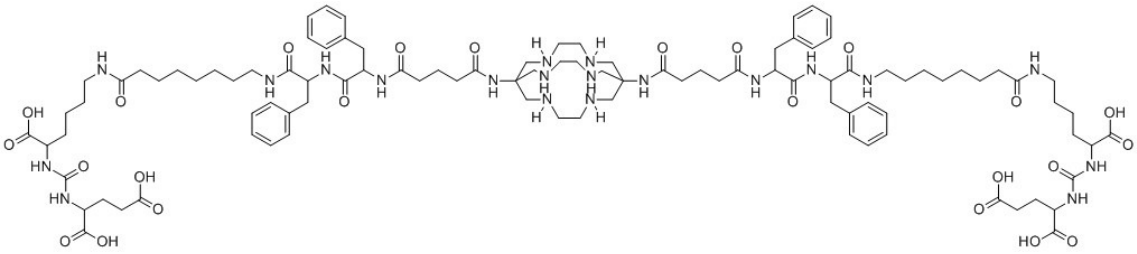
The claims defining the invention are as follows:

1. A method for the detection and/or diagnosis of a cancer associated with overexpression of a PSMA receptor in a subject in need thereof, the method comprising:

i) administering to the subject a dose of between about 100 MBq to about 300 MBq of a compound of Formula (I) or a salt thereof complexed with ^{64}Cu;



Formula (I)

ii) imaging of the subject by PET imaging at a time of at least about 8 hours after administration of the compound of Formula (I).

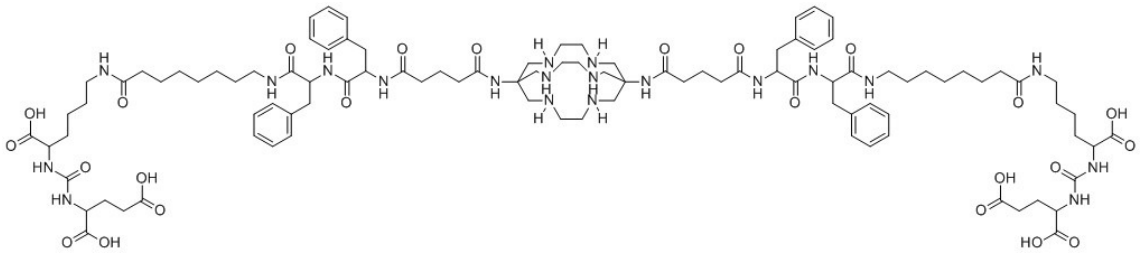
2. A method according to claim 1, wherein the dose of the compound of Formula (I) or a pharmaceutically acceptable salt thereof complexed with ^{64}Cu is about 200 MBq.

3. A method according to claim 1 or 2, wherein the imaging of the subject by PET imaging is at a time of about 8 hours, about 10 hours, about 12 hours, about 16 hours, about 20 hours, about 24 hours, about 28 hours, about 32 hours or about 36 hours after administration of the compound of Formula (I).

4. A method according to any one of claims 1 to 3, wherein the cancer associated with the PSMA receptor is a prostate cancer, or wherein the cancer is a prostate cancer and is associated with biochemical recurrence.

5. A method for the detection and/or diagnosis of a secondary cancer related to a primary cancer associated with overexpression of a PSMA receptor in a subject in need thereof, the method comprising:

i) administering to the subject a dose of between about 100 MBq to about 300 MBq of a compound of Formula (I) or a salt thereof complexed with ^{64}Cu;



Formula (I)

ii) imaging of the subject by PET imaging at a time of at least about 8 hours after administration of the compound of Formula (I).

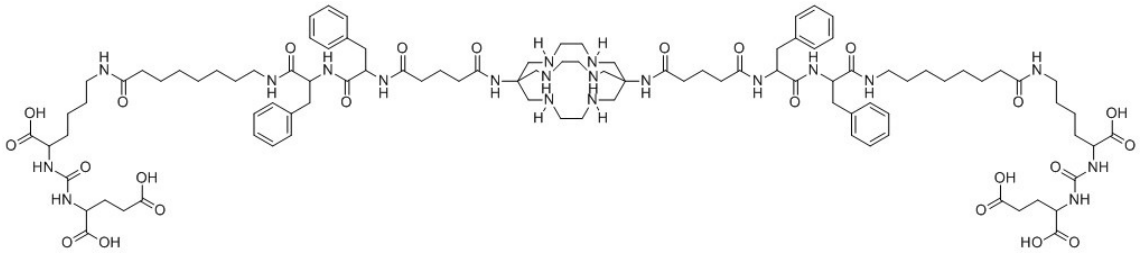
6. A method according to claim 5, wherein the dose of the compound of Formula (I) or a pharmaceutically acceptable salt thereof complexed with ^{64}Cu is about 200 MBq.

7. A method according to claim 5 or 6, wherein the imaging of the subject by PET imaging is at a time of about 8 hours, about 10 hours, about 12 hours, about 16 hours, about 20 hours, about 24 hours, about 28 hours, about 32 hours or about 36 hours after administration of the compound of Formula (I).

8. A method according to any one of claims 5 to 7, wherein the cancer associated with the PSMA receptor is a prostate cancer, or wherein the cancer is a prostate cancer and is associated with biochemical recurrence.

9. A method for determining the TNM stage of a prostate cancer in a subject, the method comprising

i) administering to the subject a dose of between about 100 MBq to about 300 MBq of a compound of Formula (I) or a salt thereof complexed with ^{64}Cu;



Formula (I)

ii) imaging of the subject by PET imaging; and

iii) determining the TNM stage of the cancer on the basis of one or more images obtained in step ii) and the ISUP grade of the tumour;

wherein the ISUP grade of the tumour is determined prior to steps i) to iii).

10. A method according to claim 9, wherein the imaging of the subject by PET imaging is at a time of about 8 hours, about 10 hours, about 12 hours, about 16 hours, about 20 hours, about 24 hours, about 28 hours, about 32 hours or about 36 hours after administration of the compound of Formula (I).

11. A method according to claim 9 or 10, wherein the method further comprises the step of determining the tumor-to-background ratio (TTBR) of a lesion visualised by imaging, wherein the tumor-to-background ratio (TTBR) of a lesion associated with the cancer in a the subject as detected by imaging in step ii) is more than about 40.

12. A method according to any one of claims 9 to 11, wherein the ISUP grade of the tumour is Grade 1, Grade 2, Grade 3, Grade 4 or Grade 5.

13. A method according to any one of claims 9 to 12, wherein the ISUP grade of the tumour is determined by calculation of the Gleason Score.

14. A method according to claim 13, wherein the Gleason Score is 6, 7, 8, 9 or 10.

15. A method according to any one of claims 9 to 14, wherein the TNM stage of the prostate cancer is selected from one or more of TX, T0, T1, T2, T3, T4, NX, N0, N1, N2, N3, MX, M0 or M1.