, most preferably, the saponin derivative is a SO1861 derivative according to claim 24 or 25.

28. Conjugate of any one of the claims 1-27, wherein the at least one sdAb comprises an sdAb for binding to a cell-surface molecule of the cell wherein the cell is an aberrant cell such as a tumor cell, an auto-immune cell, an infected cell such as a virally infected cell, or a cell comprising a gene defect or an enzyme defect.

29. Conjugate of any one of the claims 1-28, wherein the at least one sdAb comprises an sdAb for binding to a cell-surface molecule of the cell, the sdAb derived from or based on any one or more of immunoglobulins: an anti-CD71 antibody such as IgG type OKT-9, an anti-HER2 antibody such as trastuzumab (Herceptin), pertuzumab, an anti-CD20 antibody such as rituximab, ofatumumab, tositumomab, obinutuzumab ibritumomab, an anti-CA125 antibody such as oregovomab, an anti-EpCAM (17-1A) antibody such as edrecolomab, an anti-EGFR antibody such as cetuximab, matuzumab, panitumumab, nimotuzumab, an anti-CD30 antibody such as brentuximab, an anti-CD33 antibody such as gemtuzumab, huMy9-6, an anti-vascular integrin alpha-v beta-3 antibody such as etaracizumab, an anti-CD52 antibody such as alemtuzumab, an anti-CD22 antibody such as epratuzumab, pinatuzumab, binding fragment (Fv) of anti-CD22 antibody moxetumomab, humanized monoclonal antibody inotuzumab, an anti-CEA antibody such as labetuzumab, an anti-CD44v6 antibody such as bivatuzumab, an anti-FAP antibody such as sibrotuzumab, an anti-CD19 antibody such as huB4, an anti-CanAg antibody such as huC242, an anti-CD56 antibody such as huN901, an anti-CD38 antibody such as daratumumab, OKT-10 anti-CD38 monoclonal antibody, an anti-CA6 antibody such as DS6, an anti-IGF-1R antibody such as cixutumumab, 3B7, an anti-integrin antibody such as CNTO 95, an anti-syndecan-1 antibody such as B-B4, an anti-CD79b such as polatuzumab, an anti-HIVgp41 antibody, preferably any one of an anti-HIVgp41 antibody, an anti-CD71 antibody, an anti-HER2 antibody and an anti-EGFR antibody, more preferably any one of: trastuzumab, pertuzumab, cetuximab, matuzumab, an anti-CD71 antibody, OKT-9, most preferably trastuzumab, cetuximab, the anti-CD71 antibody OKT-9.

30. Conjugate of any one of the claims 1-29, wherein the at least one effector molecule is covalently bound to at least one sdAb, preferably one, of the at least one sdAb and/or to at least one, preferably one, of the at least one saponin, either via a linker or bound directly to the sdAb and/or to the saponin, and/or wherein the at least one saponin is covalently bound to at least one sdAb, preferably one, of the at least one sdAb and/or to at least one effector molecule, preferably one, of the at least one effector molecule, either via a linker or bound directly to the sdAb and/or to the effector molecule.

31. Conjugate of any one of the claims 1-30, wherein the conjugate comprises a trifunctional linker with each of the at least one sdAb, the at least one saponin and the at least one effector molecule covalently bound to the trifunctional linker, preferably separately, either directly, or via a linker, and preferably, the conjugate comprises a trifunctional linker with one sdAb, the at least one saponin and at least one, preferably one, effector molecule covalently bound to the trifunctional linker, separately, either directly, or via a linker.

32. Conjugate of any one of the previous claims, wherein the at least one saponin is covalently bound via a thio-ether bond to a sulfhydryl group in one of the at least one sdAb and/or in one of the at least one effector molecule, the covalent bonding preferably via linker N-ε-maleimidocaproic acid hydrazide (EMCH) that is covalently bound to an aldehyde group in position C_{23} of the aglycone core structure of the saponin and that is covalently bound to the sulfhydryl group in the sdAb and/or in the effector molecule, such as a sulfhydryl group of a cysteine.

