

225Actinium DOE User Meeting

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Introduction

Ekaterina (Kate) Dadachova, PhD

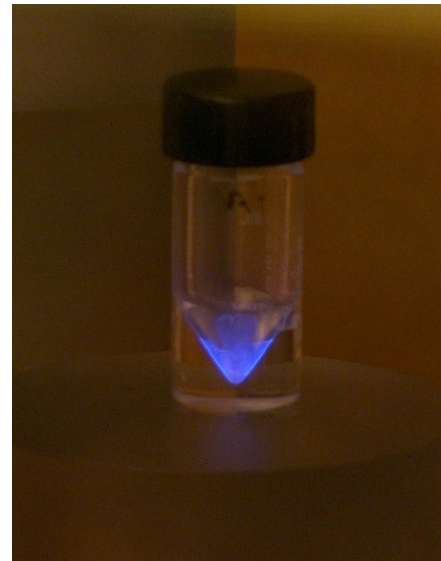
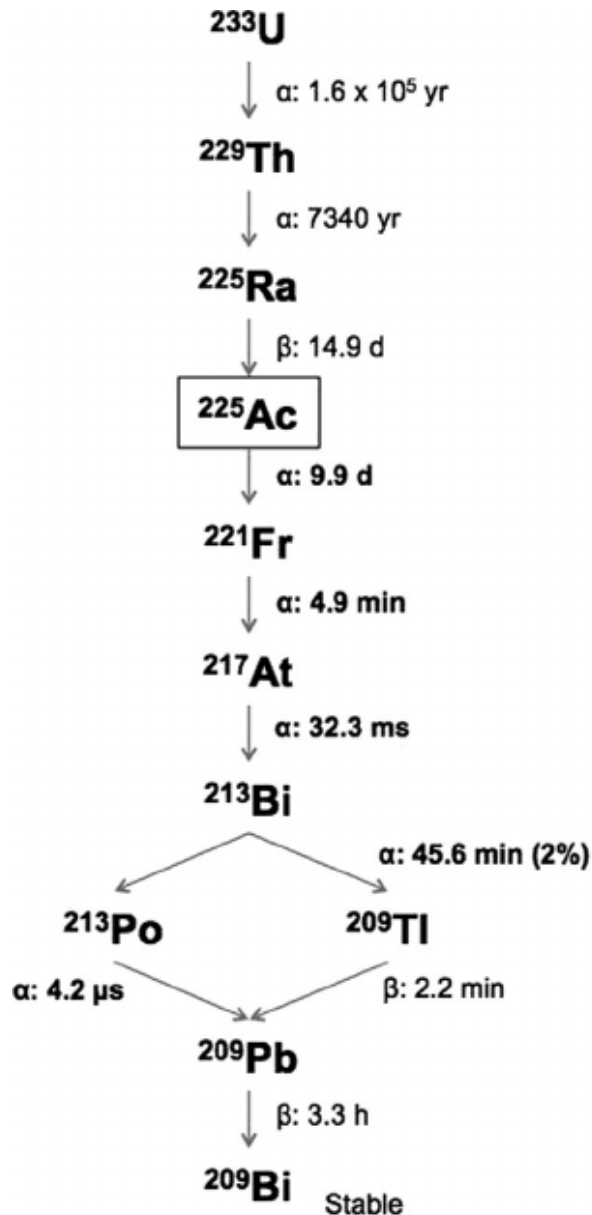
Chair in Radiopharmacy, Fedoruk Center for Nuclear Innovation

Professor, College of Pharmacy and Nutrition

University of Saskatchewan, Canada

225Ac – discovery and nuclear decay

Actinium-225 was discovered in 1947 by a team of physicists from Argonne National Laboratory led by F. Hagemann and, independently, by a Canadian group led by A. C. English.



225Ac - clinical applications

The idea of using 225Ac and 213Bi for therapy expressed in 1993 (Geerlings MW et al. Nucl. Med. Commun. 1993)

Clinical use of 213Bi-labeled antibodies reported in 1999 (Sgouros G et al. J. Nucl Med. 1999)

Clinical use of 225Ac-labeled antibodies described in 2011 (Jurcic JG et al. Blood, 2011)

Cancer Type	Radioconjugate	Patients
Leukemia	²¹³ Bi-anti-CD33-mAb	49
	²²⁵ Ac-anti-CD33-mAb	76
Lymphoma	²¹³ Bi-anti-CD20-mAb	12
Melanoma	²¹³ Bi-anti-MCSP-mAb	54
Bladder cancer	²¹³ Bi-anti-EGFR-mAb	12
Glioma	²¹³ Bi-Substance P	68
	²²⁵ Ac-Substance P	20
Neuroendocrine tumors	²¹³ Bi-DOTATOC	25
	²²⁵ Ac-DOTATOC	39
Prostate cancer	²²⁵ Ac-PSMA617	>400

Morgenstern A., et al. Semin Nucl Med. 2020