Methods and Compositions for Treating Prostate Cancer Using DNA Vaccines

INVENTORS • Douglas McNeel, Brian Olson

WARF: PO5235US

The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a DNA vaccine for prostate cancer treatment.

OVERVIEW

Prostate cancer is a significant health risk for men over the age of 50 and currently is a pervasive health threat with as many as 200,000 new cases diagnosed each year in the US alone. At present, there is no accepted adjuvant treatment for patients undergoing radical prostatectomy or ablative radiation therapy that has been proven to prevent progression to metastatic disease.

THE INVENTION

UW-Madison researchers have developed a new approach for inducing an immune response to a protein critical in the progression of prostate cancer. Their approach utilizes a DNA vaccine directed against the androgen receptor (AR). The invention describes the generation and administration of a DNA plasmid containing all or select portions of the AR gene in order to elicit an immune response in a mammal, including in a human.

APPLICATIONS

• Prostate cancer treatment

KEY BENEFITS

• DNA vaccines are generally regarded as safe and non-toxic
• Plasmid-based DNA vaccines may potentially stay present within their target cells, unlike protein and peptide vaccines that are rapidly cleared, thereby enhancing the immune response
• Proteins expressed from these DNA vaccines were shown to lyse prostate cancer cells in vitro
• This DNA vaccine could be combined with DNA vaccines for other prostate-specific

THE WARF ADVANTAGE

WARF: A Leader in Technology Transfer Since 1925
Since its founding as a private, nonprofit affiliate of the University of Wisconsin–Madison, WARF has provided patent and licensing services to UW–Madison and worked with commercial partners to transform university research into products that benefit society. WARF intellectual property managers and licensing staff members are leaders in the field of university-based technology transfer. They are familiar with the intricacies of patenting, have worked with researchers in relevant disciplines, understand industries and markets, and have negotiated innovative licensing strategies to meet the individual needs of business clients.

The University of Wisconsin and WARF – A Single Location to Accelerate Translational Development of New Drugs
UW–Madison has the integrative capabilities to complete many key components of the drug development cycle, from discovery through clinical trials. As one of the top research universities in the world, and one of the two best-funded universities for research in the country, UW–Madison offers state-of-the-art facilities unmatched by most public universities.

These include the Small Molecule Screening Facility at the UW Comprehensive Cancer Center; the Zeeh Pharmaceutical Experiment Station, which provides consulting and laboratory services for developing formulations and studying solubility, stability and more; the Waisman Clinical Biomanufacturing Facility; the Wisconsin Institute for Medical Research, which provides UW–Madison with a complete translational research facility; and the innovative, interdisciplinary Wisconsin Institutes for Discovery, home to the private, nonprofit Morgridge Institute for Research and its public twin, WID, part of the university's graduate school. The highly qualified experts at these facilities are ready to work with you to create a library of candidates for drug development.
antigens, such as PAP, to form a multivalent cocktail.

STAGE OF DEVELOPMENT

The development of this technology was supported by WARF Accelerator. WARF Accelerator selects WARF’s most commercially promising technologies and provides expert assistance and funding to enable achievement of commercially significant milestones. WARF believes that these technologies are especially attractive opportunities for licensing.

ADDITIONAL INFORMATION

Related Portfolios
WARF Accelerator Program Technologies

Tech Fields
Pharmaceuticals & Vitamin D - Oncology & hematology

CONTACT INFORMATION

For current licensing status, please contact Andy DeTienne at adetienne@warf.org or 608-960-9857.