33. Conjugate of any one of the previous claims, wherein the at least one saponin is a bi-desmosidic triterpene saponin or derivative thereof belonging to the type of a 12,13-dehydrooleanane with optionally an aldehyde function in position C_{23} and comprising a glucuronic acid unit in a first saccharide chain bound at the C_3beta-OH group of the aglycone core structure of the saponin, wherein the saponin is covalently bound to an amino-acid residue of the at least one sdAb and/or of the at least one effector molecule via the carboxyl group of the glucuronic acid unit in the first saccharide chain, preferably via a linker, wherein the amino-acid residue preferably is selected from cysteine and lysine.

34. Conjugate of claim 33, wherein the at least one saponin comprises a glucuronic acid unit in the first saccharide chain at the C_3beta-OH group of the aglycone core structure of the saponin, which glucuronic acid unit is covalently bound to a linker, which linker is preferably covalently bound via an amide bond to an amine group in the at least one sdAb and/or in the at least one effector molecule, such as an amine group of a lysine or an N-terminus of the sdAb and/or of the effector molecule, preferably said linker is 1-[Bis(dimethylamino)methylene]-1H-1,2,3-triazolo[4,5-b]pyridinium 3-oxid hexafluorophosphate (HATU).

35. Conjugate of any one of the previous claims, comprising more than one covalently bound saponin moieties of the at least one saponin, preferably 2, 3, 4, 5, 6, 8, 10, 16, 32, 64, 128 or 1-100 of such moieties, or any number of such moieties therein between, such as 7, 9, 12 saponin moieties.

36. Conjugate of claim 35, wherein the more than one covalently bound saponin moieties are covalently bound directly to an amino-acid residue of the at least one sdAb and/or of the at least one effector molecule, preferably to a cysteine and/or to a lysine, and/or are covalently bound via a linker and/or via a cleavable linker.

37. Conjugate of claim 35, wherein the more than one covalently bound saponin moieties are part of a covalent saponin conjugate comprising an oligomeric molecule or a polymeric molecule to which the saponin is covalently bound, and wherein the sdAb is also covalently bound to the same oligomeric molecule or polymeric molecule as to which the saponin is bound and wherein the effector moiety is covalently bound to the sdAb or to the oligomeric molecule or the polymeric molecule, preferably 1-8 of such oligomeric molecules or polymeric molecules comprising the saponin(s) is/are covalently bound to the sdAb, or 2-4 of the oligomeric molecules or polymeric molecules comprising the saponin(s) are covalently bound to the sdAb, wherein the oligomeric molecule or the polymeric molecule of the covalent saponin conjugate is optionally a dendron such as a G2 dendron, G3 dendron, G4 dendron or G5 dendron with 4, 8, 16 and 32 binding sites for covalently binding 4, 8, 16 or 32 saponin moieties, respectively, wherein optionally 1-32 saponin moieties, preferably 2, 3, 4, 5, 6, 8, 10, 16, 32 of such moieties, or any number of such moieties therein between, such as 7, 9, 12 saponin moieties, are covalently bound to the oligomeric molecule or to the polymeric molecule of the at least one covalent saponin conjugate, either directly or via a linker.

38. Conjugate of any one of the previous claims, wherein the at least one saponin is covalently bound to at least one of the at least one sdAb and/or to at least one of the at least one effector molecule via a cleavable linker.

39. Conjugate of claim 38, wherein the cleavable linker is subject to cleavage under acidic conditions, reductive conditions, enzymatic conditions and/or light-induced conditions, and preferably the cleavable linker comprises a cleavable bond selected from a hydrazone bond and a hydrazide bond subject to cleavage under acidic conditions, and/or a bond susceptible to proteolysis, for example proteolysis by Cathepsin B, and/or a bond susceptible for cleavage under reductive conditions such as a disulfide bond.

