

12-2012

PROFESSOR ZBIGNIEW JAWOROWSKI – IN MEMORIAM

Ludwik Dobrzyn 'ski

Cardinal Stefan Wyszyński University and the National Institute of Nuclear Research, Warsaw, Poland

Michael P.R. Waligórski

Polish Academy of Sciences and Centre of Oncology, Kraków, Poland

Marek K. Janiak

Military Institute of Hygiene and Epidemiology, Warsaw, Poland

Follow this and additional works at: https://scholarworks.umass.edu/dose_response

Recommended Citation

Dobrzyn 'ski, Ludwik; Waligórski, Michael P.R.; and Janiak, Marek K. (2012) "PROFESSOR ZBIGNIEW JAWOROWSKI – IN MEMORIAM," *Dose-Response: An International Journal*: Vol. 10 : Iss. 4 , Article 5.

Available at: https://scholarworks.umass.edu/dose_response/vol10/iss4/5

This Article is brought to you for free and open access by ScholarWorks@UMass Amherst. It has been accepted for inclusion in Dose-Response: An International Journal by an authorized editor of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

Dose-Response, 10:467-472, 2012
Formerly Nonlinearity in Biology, Toxicology, and Medicine
Copyright © 2012 University of Massachusetts
ISSN: 1559-3258
DOI: 10.2203/dose-response.12-007.Dobrzynski

International **DOSE-RESPONSE** Society
www.Dose-Response.org



PROFESSOR ZBIGNIEW JAWOROWSKI – IN MEMORIAM

Ludwik Dobrzyński, Professor of Physics □ Faculty of Mathematics and Natural Sciences, Cardinal Stefan Wyszyński University and the National Institute of Nuclear Research, Warsaw, Poland; Ludwik.Dobrzynski@ncbj.gov.pl

Michael P.R. Waligórski, Professor of Physics □ Institute of Nuclear Physics, Polish Academy of Sciences and Centre of Oncology, Kraków Division, Kraków, Poland; z5waligo@cyfronet.pl

Marek K. Janiak, Professor of Medical Sciences □ Military Institute of Hygiene and Epidemiology, Warsaw, Poland; mjaniak@wihe.waw.pl

Professor Zbigniew Jaworowski, a medical doctor by training, well known to the Polish and international scientific community for his clear and often controversial views on issues of radiation protection and climatology, who devoted his later years to seek for clear answers to social issues raised by

Address correspondence to Ludwik Dobrzyński, National Centre for Nuclear Research and Cardinal Stefan Wyszyński University, Poland, E-mail: Ludwik.Dobrzynski@ncbj.gov.pl

L. Dobrzyński and others

present approaches to the Linear-no-Threshold (LNT) and Global Climate Warming paradigms, died in Warsaw on November 12th 2011, at the age of 84. His eventful and prolific life included medical practice in cancer radiotherapy and toxicology, expert mountain climbing in his youth, glacier studies of the effects of atmospheric atomic bomb testing, international recognition as a radiation health scientist, chairmanship of the United Nations Scientific Committee on the Effects of Atomic Radiations (UNSCEAR), providing expert advice to the Polish Government in the aftermath of the Chernobyl Accident and, last but not least, eloquent opposition to the Global Warming and LNT hypotheses against the mainstream of climatologists and radiation protection experts. His quest for truth in science and the clear and public manner in which he presented his views was greatly admired by his many friends and vehemently criticised by his opponents.

Zbigniew Jaworowski was born in Kraków, the medieval capital of Poland, on 17th October 1927 and graduated from its Medical University in 1952. While still an undergraduate he became assistant at the Institute of Physiological Chemistry studying chemical carcinogenesis. Over the years 1953-1958 he worked as medical doctor of radiotherapy at the Institute of Oncology in Gliwice. He next moved to the Institute for Nuclear Research at Świerk near Warsaw to head the Laboratory of Radiotoxicology. Finally, between 1970 and 1987 Professor Zbigniew Jaworowski worked at the Central Laboratory for Radiological Protection (CLOR) in Warsaw as head of the Department of Radiation Hygiene. In the years 1987-1988 he visited the Biophysical Group of the Institute of Physics at the University of Oslo, Norway, and over the next two years (1988-1990) worked at the Norwegian Polar Research Institute in Oslo. His stay in Norway was interrupted by a six-month (1990/1991) visiting professorship at the National Institute for Polar Research in Tokyo, Japan, and followed by work at the Institute for Energy Technology at Kjeller near Oslo (1991-1993). On retirement, he returned to the Central Laboratory for Radiological Protection (CLOR) in Warsaw where he chaired CLOR's Scientific Council for several years.

