Isotron development of Cu67 radioisotope

Final CRADA Report

Global Security Sciences Division

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prepared by
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Participants: Iotron Medical, Inc.

Oct. 31, 2016

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Non Proprietary Final CRADA Report

Date: October 31, 2016

CRADA Number: C1100901

CRADA Title: Iotron development of Cu67 radioisotope

CRADA Start/End Date: February 1, 2012 to January 31, 2015

Argonne Dollars: \$250,000

Participant Dollars: \$560,000

Argonne PI: David Ehst

Participant(s):

Iotron Medical Inc. \$560,000
Name Participant Dollars

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Name \$ _____
Participant Dollars

Complete Address

DOE Program Dennis Phillips
Manager:

Summary of Major Accomplishments:

The collaboration has developed a method of producing the Cu-67 medical isotope for beta therapy of cancers such as non-Hodgkins melanoma. In particular we have used electron linac production of intense gamma ray beams to convert Zn-68 into Cu-67 in metal targets. The targets are subsequently processed by separating the Cu isotope from the Zn metal using sublimation, with ceramic components to avoid contamination of the final product.

Summary of Technology Transfer Benefits to Industry:

Development of this new therapy for cancer requires access to a large electron accelerator facility (the LEAF linac at Argonne) as well as development of target production and processing. The investment shared by the government and the Participant will enable commercial production in the future, under a license obtained from the Lab.

Other Information/Results: (Papers, Inventions, Software, etc.)

1. US Patent: 8,526,561 issued Sept. 3, 2013
2. US Patent: 9,312,037 issued April 12, 2016
3. "Copper-67 production on electron linacs--photonuclear technology development," David Ehst, et al., WTTC 2012 conference (Playa del Carmen, Mexico)
4. COOL code for target cooling design

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