

**NON PROPRIETARY****FINAL CRADA REPORT**

Date: 2 October 2009

CRADA Number: 0300401

CRADA Title: Production of Ra225 precursor for Ac225/Bi213 generators

CRADA Start/End Date: 9 October 2003/7 March 2007

Argonne Dollars: \$180,000

Participant Dollars: \$180,000

Argonne PI: David Ehst

Industrial Partner: AlphaMed Inc. (20 Juniper Ridge Rd., Acton, MA 01720  
(complete address))

DOE Program Manager: Regina Carter

Summary of Major Accomplishments: Russian subcontractors shipped two small deliveries of Ra225 to PNNL for evaluation. The activity was close to the requisite amount in the subcontract. The first labeled properly; the second did not.

Summary of Technology Transfer Benefits to Industry: This showed that the Russians could supply Ra225 to the US; however they proved unable to meet future demands for larger amounts of activity. The US DOE attempts to get Ra225 from Russia should be terminated; the Russians, under Rosatom, are not interested in this business.

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

1. Peptide-targeted alpha-radiation for melanoma therapy, Y. Miao, M. Hylarides, T. Shelton, H. Moore, D. W. Wester, D. R. Fisher, A. Fritzberg, R. Testa, T. Hoffman, T. P. Quinn, 16<sup>th</sup> EORTC-NCI-AACR Symp. on "Molecular Targets and Cancer Therapeutics," Geneva, Switzerland, Sept. 2004

2. D.O. Dubinkin, N.A. Nerosin, V.B. Pavlovich, E. Ya. Smetanin // Extraction and high purification of actinium-225 isotope for medical application, - Extended Abstracts of Papers presented at the Sixth International on Nuclear and Radiochemistry (NPS-6), 353 Aachen, Germany, 2004.

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3. A.A. Kotovskii, V.V. Malaev, N.A. Nerosin, V.B. Pavlovich, I.V. Prokofiev, E.Ya. Smetanin, A.V. Fedorov, V.V. Shapovalov, E.V. Shvarzburg // Production of radium-225 in actinium-225 generators with subsequent production of actinium-225 from radium-225. Abstracts of the 10-th International Conference "Physical and Chemical Processes on Selection of Atoms and Molecules", p. 45, Zvenigorod, 2005. (in Russian)

4. A.A. Kotovskii, V.V. Malaev, N.A. Nerosin, I.V. Prokofiev, E.Ya. Smetanin, A.V. Fedorov, V.V. Shapovalov, Yu.A. Yakovshits // Actinium-225 generator. Proc. Of the 5-th Russian Conference on radiochemistry "Radiochemistry-2006", p. 320, Dubna, 2006. (in Russian)

Attachments-termination/redirection of activity (Word Documents):

redirection of ANL-T2-213-11Dec06  
de-ES-2Mar07