

## THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method of assessing prognosis of a prostate cancer in a subject, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: Adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1 (APPL1), Sortilin 1 (SORT1), and Syndecan-1 (SDC1), in a biological sample from the subject as compared to a reference, wherein the reference is a normal prostate tissue, a benign prostate tissue, a normal blood sample or a normal plasma sample.
2. A method of measuring the severity of a prostate cancer in a subject, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: Adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1 (APPL1), Sortilin 1 (SORT1), and Syndecan-1 (SDC1), in a biological sample from the subject as compared to a reference, wherein the reference is a normal prostate tissue, a benign prostate tissue, a normal blood sample or a normal plasma sample.
3. A method of monitoring the progression of a prostate cancer in a subject, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: Adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1 (APPL1), Sortilin 1 (SORT1), and Syndecan-1 (SDC1), in a biological sample from the subject as compared to a reference, wherein the reference is a normal prostate tissue, a benign prostate tissue, a normal blood sample or a normal plasma sample.
4. A method of identifying a subject suffering from prostate cancer who is likely to be responsive to a cancer therapy, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: Adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1 (APPL1), Sortilin 1 (SORT1), and Syndecan-1

(SDC1), in a biological sample from the subject as compared to a reference, wherein the reference is a normal prostate tissue, a benign prostate tissue, a normal blood sample or a normal plasma sample.

5. A method of predicting the risk of recurrence of prostate cancer in a subject following a cancer therapy, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: Adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1 (APPL1), Sortilin 1 (SORT1), and Syndecan-1 (SDC1), in a biological sample from the subject as compared to a reference, wherein the reference is a normal prostate tissue, a benign prostate tissue, a normal blood sample or a normal plasma sample.
6. A method of stratifying a subject suffering from prostate cancer into a likely responder or non-responder to a cancer therapy, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: Adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1 (APPL1), Sortilin 1 (SORT1), and Syndecan-1 (SDC1), in a biological sample from the subject as compared to a reference, wherein the reference is a normal prostate tissue, a benign prostate tissue, a normal blood sample or a normal plasma sample.
7. A method of assessing the suitability of: androgen receptor (AR) therapeutic intervention, non-AR therapy, AR therapeutic monitoring, a PET scan and/or radiation therapy, for a subject suffering from prostate cancer, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: Adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1 (APPL1), Sortilin 1 (SORT1), and Syndecan-1 (SDC1), in a biological sample from the subject as compared to a reference, wherein the reference is a normal prostate tissue, a benign prostate tissue, a normal blood sample or a normal plasma sample.

8. A method of determining the metastatic potential of a prostate cancer in a subject, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: Adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1 (APPL1), Sortilin 1 (SORT1), and Syndecan-1 (SDC1), in a biological sample from the subject as compared to a reference, wherein the reference is a normal prostate tissue, a benign prostate tissue, a normal blood sample or a normal plasma sample.
9. A method of determining the rate of relapse of prostate cancer in a subject, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: Adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1 (APPL1), Sortilin 1 (SORT1), and Syndecan-1 (SDC1), in a biological sample from the subject as compared to a reference, wherein the reference is a normal prostate tissue, a benign prostate tissue, a normal blood sample or a normal plasma sample.
10. A method of determining the risk of mortality of prostate cancer in a subject, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: Adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1 (APPL1), Sortilin 1 (SORT1), and Syndecan-1 (SDC1), in a biological sample from the subject as compared to a reference, wherein the reference is a normal prostate tissue, a benign prostate tissue, a normal blood sample or a normal plasma sample.
11. A method of assessing whether prostate cancer in a subject is slow growing, indolent, or aggressive, the method comprising detecting one or more of an altered presence, level, secretion and distribution of at least the following three endosomal biomarkers: Adaptor protein, phosphotyrosine interacting with PH domain and leucine zipper 1 (APPL1), Sortilin 1 (SORT1), and Syndecan-1 (SDC1), in a biological sample from the subject as compared to a reference,

wherein the reference is a normal prostate tissue, a benign prostate tissue, a normal blood sample or a normal plasma sample.

12. The method of any one of claims 1 to 11, wherein the reference is a normal prostate tissue or a benign prostate tissue
13. The method of any one of claims 1 to 11, wherein the reference is a normal blood sample or a normal plasma sample.
14. The method of any one of claims 1 to 13, wherein the method comprises detecting altered elevated levels or distribution of APPL1, SORT1 and SDC1.
15. The method of any one of claims 1 to 14, wherein the endosomal biomarkers are proteins.
16. The method of any one of claims 1 to 14, wherein the endosomal biomarkers are nucleic acids.
17. The method of any one of claims 1 to 16, wherein the method comprises determining the progression of the prostate cancer in the subject.
18. The method of any one of claims 1 to 17, wherein the method further comprises comparing the presence, level, secretion and distribution of the selected markers with one or more other markers known to be indicative of the presence or absence of prostate cancer in the subject.
19. The method of any one of claims 1 to 18, wherein the prostate cancer is a prostate cancer with a Gleason score.
20. The method of any one of claims 1 to 19, wherein the method is conducted by visualisation of staining intensity.