CLAIMS

1. A compound having the structure of Formula I below, or a pharmaceutically acceptable salt thereof:

$$A\text{-}L^1\text{-}(L^2)_n\text{-}B$$

Formula I

wherein A is a chelating moiety or a metal complex thereof,

wherein said chelating moiety is selected from the group consisting of DOTA (1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid), DOTMA (1R,4R,7R,10R)-α, α', α", α'"-tetramethyl-1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid, DOTAM (1,4,7,10-tetrakis(carbamoylmethyl)-1,4,7,10-tetraazacyclododecane), DO3AM-acetic acid (2-(4,7,10-tris(2-amino-2-oxoethyl)-1,4,7,10-tetraazacyclododecan-1-yl)acetic acid), DOTP (1,4,7,10-tetraazacyclododecane-1,4,7,10-tetra(methylene phosphonic acid)), DOTA-4AMP (1,4,7,10-tetraazacyclododecane-1,4,7,10-tetrakis(acetamido-methylenephosphonic acid), NOTA (1,4,7-triazacyclononane-1,4,7-triacetic acid), and HP-DO3A (hydroxypropyltetraazacyclododecanetriacetic acid);

wherein the metal of said metal complex is selected from the group consisting of Bi, Pb, Y, Mn, Cr, Fe, Co, Zn, Ni, Tc, In, Ga, Cu, Re, a lanthanide, an actinide, or

the metal of said metal complex is a radionuclide selected from the group consisting of ^{47}Sc, ^{55}Co, ^{60}Cu, ^{61}Cu, ^{62}Cu, ^{64}Cu, ^{67}Cu, ^{66}Ga, ^{67}Ga, ^{68}Ga, ^{82}Rb, ^{86}Y, ^{87}Y, ^{89}Zr, ^{90}Y, ^{97}Ru, ^{99}Tc, ^{99m}Tc, ^{105}Rh, ^{109}Pd, ^{111}In, ^{117m}Sn, ^{149}Pm, ^{149}Tb, ^{153}Sm, ^{166}Ho, ^{177}Lu, ^{186}Re, ^{188}Re, ^{198}Au, ^{199}Au, ^{201}Tl, ^{203}Pb, ^{211}At, ^{212}Pb, ^{212}Bi, ^{213}Bi, ^{223}Ra, ^{225}Ac, ^{227}Th, and ^{229}Th

L^1 is optionally substituted C_1-C_6 alkyl or optionally substituted C_1-C_6 heteroalkyl,;

B is a human or humanized IgG antibody or an antigen-binding fragment thereof;

n is 1; and

L^2, has the structure:

$$(\text{-}X^1\text{-}L^3\text{-}Z^1\text{-})$$

Formula II

wherein X^1 is C=O(NR^1), or NR^1,

in which R^1 is H or optionally substituted C_1-C_6 alkyl or optionally substituted C_1-C_6 heteroalkyl, substituted aryl or heteroaryl;

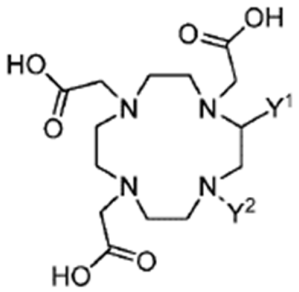
L^3 is optionally substituted C1-C_{50} alkyl or optionally substituted C_1-C_{50} heteroalkyl; and

Z^1 is CH_2, C=O, C=S, OC=O, NR^1C=O, NR^1; in which

R^1 is a hydrogen or optionally substituted C_1-C_6 alkyl, pyrrolidine-2,5-dione.

2. The compound in claim 1, wherein the chelating moiety is DOTA (1,4,7,1 0-tetraazacyclododecane-1,4,7,10-tetraacetic acid).

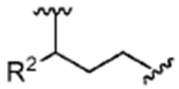
3. The compound of claim 2, wherein the chelating moiety has the structure:



Wherein Y^1 is $-CH_2OCH_2(L^2)_n$-B, $C=O(L^2)_n$-B, or $C=S(L^2)_n$-B and Y^2 is $-CH_2CO_2H$; or

Y^1 is H, and Y^2 is L^1-$(L^2)_n$-B

4. The compound of claim 1, wherein L^1 has the structure:



Formula III

wherein R^2 is hydrogen or $–CO_2H$.

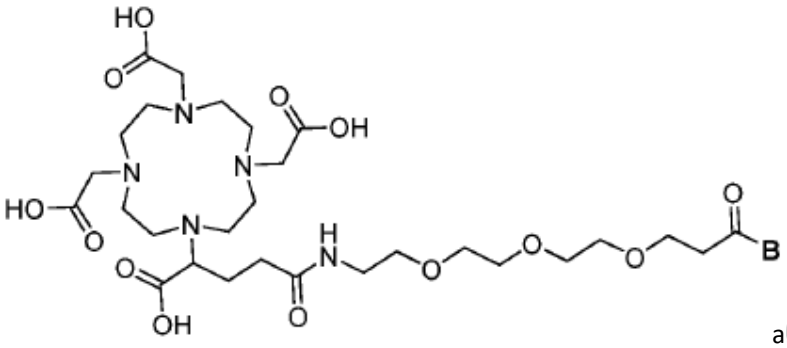
5. The compound of claim 4, wherein A is a metal complex and the metal of said metal complex is a radionuclide selected from the group consisting of ^{64}Cu, ^{68}Ga, ^{90}Y, ^{111}In, ^{177}Lu, ^{225}Ac and ^{227}Th, wherein the metal is for use in imaging or therapeutic agents.

6. The compound of claim 3, wherein Y^1 is H.

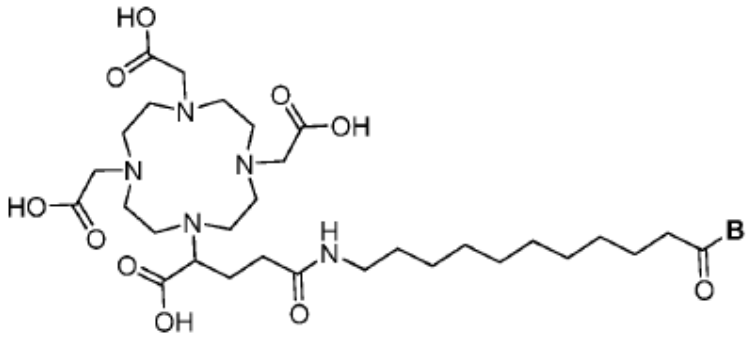
7. The compound of claim 1, wherein X^1 is $C=O(NR^1)$ and R^1 is H.

8. The compound of claim 1, wherein Z^1 is $-CH_2$.

9. The compound of claim 1, wherein the compound is selected from the group consisting of:



ahd



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10. The compound of claim 5, wherein the radionuclide is ^{68}Ga, ^{111}In, ^{177}Lu, or ^{225}Ac.

11. The compounds of claim 10, wherein the radionuclide is ^{111}In.

12. The compound of claim 10, wherein the radionuclide is ^{68}Ga.

13. The compound of claim 1, wherein the metal is an alpha-emitting radionuclide.

14. The compound of claim 13, wherein the radionuclide is ^{225}Ac or a progeny thereof.

15. A pharmaceutical composition comprising a compound of claim 1 and a pharmaceutically acceptable excipient.

16. The compound of claim 1, wherein L^3 is $C_5 – C_{20}$ polyethylene glycol.