

# OncoSec Medical Receives VBHRC Funding to Study Novel Gene Therapy Approach in Melanoma

SAN DIEGO-- OncoSec Medical Inc. (OTCQB:[ONCS](#)), a company developing DNA-based intratumoral cancer immunotherapies, along with researchers at Old Dominion University (ODU) and Eastern Virginia Medical School (EVMS), has received a \$585,000 grant from the Virginia Biosciences Health Research Corporation (VBHRC) to study a novel gene therapy approach for the treatment of malignant melanoma.

The study, titled “Biomarker-Driven Optimization of IL-12 Gene Electrotransfer for the Treatment of Melanoma,” aims to identify specific diagnostic markers in circulation that characterize successful electro-transfer therapy of DNA-encoded IL-12 in patients with melanoma.

“Right now,” stated Dr. Robert H. Pierce, Chief Scientific Officer of OncoSec, “we have to wait to observe local and systemic clinical tumor regressions to know if a given treatment cycle ‘has worked’. If we had in our hands a near real-time blood-based biomarker, which indicated the success of a treatment and its relative strength, then we could quickly optimize and accelerate our development. Hopefully, we can find a biomarker approach that is generalizable – beyond IL-12 — to all of our future intratumoral gene-electro transfer targets.”

O. John Semmes, Ph.D., Anthem Distinguished Professor for Cancer Research and Director of the Leroy T. Canoles Jr. Cancer Research Center, will lead a team at EVMS in identifying specific biomarkers that indicate the presence and extent of a response to DNA IL-12 therapy. This insight will guide efforts to determine a dosing strategy that elicits the most effective anti-tumor response with the fewest undesirable side effects.

Dr. Semmes said, “We want to pick up an expression pattern of proteins that will tell us a strong IL-12 response has been generated. Once we have that, we can ask what happens when you change the dose.”

Richard Heller, Ph.D., Reidy Center Director and Professor/Eminent Scholar of the School of Medical Diagnostics and Translational Sciences at Old Dominion University’s College of Health Sciences, will serve as principal investigator for the study. Dr. Heller is an inventor of the pIL-12 protocol being used in the study and is recognized as a pioneer in the field of gene-electro therapy.

“This is an excellent opportunity to move this technology forward in a manner that will be beneficial to a larger number of patients,” said Dr. Heller. “I am looking forward to working with Dr. Semmes and his team at EVMS and Dr. Pierce and his team at OncoSec on this exciting and ground breaking project.”

## **About Frank Reidy Research Center for Bioelectrics**

The mission of the Center is to increase scientific knowledge and understanding of the interaction of electromagnetic fields and ionized gases with biological cells and to apply this knowledge to the development of medical diagnostics, therapeutics, and environmental decontamination. The objectives of the Center are to perform leading edge interdisciplinary and multi-institutional research, recruit top faculty and exceptional graduate students, support regional, national and international programs, and to increase external funding and institutional visibility.

## **About Leroy T. Canoles Jr. Cancer Research Center**

The EVMS Leroy T. Canoles Jr. Cancer Research Center is dedicated to translational research that leads to improved care for the types of cancer most prevalent in our community. Clinicians and scientists collaborate to connect the laboratory and the physician's office. The center's scientists seek to expand research into new diagnostic and therapeutic tools as a means to improve physicians' ability to identify the best course of treatment for each patient.

## **About OncoSec Medical**

OncoSec Medical Inc. is a biopharmaceutical company developing its investigational ImmunoPulse intratumoral cancer immunotherapy. OncoSec Medical's core technology is designed to enhance the local delivery and uptake of DNA IL-12 and other DNA-based immune-targeting agents. Clinical studies of ImmunoPulse have demonstrated an acceptable safety profile and preliminary evidence of anti-tumor activity in the treatment of various skin cancers, as well as the potential to initiate a systemic immune response without the systemic toxicities associated with other treatments. OncoSec's lead program evaluating ImmunoPulse for the treatment of metastatic melanoma is currently in Phase 2 development, and is being conducted in collaboration with several prominent academic medical centers. As the company continues to evaluate ImmunoPulse in its current indications, it is also focused on identifying and developing new immune-targeting agents, investigating additional tumor indications, and evaluating combination-based immunotherapy approaches. For more information, please visit [www.oncosec.com](http://www.oncosec.com).

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