The scientific career of Professor Jaworowski covered an unusually broad range of topics. In 1963 he received his Ph.D. and in 1967 he became Assistant Professor in medical sciences. In 1977 he became Full Professor, by state nomination. The list of his scientific interests and achievements is diverse and impressive – in his short CV note, we read:

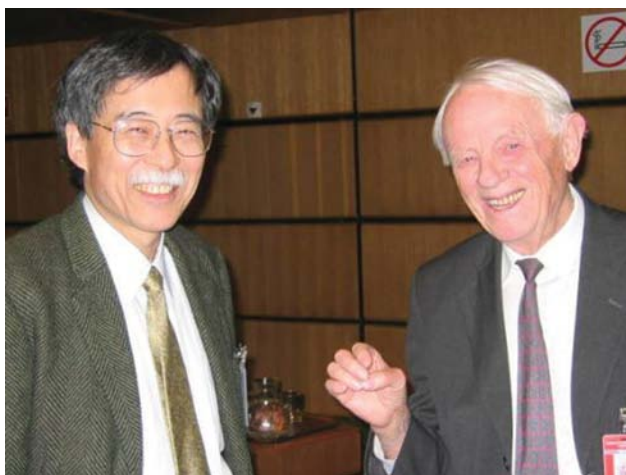
Professor Zbigniew Jaworowski studied: (1) internal contamination radionuclides in animals and human beings; (2) development of analytical methods for detection of pollutants in the human body and the environment; (3) metabolism of radionuclides; (4) biological effects of ionizing radiation; (5) impact of nuclear war on the population; (6) remedial measures in nuclear emergencies; (7) environmental levels and migration of radionuclides and heavy metals; (8) relation between pollutants in the environment and in man; (9) historical mon-

Professor Zbigniew Jaworowski – In Memoriam

itoring of radionuclides and heavy metals in man - the first discovery that lead level in human bones was much higher between 11th and 19th century than is now; (10) historical monitoring of radionuclides and heavy metals in the environment; (11) vertical distribution of natural radionuclides, fission products and heavy metals in the troposphere and stratosphere; (12) determination of natural radionuclides, fission products and heavy metals in contemporary and pre-industrial ice from glaciers in both hemispheres, for studying the geographical distribution, temporal changes and flux of natural and man-made pollutants in the global atmosphere; (13) regional and global impact of pollution caused by coal burning; (14) validity of polar ice core records of greenhouse gases for reconstruction of the composition of the ancient atmosphere.

Equally broad were Jaworowski's social activities and range of articles, published not only in peer-reviewed journals, including *Nature*, but also in popular science journals and newspapers. Altogether, Professor Zbigniew Jaworowski published 196 peer-reviewed papers, four books, was editor and co-editor of 10 scientific documents published by UNSCEAR, IAEA, and UNEP and also wrote some 60 articles to Polish newspapers and popular science magazines.

The contribution of Professor Jaworowski to the work of the United Nations Scientific Committee on the Effects of Atomic Radiations (UNSCEAR) deserves special mention. On Poland joining the Committee in 1973, Professor Jaworowski became Representative of Poland to UNSCEAR and held that position until 2009. He was one of the best known and longest-serving members of the Committee, always alert, always extremely well prepared and most knowledgeable on matters the Committee was concerned with. He was elected vice-Chairman (1978-1979) and Chairman of UNSCEAR (1980-1982). His pointed and well-focused arguments earned him respect and warm friendship with many members of this distinguished scientific body.



Professor Zbigniew Jaworowski with Professor Ohtsura Niwa (Japan), one of his close friends, at the 54th Session of UNSCEAR, Vienna 2006.

L. Dobrzyński and others

Another important activity of Professor Jaworowski was the part he played as scientific advisor to the Polish Governmental Commission on the Effects of the Chernobyl Accident. His ability and competence were evident: on his advice the Polish Government decided to use Lugol's solution containing stable iodine to protect Polish children against radioiodine released from the burning Soviet nuclear reactor. Over the years to come, he carefully followed the aftermath of this accident, both in the former Soviet Union and all over the world, publishing many insightful papers on the consequences of this largest catastrophe of a commercial nuclear power plant. An article which stirred a most vivid discussion, was his *Radiation Risk and Ethics* published in *Physics Today* (vol. 52, no. 9) in 1999, where he stated that well-documented scientific evidence should be fully presented and clearly interpreted - even if this interpretation were to go against opinions commonly held on the subject.