40. Conjugate of claim 38 or 39, wherein the cleavable linker is subject to cleavage *in vivo* under acidic conditions as for example present in endosomes and/or lysosomes of mammalian cells, preferably human cells, preferably at pH 4.0 – 6.5, and more preferably at pH $\leq$ 5.5.

41. Conjugate of claim 37 or any one of claims 38-40 when dependent on claim 37, wherein the oligomeric molecule or the polymeric molecule of the covalent saponin conjugate is covalently bound to at least one of the at least one sdAb and/or to at least one of the at least one effector molecule, preferably to an amino-acid residue of the sdAb and/or of the effector molecule.

42. Conjugate of claim 41, wherein the at least one saponin is covalently bound to the oligomeric molecule or to the polymeric molecule of the covalent saponin conjugate via a cleavable linker according to any one of the claims 38-40.

43. Conjugate of claim 41 or 42, wherein the at least one saponin is covalently bound to the oligomeric molecule or to the polymeric molecule of the covalent saponin conjugate via any one or more of an imine bond, a hydrazone bond, a hydrazide bond, an oxime bond, a 1,3-dioxolane bond, a disulfide bond, a thio-ether bond, an amide bond, a peptide bond or an ester bond, preferably via a linker.

44. Conjugate of any one of the claims 41-43, wherein the at least one saponin comprises an aglycone core structure comprising an aldehyde function in position C_{23} and the at least one saponin comprises optionally a glucuronic acid function in a first saccharide chain at the C_3beta-OH group of the aglycone core structure of the saponin, which aldehyde function is involved in the covalent bonding to the oligomeric molecule or to polymeric molecule of the covalent saponin conjugate, and/or, if present, the glucuronic acid function is involved in the covalent bonding to the oligomeric molecule or to the polymeric molecule of the covalent saponin conjugate, the bonding of the saponin either via a direct covalent bond, or via a linker.

45. Conjugate of claim 44, wherein the aldehyde function in position C_{23} of the aglycone core structure of the at least one saponin is covalently bound to linker EMCH, which EMCH is covalently bound via a thio-ether bond to a sulfhydryl group in the oligomeric molecule or in the polymeric molecule of the covalent saponin conjugate, such as a sulfhydryl group of a cysteine.

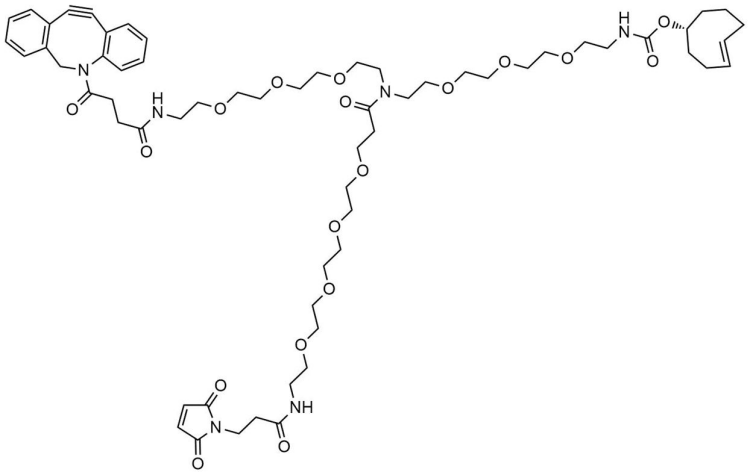
46. Conjugate of claim 44 or 45, wherein the glucuronic acid function in the first saccharide chain at the C_3beta-OH group of the aglycone core structure of the saponin is covalently bound to linker HATU, which HATU is covalently bound via an amide bond to an amine group in the oligomeric molecule or in the polymeric molecule of the covalent saponin conjugate, such as an amine group of a lysine or an N-terminus of a protein.

