



To the Ambassador Extraordinary and
Plenipotentiary of Japan to Ukraine

No. 36, dated March 30, 2011.

Dear Mr. Tadashi IZAWA,

Please accept our condolences with respect to the courageous people of Japan in the tragic aftermath of the earthquake and the accident at the Fukushima-1 nuclear power plant.

During the Chernobyl tragedy in Ukraine, there were no effective and safe products, either in terms of the protection of people from radiation damage during such catastrophes or in terms of restoring their deteriorated health in connection with the effects that followed afterwards. Nowadays, such product is created in Ukraine, and we are ready to provide it to the Government of Japan.

The scientists from our [institute](#) have created a completely safe radioprotector, which is the most effective of all well-known technologies around the world that exist at the present time. In 1994, we developed technology for producing aqueous solutions of the molecular carbon C₆₀ (fullerene) and products that are based on them. Long-term research carried out on one of the products – “Water with the hydrated C₆₀ fullerene” - has proven its unique, multi-dimensional biomedical effectiveness, including its exceptional antioxidant and radioprotective characteristics.

Advanced preclinical and clinical trials, conducted by certified scientific organisations of Ukraine, have made it possible to legally register this product as a multi-functional, medical and preventive [dietary supplement](#). The [Safety and Health Certificate](#) from the Ministry of Health of Ukraine no. 05.03.02-04/95179 was issued on December 2, 2010.

At the present time, we have initiated the procedure of registering this product in Russia. We are also aware that developments with respect to the use of fullerenes, and those that are somewhat similar to ours, are also taking place in Japan and another countries. However, all of them are still far from completion and their application in terms of public health services.

In the capacity of emergency aid, we would like to provide you with 10,000 complimentary packages (5 tons) of our product.

We are also ready to provide the available official documentation in this relation, which will help to legally register this product in Japan.

Page 1/6



This product is easy to use and can be taken in combination with any other therapeutic and preventative agents, thereby increasing their effectiveness.

The approximate dosage scheme for using this product as a radioprotective means is a dose of 30-50 ml, to be taken orally (by drinking it) three times per day.

It is desirable that this product be consumed 1-3 days before any probable exposure.

The duration of ingestion of this product depends on the nature, intensity and duration of the radiation emitted, and therefore, it may vary from several days to several weeks-months.

Sincerely yours on behalf of the founders,

Director  Oleg Sizonenko

Director of Science, PhD  Grigoriy Andrievsky



P.S. *This Letter contains appendix (see below).*



Appendix
to the Letter
to the Ambassador Extraordinary and
Plenipotentiary of Japan to Ukraine

Enclosed you will find information in electronic format (DVD-disc) confirming the reasonableness of using hydrated C_{60} fullerene as the most effective radioprotector.

Today, hydrated C_{60} fullerene is the most effective radioprotector as compared to all other known radioprotectors in the world, for example, Amifostine (USA) and some substances based on fullerene C_{60} supposedly being developed now in Japan, USA and other countries. As compared to any of them, hydrated fullerene C_{60} is at least (!) 100 times more effective and completely harmless, irrespective of the duration of its application, without any risk of undesirable side effects and overdosage.

DVD -disc contains the following directories:

Directory - **International publications about radioprotective properties of fullerenes** contains:

1. Višnja BOGDANOVIĆ, Karmen STANKOV, Ivana IČEVIĆ, Dragan ŽIKI, Aleksandra NIKOLIĆ, Slavica ŠOLAJIĆ, Aleksandar DJORDJEVIĆ and Gordana BOGDANOVIĆ. FULLERENOL $C_{60}(OH)_{24}$ EFFECTS ON ANTIOXIDATIVE ENZYMES ACTIVITY IN IRRADIATED HUMAN ERYTHROLEUKEMIA CELL LINE. J. Radiat. Res., 49, (2008) 321–327
2. Aaron P Brown, Eun Joo Chung, Mary Ellen Urick, William P Shield, Anastasia L Sowers, Angela Thetford, Uma T Shankavaram, James B Mitchell and Deborah E Citrin. RESEARCH EVALUATION OF THE FULLERENE COMPOUND DF-1 AS A RADIATION PROTECTOR. Radiation Oncology, 2010, 9 p.
3. Borbala Daroczi, Gabor Kari, Mary Frances McAleer, Jeffrey C. Wolf, Ulrich Rodeck, and Adam P. Dicker. *IN VIVO* RADIOPROTECTION BY THE FULLERENE NANOPARTICLE DF-1 AS ASSESSED IN A ZEBRAFISH MODEL. Clin. Cancer. Res., 12(23) (2006) 7086-7091.
4. G Albarran, V.A. Basiuk, E.V. Basiuk, J.M. Saniger. STABILITY OF FULLERENE UNDER IRRADIATION. Advances in Space Research, 33 (2004) 72-75.
5. Sanja Trajković, Silva Dobrić, Vesna Jaćević, Viktorija Dragojević-Simić, Zoran Milovanović, Aleksandar Dorđević. TISSUE-PROTECTIVE EFFECTS OF

Page 3/6



FULLERENOL $C_{60}(OH)_{24}$ AND AMIFOSTINE IN IRRADIATED RATS. *Colloids and Surfaces B: Biointerfaces*, 58 (2007) 39–43.

6. Li Xiao, Hiroya Takada, Kentaro Maeda, Mari Haramoto, Nobuhiko Miwa. ANTIOXIDANT EFFECTS OF WATER-SOLUBLE FULLERENE DERIVATIVES AGAINST ULTRAVIOLET RAY OR PEROXYLIPID THROUGH THEIR ACTION OF SCAVENGING THE REACTIVE OXYGEN SPECIES IN HUMAN SKIN KERATINOCYTES. *Biomedicine & Pharmacotherapy* 59 (2005) 351–358.

