

ПЧ
Н 43

VOL. 105, NO. 1, JULY 2013

HEALTH PHYSICS

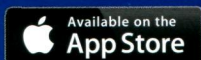
THE RADIATION SAFETY JOURNAL



The Official Journal of
the Health Physics Society



www.health-physics.com



 Wolters Kluwer
Health

Lippincott
Williams & Wilkins

HEALTH PHYSICS

The Radiation Safety Journal

July 2013

Volume 105

Number 1

ISSN 0017-9078

CONTENTS

EDITORIAL

HPS Publications Implement Society's "SI Only" Position

Howard Dickson, Mary Walchuk, Michael T. Ryan, Craig A. Little, Genevieve S. Roessler, Kelly Classic, and John Edwards

1

PAPERS

Immunological Changes Associated with Chronic Ingestion of Depleted Uranium in Rats

Yuhui Hao, Jiong Ren, Rong Li, Jing Liu, Zhangyou Yang, and Yongping Su

3

Screening of Residents Following the Tokyo Electric Fukushima Daiichi Nuclear Power Plant Accident

Hisayoshi Kondo, Jiro Shimada, Choichiro Tase, Takako Tominaga, Hideo Tatsuzaki, Makoto Akashi, Koichi Tanigawa, Yasumasa Iwasaki, Tatsuo Ono, Masayuki Ichihara, Yoshitaka Kohayagawa, and Yuichi Koido

11

Development of an Inhalation Intake Model for ²⁴¹Am Based on Mayak Production Association Worker Data

Alexandra B. Sokolova, Klara G. Suslova, Valentin F. Khokhryakov, Victor V. Khokhryakov, Vladimir E. Vvendensky, and Scott C. Miller

21

Efficacy of Chelator CBMIDA-CaNa₂ for the Removal of Uranium and Protection against Uranium-induced Cell Damage in Human Renal Proximal Tubular Cells

Yizhong Bao, Dan Wang, Yuxing Hu, Aihong Xu, and Honghong Chen

31

A Comparison of RF Exposure in Macro- and Femtocells.

Brad Zarikoff and David Malone

39

Detection and Quantification of Gaseous and Particulate Fukushima Fission Products at Orangeburg, South Carolina

Zheng Chang, Willard S. Moore, Kara D. McCullough, and Samuel Morenikeji

49

Updated Emergency Response Guidance for the First 48 h after the Outdoor Detonation of an Explosive Radiological Dispersal Device

Stephen V. Musolino, Frederick T. Harper, Brooke Buddemeier, Michael Brown, and Richard Schlueck

65

ICNIRP GUIDELINES

ICNIRP Guidelines on Limits of Exposure to Incoherent Visible and Infrared Radiation

International Commission on Non-Ionizing Radiation Protection

74

FORUM

eFRMAC Overview: Data Management and Enabling Technologies for Characterization of a Radiological Release

Daniel J. Blumenthal, Harvey W. Clark, James J. Essex, and Eric C. Wagner

97

BOOK REVIEWS

Radiation Shielding for Diagnostic Radiology

Mary Ellen Jafari

104

Physics in Nuclear Medicine, 4th Edition

Michael Bonvento

105

(Continued)

Health Physics (ISSN 0017-9078), a peer-reviewed journal, is a publication of the Health Physics Society and is published monthly by Lippincott Williams & Wilkins, 16522 Hunters Green Parkway, Hagerstown, MD 21740-2116. Business offices are located at Two Commerce Square, 2001 Market St., Philadelphia, PA 19103. Periodical postage paid at Hagerstown, MD, and at additional mailing offices. Copyright © 2013 by the Health Physics Society. **Annual subscription rates:** *United States* - \$672.00 Individual, \$2,599.00 Institution. *Rest of World* - \$731.00 Individual, \$2,682.00 Institution. Single copy rate \$235.00. Subscriptions outside the United States must be prepaid. Subscriptions outside North America must add \$32.00 for airfreight delivery. GST tax of 7% will be added to the subscription price of all orders shipped to Canada. (Lippincott Williams & Wilkins GST Identification #895524239. Publications Mail Agreement #40052291). Prices subject to change without notice. Subscriptions will begin with currently available issue unless otherwise requested. Copies will be replaced without charge if the publisher receives a request within 90 days of the mailing date. Individual subscription rates include print and access to the online version. Institutional rates are for print only; online subscriptions are available via Ovid. Please contact the Ovid Regional Sales Office near you for more information on institutional online access. Visit www.lww.com/resources/librarians/ for contact information. **POSTMASTER: Address for nonmember subscription information, orders, or change of address:** 16522 Hunters Green Parkway, Hagerstown, MD 21740-2116; phone 1-800-638-3030 or 1-301-223-2300; fax 1-301-223-2400. In Japan, contact LWW Igaku-Shoin Ltd., 3-23-14 Hongo, Bunkyo-ku, Tokyo 113-0033; phone 81-3-5689-5400; fax 81-3-5689-5402. In Bangladesh, India, Nepal, Sri Lanka, and Pakistan, contact Globe Publications Pvt. Ltd. B-13 3rd Floor, A Block, Shopping Complex, Naraina Vihar, Ring Road, New Delhi, 110028; India phone 91-11-579-3211; fax 91-11-579-8876. Indexed in *Current Contents (Life Sciences, Science Citation Index, SciSearch Database, ISI/BioMed, Research Alert)*, *Biosis, Index Medicus, MEDLINE, Excerpta Medica, Chem. Abstr., WRC Info., Environ. Per. Bibl., Cancer Journals and Serials, Applied Health Phys. Abstr., Aqualine Abstr., Current Awareness in Biological Sciences, Energy Res. Abstr., Congress. Info. Serv. Index, ASSIA, Cambridge Scientific Service, PASCAL-CNRS Database, NISC's Fish and Fisheries Worldwide*, and *Energy Database*.

CONTENTS *(continued)*

OTHER CONTENT

News and Notices	106
Health Physics Society Prospectus	113
Health Physics Society Affiliate Members	114
Author Guidelines	Appears at the back of this issue
Advertisers Guide	Appears at the back of this issue

Advertisers Index

Appears at the back of this issue

Up and Coming

Appears at the back of this issue

On the cover: Emergency personnel getting screened at Kawamata High School in Fukushima Prefecture, Japan, on 19 March 2012. On that day, more than 670 residents from within a 30-km radius of the Fukushima Daiichi Nuclear Power Plant were also screened.