47. Conjugate of any one of the claims 41-46, wherein the polymeric molecule or the oligomeric molecule of the covalent saponin conjugate is bound to at least one, preferably one, of the at least one sdAb and/or to at least one, preferably one, of the at least one effector molecule, preferably to an amino-acid residue of the sdAb and/or to an amino-acid residue of the effector molecule, involving a click chemistry group on the polymeric molecule or the oligomeric molecule of the covalent saponin conjugate, the click chemistry group preferably selected from a tetrazine, an azide, an alkene or an alkyne, or a cyclic derivative of these groups, more preferably the click chemistry group is an azide.

48. Conjugate of any one of the claims 41-47, wherein the polymeric molecule or the oligomeric molecule of the covalent saponin conjugate comprises a polymeric structure and/or an oligomeric structure

selected from: a linear polymer, a branched polymer and/or a cyclic polymer, an oligomer, a dendrimer, a dendron such as a G2 dendron or a G3 dendron, a dendronized polymer, a dendronized oligomer, a DNA, a polypeptide, a poly-lysine, a poly-ethylene glycol, an oligo-ethylene glycol (OEG), such as OEG_3, OEG_4 and OEG_5, or an assembly of these polymeric structures and/or oligomeric structures which assembly is preferably built up by covalent cross-linking, preferably the polymeric molecule or the oligomeric molecule of the covalent saponin conjugate is a dendron such as a poly-amidoamine (PAMAM) dendrimer.

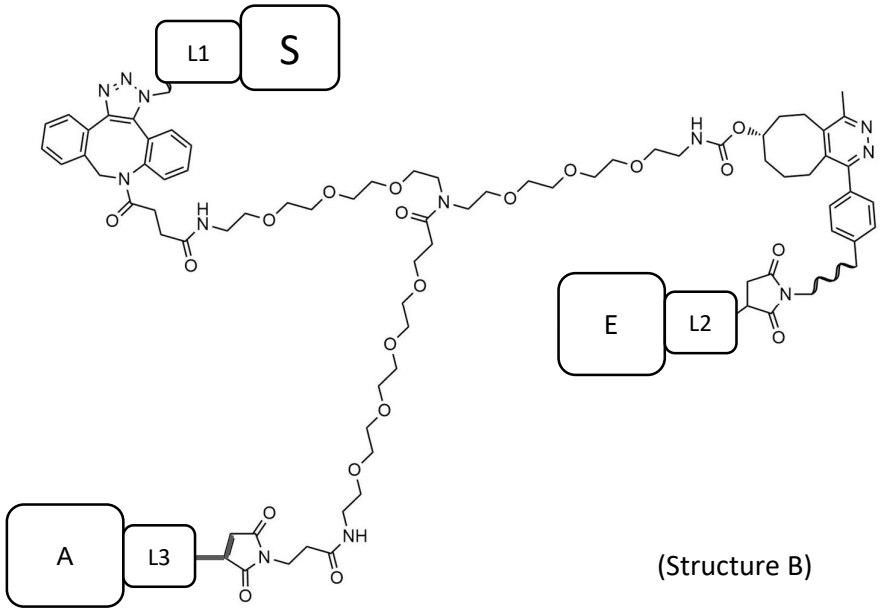
49. Conjugate according to any one of claim 1 – 48, wherein the at least one saponin is covalently bound to at least one, preferably one, of the at least one sdAb and is covalently bound to at least one, preferably one, of the at least one effector molecule via a tri-functional linker, preferably the trifunctional linker represented by Structure A:



(Structure A)

,

the conjugate preferably comprising the trifunctional linker of Structure A and having a molecular structure represented by Structure B:



(Structure B)

,

wherein S is the at least one saponin or the covalent saponin conjugate of any one of the claims 37 and 41-48, E is the at least one, preferably one, effector molecule, A is the at least one sdAb such as a single sdAb, L1, L2 and L3 are each individually a bond between the trifunctional linker and the saponin or the covalent saponin conjugate, the effector molecule, and the sdAb, respectively, or L1, L2 and L3 are a linker, wherein L1, L2 and L3 are the same or different.