7. Loren K Mell & Benjamin Movsas. PHARMACOLOGIC NORMAL TISSUE PROTECTION IN CLINICAL RADIATION ONCOLOGY: FOCUS ON AMIFOSTINE. *Drug Metab. Toxicol.*, 4(10) (2008) 1341-1350.

8. Q. Zhao, Y. Li, J. Xu, R Liu, W. Li. RADIOPROTECTION BY FULLERENOLS OF STYLYNYCHIA MYTILUS EXPOSED TO γ -RAYS. *J. Radial Biol.*, 2 (2005) 169-175.

Directory – **Andrievsky G. and IPAC LLC publications about radioprotective properties of hydrated C_{60} fullerenes** contains:

1. Grigory V. Andrievsky, Vadim I. Bruskov, Artem A. Tykhomyrov, Sergey V. Gudkov. PECULIARITIES OF THE ANTIOXIDANT AND RADIOPROTECTIVE EFFECTS OF HYDRATED C_{60} FULLERENE NANOSTRUCTURES *IN VITRO* AND *IN VIVO*. *Free Radical Biology & Medicine* 47 (2009) 786–793.

2. G.V. Andrievsky, A.V. Zhmuro, L.V. Zabobonina. FIRST CLINICAL CASE OF TREATMENT OF PATIENT (VOLUNTEER) WITH RECTAL ADENOCARCINOMA BY HYDRATED C_{60} FULLERENES: NATURAL COURSE OF THE DISEASE OR NON-SPECIFIC ANTICANCER ACTIVITY? Message to the Symposium "Fullerenes in Biology and Medicine" of 197th Meeting of the American ECS (May 14-18, 2000, Toronto, Ontario, Canada). Abs# 700 (2 p.).

3. Analytical report IPAC LLC about $C_{60}HyFn$ non-toxicity (Russ), 25.02.2010, Kharkov, Ukraine, 2010, 12 p. (http://www.ipacom.com/images/Articles/report_analytical_ru.pdf).

4. IS FULLERENE TOXICITY A MYTH? NANOWERK Research and General News, August 15, 2007 (<http://www.nanowerk.com/news/newsid=2373.php#>).

5. OFFICIAL REPORTS ABOUT PRECLINICAL, CLINICAL TRIALS AND TESTING ON RADIOPROTECTIVE, NON-GENOTOXIC PROPERTIES OF WATER SOLUTION OF HYDRATED C_{60} FULLERENE (see on IPAC LLC site <http://www.ipacom.com/index.php/en/publications-about-c60hyfn/70>) and pdf-file with "Some important results from pre- and clinical trials of hydrated C_{60} fullerene".



Directory - **About Biological Safety of Fullerenes in Japan** contains:

1. Hisae Aoshima, Shuichi Yamana, Shigeo Nakamura and Tadahiko Mashino. BIOLOGICAL SAFETY OF WATER-SOLUBLE FULLERENES EVALUATED USING TESTS FOR GENOTOXICITY, PHOTOTOXICITY, AND PRO-OXIDANT ACTIVITY. *J. Toxicol. Sci.*, 35 (2010) 401-409.
2. Naohide Shinoharaa, Kyomu Matsumotob, Shigehisa Endohc, Junko Maruc, Junko Nakanishia. *IN VITRO AND IN VIVO GENOTOXICITY TESTS ON FULLERENE C₆₀ NANOPARTICLES*. *Toxicology Letters*, 191 (2009) 289–296.
3. Yasuo Morimoto, Norihiro Kobayashi, Naohido Shinohara, Toshikiko Myojo, Isamu Tanaka, Junko Nakanishi. HAZARD ASSESSMENTS OF MANUFACTURED NANOMATERIALS. Advance Publication: *Journal of Occupational Health*, Jun 10 (2010) 21 p.
4. Tomohisa Mori, Hiroya Takada, Shinobu Ito, Kenji Matsubayashi, Nobuhiko Miwa, Toshiko Sawaguchi. PRECLINICAL STUDIES ON SAFETY OF FULLERENE UPON ACUTE ORAL ADMINISTRATION AND EVALUATION FOR NO MUTAGENESIS. *Toxicology*, 225 (2006) 48–54.
5. Hisae Aoshima, Yasukazu Saitoh, Shinobu Ito, Shuichi Yamana, Nobuhiko Miwa. SAFETY EVALUATION OF HIGHLY PURIFIED FULLERENES (HPFS) AND VITAMINE C₆₀. *J. Toxicol. Sci.*, 34 (2009) 555-562

Directory - **Eiji Osawa and Grigoriy Andrievsky** contains:

1. Two photo with Osawa, June 28, 2007, Kharkov, Ukraine.
2. E. Osawa report about our achievements (2005, in Japanese).

After our participation in the 6th International Workshop 'Fullerenes and Atomic Clusters' in summer 2003, we have established a scientific contact with a famous Japanese scientist and leading expert in fullerene studies E. Osawa. In 1970, long before the fullerenes were discovered in 1985, he predicted and calculated their structure.

E. Osawa is an honorable professor of many famous universities and the President of NanoCarbon Research Institute of Japan.



In his report presented at the Nanotechnology Forum on October 7, 2003, Osawa highlighted the unique nature of our developments (fullerene water solutions), which are a real breakthrough in fullerene studies after our first publications in 1995.

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Our achievements on hydrated fullerenes have deserved very encouraging comment from the Nobel Prize laureate, H.W. Kroto in his letter to Andrievsky G.V. of April 29, 1999:

"...Thank you very much for sending me your very interesting paper on the water solubility of fullerenes. It looks like a very important advance, in particular for pharmaceutical applications. I do hope that it turns out to be a major step forward....

Professor Sir H.W. Kroto, F.R.S.

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