

ION CHANNEL BLOCKADE OF RADIUM-223 GUT UPTAKE

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Technology Description

Researchers at Washington University in St. Louis have developed a method to reduce gut uptake of Radium-223 and improve its targeting to metastasized bone cancer. Prostate cancer is the most common cancer among men and a leading cause of cancer-related mortality. Prostate cancer can metastasize to the bone. Radium-223 has been approved to treat prostate cancer patients with bone metastases. This radiotherapy is not optimal, however, as approximately half of the activity is rapidly transited via the small bowel into the intestines. This leads to treatment complications and a reduction of therapeutic dose to the targeted bone metastases. To help overcome this limitation the inventors have developed this technology. It provides a method of using ion channel blockers to block gut uptake of Radium-223 and increase bone targeting. This method can be used to reduce background effects and increase the efficacy of Radium-223 therapy.

Stage of Research

Initial studies show great promise and further development is ongoing.

Applications

- Treatment of prostate cancer
 - Improve radiotherapy for bone metastases
- Potential for use in development of other alpha particle emitting radiotherapies

Key Advantages

- Improve effectiveness of Radium-223 therapy
 - Increase targeting to sites of bone metastasis
 - Reduce off-target, gut uptake of Radium-223
- Potential to reduce required dosage of Radium-223
- Combines 2 FDA approved therapies

Patents

- Provisional patent application has been filed

Related Web Links

- [Dr. Thorek profile](#)