50. Pharmaceutical composition comprising the conjugate of any one of the claims 1-49, and optionally a pharmaceutically acceptable excipient and/or pharmaceutically acceptable diluent.

51. Pharmaceutical composition of claim 50, for use as a medicament.

52. Use of the pharmaceutical composition of claim 50, in the manufacture of a medicament for treatment or the prophylaxis of any one or more of: a cancer, an auto-immune disease such as rheumatoid arthritis, an enzyme deficiency, a disease related to an enzyme deficiency, a gene defect, a disease relating to a gene defect, an infection such as a viral infection, hypercholesterolemia, primary hyperoxaluria, haemophilia A, haemophilia B, alpha-1 antitrypsin related liver disease, acute hepatic porphyria, an amyloidosis and transthyretin-mediated amyloidosis.

53. Pharmaceutical composition of claim 51 or use of the pharmaceutical composition of claim 52, wherein the saponin is SO1861, a SO1861 derivative, QS-21, or a QS-21 derivative, preferably a SO1861 derivative or a QS-21 derivative, more preferably a SO1861 derivative of any one of the claims 24-27.

54. Pharmaceutical composition for use of claim 53 or use of the pharmaceutical composition of claim 52 or 53, wherein:

- said use is in the treatment or prevention of cancer in a human subject; and/or
- said use is in the treatment or prophylaxis of cancer in a patient in need thereof, wherein the at least one sdAb binds to a cell-surface molecule of the cell, preferably to a tumor-cell surface molecule of the cell, more preferably to a tumor cell-specific surface molecule of the cell; and/or
- the pharmaceutical composition, preferably a therapeutically effective amount of the pharmaceutical composition, is administered to a patient in need thereof, preferably a human patient.

55. *In vitro* or *ex vivo* method for transferring the effector molecule of any one of the claims 1-49 from outside a cell to inside said cell, preferably to the cytosol of said cell, comprising the steps of:

a) providing a cell which expresses on its cell surface the binding site for the at least one sdAb comprised by the conjugate of any one of the claims 1-49, said binding site preferably present on a cell-surface molecule of the cell according to any one of the claims 4-9, 20, 28 or 29, said cell preferably being selected from a liver cell, an aberrant cell such as a virally infected cell, an auto-immune cell, a cell comprising a gene defect, a cell comprising an enzyme deficiency and a tumor cell;
b) providing the conjugate of any one of the claims 1-49, said conjugate comprising the effector molecule to be transferred into the cell provided in step a); and
c) contacting the cell of step a) *in vitro* or *ex vivo* with the conjugate of step b),

therewith effecting the transfer of said conjugate comprising the effector molecule from outside the cell to inside said cell, and by effecting the transfer of said conjugate effecting the transfer of the effector molecule from outside the cell to inside said cell, preferably into the cytosol of said cell.

56. *In vitro* or *ex vivo* method for transferring the conjugate of any one of the claims 1-49 from outside a cell to inside said cell, comprising the steps of:

a) providing a cell which expresses on its cell surface the binding site for the at least one sdAb comprised by the conjugate of any one of the claims 1-49, said binding site preferably present on a cell-surface molecule of the cell according to any one of the claims 4-9, 20, 28 or 29, said cell preferably being selected from a liver cell, an aberrant cell such as a virally infected cell, an auto-immune cell, a cell comprising a gene defect, a cell comprising an enzyme deficiency and a tumor cell;
b) providing the conjugate of any one of the claims 1-49; and
c) contacting the cell of step a) *in vitro* or *ex vivo* with the conjugate of step b), therewith effecting the transfer of the conjugate from outside the cell to inside said cell.