Professor Zbigniew Jaworowski participated in, or chaired, some twenty Advisory Groups of the International Atomic Energy Agency (IAEA) and of the United Nations Environmental Programme (UNEP). He was Principal Investigator of three research projects of the US Environmental Protection Agency and of four research projects of the IAEA.



Professor Jaworowski with Dr. Marion Cheadle (UNEP), Vienna 2006.

Professor Jaworowski was always interested in environmental issues devoting his last years to the global warming issue. He strongly opposed the anthropogenic source of this effect, a position which he justified in his article entitled *Nature, Not Human Activity, Rules the Climate*, published by The Heartland Institute in March 2008 as part of the *Summary for Policymakers of the Report of the Nongovernmental International Panel on Climate Change* (edited by S. Fred Singer). He was also the first Polish scientist to inform the Government and the public in Poland about a possible Carrington's Pulse in 2012. This illustrates his sensitivity to public issues and to possible threats to mankind on the Planet Earth.

Professor Zbigniew Jaworowski – In Memoriam

Zbigniew (Zbig or Zbyszek to his friends) Jaworowski was a rare scientist always open and attentive to new issues, always ready to enter a new subject, but at the same time able to reflect on what he had read in his vast library of books written in the many languages he had command of. Indeed, he had a deep knowledge of Polish, British, German and Russian literature and poetry and could quote long verses of poetry, especially in Polish and English, from memory. He was able to discuss sanscrit and Indian culture in great detail. He was also deeply interested in the social background and development of different religions, though himself being a non-believer. His opinions on even the most drastic problems were clear and supported by strong arguments, but never worded in a manner offensive to his adversary. Yet this truly humanistic approach was not always returned, so he often suffered abuse from those who did not respect the basic rules of how science and dispute should be conducted.

To illustrate Zbig's great sense of humour, let us quote from his letter of 4th February 2010 to one of us (L.D.), concerning his strong opposition to the LNT hypothesis:

By now, the LNT paradigm has lasted half a century, or so. The paradigm that witches should be burnt lived for 200 years, before rapidly turning into oblivion as an idiotic madness, within about 5 years. Thus a bright future awaits LNT, maybe for another 150 years, or maybe for twenty. I may be wrong since in the (BSS) Directive the European Union is now working on, not once are LNT nor its derivatives, such as collective dose, dose commitment, committed dose, or ALARA, quoted.

While often being critical of UNSCEAR reports as not being clear or visionary enough, he spared no effort to keep the Committee going while it went through a financial crisis which threatened its very existence. He minced no words in his explanation of this crisis and in expressing his concern for the purity of science:

Climategate consists, among other malicious acts, in officially ignoring and withholding from publication the substantial evidence showing that climate warming has nothing to do with human activity. I have seen the same happening for years in the radiation effects community: hormesis was being ignored. Until very recently, it was not possible for papers on hormesis to overcome the peer review barrier of scientific journals. We then observed financial punishment, to the point of almost putting UNSCEAR to a standstill, for the unruly 1994 Report and the 2000 Chernobyl Annex. Climategate illustrates the destructive mechanisms of contemporary science. Nor is UNSCEAR free from such mechanisms. We have our own UNSCEARgate – older than Climategate - the gate to the destruction of civilisation. A real shame!

(from a letter to L. D. of February 8, 2010)

L. Dobrzyński and others

On November 12th 2011 we lost a first-rate scientist who enthusiastically and competently shared his knowledge with the society. It is now very difficult for us to accept the fact that we will no longer enjoy the company of this warm, knowledgeable, and inspiring Colleague and Friend endowed with such a sense of humour and mental ability, but also a devoted husband to his wife, Professor Zofia Kielan-Jaworowska (an eminent paleozoologist in her own right) and a loving father to his son, Mariusz Jaworowski and his family. We will also remember him as an ardent mountain climber who during his early expeditions to the Tatra mountains earned the nick-name “Baca” (spelled *batza*) which means “Sheppard” in the Polish highlander dialect. Indeed, he could talk endlessly about the mountains, they were his passion and love and inspiration; in the mountains he easily became leader of any group of equally passionate climbers, but if need arose, could also become the doctor to heal their bruises.



Zbigniew Jaworowski in front of Mnich (The Monk) in the Polish Tatra Mountains, which he climbed several times in his youth. In his letter to L.D. of Oct. 10 2009, Zbigniew gave this photo the title: “The Monk and the Godless”.

Baca, you will be missed in Poland and elsewhere around the world.