

Scientists for Accurate  
Radiation Information  
(SARI)

10th of October 2013

Dr Malcolm Crick  
General Secretary of UNSCEAR  
UNSCEAR secretariat  
UNITED NATIONS  
Vienna International Centre  
P.O. Box 500  
A-1400 Vienna, AUSTRIA

**SUBJECT: Important Need for Updating Annex B of the 1994 UNSCEAR Report "Sources and Effects of ionizing Radiation"**

Dear Dr Crick,

We, the undersigned members of **Scientists for Accurate Radiation Information (SARI)**, are submitting this letter<sup>1</sup> to bring to your attention the important need to update the very valuable UNSCEAR 1994 Report Annex B on "Adaptive Responses to Radiation in Cells and Organisms." During the 19 years after publishing the annex, numerous peer-reviewed publications that relate to biological mechanisms that govern the responses of biological macromolecules, cells, tissue, organs, and organisms to low doses and dose rates of ionizing radiation have increased substantially. To our disappointment, these publications are not addressed in any of the subsequent UNSCEAR reports; however, UNSCEAR's position that for radiation doses below 100 mSv adverse health effects are unlikely is quite encouraging. The indicated position along with new knowledge about radiation adaptive responses and related mechanisms may ultimately help better manage future radiological emergencies.

The Chernobyl and Fukushima experiences have revealed the importance of having a sound scientific basis for radiological emergency management as it relates to controlling population exposure to low radiation doses. With respect to managing the Fukushima radiological emergency, we express our appreciation to the UNSCEAR members<sup>(1)</sup> and others who engaged in calming emotions and fears among the Japanese public that may have been exposed to low-level radiation as a result of radionuclides released. However, for radiological emergency management, it appears that UNSCEAR is focusing on the statistical inability of attribution of harm from low-dose radiation and not considering the experimental, epidemiological, and clinical data showing beneficial effects. The beneficial effects are now known to include prevention and treatment of diseases such as

---

<sup>1</sup> SARI Contact: Dr. Bobby R. Scott, Lovelace Respiratory Research Institute, 2425 Ridgecrest Drive SE, Albuquerque, NM 87108, USA, e-mail: bscott@LRRI.org.

diabetes and cancer and autoimmune disease as well as the slowing of ageing. We are ready and willing to submit a comprehensive list of references that could help UNSCEAR update its information on radiation adaptive responses and the potential health benefits.

In addition, some recent publications involving epidemiological and ecological studies of radiation-induced cancer demonstrate that the LNT model (the basis for limiting human exposures to radiation) is not supported by the data which demonstrate an adaptive response (e.g., hormetic dose–response relationship). The LNT model is also not supported by adaptive-response results of recent cellular, tissue and animal studies. Thus, reviewing recent adaptive-response findings would be timely and may help to prevent radiation-phobia-related casualties during future radiological emergencies and also help eliminate fear of undergoing potentially life saving diagnostic imaging procedures that use low radiation doses.

We believe that having a better understanding of radiation adaptive responses after exposure of humans to low doses and low-dose rates of ionizing radiation and having this knowledge conveyed to the scientific community and general public by a highly respected scientific committee such as UNSCEAR is quite important. Therefore, we encourage UNSCEAR to undertake appropriate actions as soon as possible.

Sincerely yours,

Prof. Wade Allison, MA DPhil  
Emeritus Professor of Physics  
University of Oxford, UK OX1 3PG  
E-mail: [W.Allison1@physics.ox.ac.uk](mailto:W.Allison1@physics.ox.ac.uk)

Dr. Jerry M. Cuttler  
Cuttler & Associates Inc.,  
1781 Medallion Court, Mississauga, ON Canada, L5J2L6  
E-mail: [JerryCuttler@rogers.com](mailto:JerryCuttler@rogers.com)

Prof. Ludwik Dobrzyński  
Director, Education & Training Division  
National Center for Nuclear Research,  
Andrzeja Sołtana 7, 05-400 Otwock, Świerk, Poland  
E-mail: [L.Dobrzynski@ncbj.edu.pl](mailto:L.Dobrzynski@ncbj.edu.pl)

Prof. Mohan Doss, Ph.D., MCCPM  
Medical Physicist  
Associate Professor, Diagnostic Imaging  
Fox Chase Cancer Center, R427  
333 Cottman Avenue,  
Philadelphia, PA 19111-2497  
E-mail: [Mohan.Doss@fcc.edu](mailto:Mohan.Doss@fcc.edu)

Dr. Ludwig Feinendegen  
Professor Emeritus  
Heinrich-Heine University,  
40204 Düsseldorf, Germany  
E-mail: [Feinendegen@gmx.net](mailto:Feinendegen@gmx.net)

Dr. Krzysztof Fornalski, PhD, Eng.,  
Polish Nuclear Society (PTN),  
ul. Dorodna 16, 03-195 Warszawa, Poland  
E-mail: [Krzysztof.Fornalski@gmail.com](mailto:Krzysztof.Fornalski@gmail.com)

Mark L Miller  
Certified Health Physicist  
Sandia National Laboratories,  
Albuquerque, NM 87185  
Email: [mmiller@sandia.gov](mailto:mmiller@sandia.gov)

Dr. Charles L. Sanders  
Professor (ret.), Dept of Nuclear & Quantum Engineering, KAIST, South Korea.  
2030 New Hampshire Street Loveland, CO 80538, USA  
E-mail: [clsanders38@gmail.com](mailto:clsanders38@gmail.com)

Dr. Bobby R. Scott (contact person)  
Senior Scientist  
Lovelace Respiratory Research Institute,  
2425 Ridgecrest Drive SE,  
Albuquerque, NM 87108 USA  
E-mail: [BScott@LRRRI.org](mailto:BScott@LRRRI.org)

Dr. Yehoshua Socol  
Chair, Academic Forum for Nuclear Awareness  
POB 3067 Karney Shomron, Israel  
E-mail: [socol@FalconAnalytics.com](mailto:socol@FalconAnalytics.com)

Dr. Brant Ulsh, Ph.D, CHP  
Principal Health Physicist  
M.H. Chew & Associates,  
897 Baccarat Drive, Cincinnati, OH 45245  
Email: [Brant\\_Ulsh@mhchew.com](mailto:Brant_Ulsh@mhchew.com)

Dr. Alexander Vaiserman  
Head of the Laboratory of Epigenetics  
Institute of Gerontology,  
Vyshgorodskaya 67,  
Kiev 04114, Ukraine  
E-mail: [Vaiserman@geront.kiev.ua](mailto:Vaiserman@geront.kiev.ua)

## REFERENCES

1. Nuclear disaster expert group and comments submitted by experts from other countries:  
[http://www.kantei.go.jp/foreign/incident/expert\\_group.html](http://www.kantei.go.jp/foreign/incident/expert_group.html)