Bivalent GRPR/PSMA-Targeting Agents for Prostate Cancer Diagnosis/Therapy

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Technology description

University of Missouri Office of Technology Management & Industry Relations Non-Confidential Abstract of Invention UM Disclosure No. 17UMC001 A Novel Dual Targeting Biomarker for Prostate Cancer Diagnosis and treatment information for prostate cancer remains a difficult problem. Current methods in diagnosis include some combination of rectal exam, blood analysis, MRI, CT, and ultrasound. Medical practitioners are often left with difficult decisions regarding which tests to order, both for discovery of prostate cancer cells as well as during treatment. Much of this problem arises from the high rate of false positives that occur in the traditional PSA blood analysis test. To combat these issues, researchers have begun creating efficient biomarker targeting compounds to be used in PET and SPECT scans. Visualizing cancerous growth has a number of advantages and can be both more accurate and meaningful than traditional diagnostic methods. Two of the most promising biomarkers for prostate cancer cells are GRPr and PSMA, both of which have been separately used successfully to diagnose prostate cancer. However, it has recently been shown that GRPr and PSMA have their own problems. GRPr and PSMA levels appear to change in patients based upon a number of factors, for instance cancer growth patterns and the age of a tumor. As a result, imagining based upon only one biomarker may be insufficient to capture the full range of prostate cancer, especially if a patient’ s cancer has metastasized.

Application area

Prostate Cancer • Diagnostic • Target Treatments

Advantages

Low Cost • Flexible • Simple

Institution

University of Missouri, Columbia

Inventors

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