

CRIIRAD

Commission de Recherche et d'Informations Indépendantes sur la Radioactivité.
471 avenue Victor HUGO
26000 VALENCE
FRANCE

Tél : + 33 (0)4 75 41 82 50
Fax : + 33 (0)4 75 81 26 48
contact@criirad.org

Setting up the CRIIRAD Bandazhevsky research laboratory

Report of November 20, 2005

The scientific work has begun.

From the 4th to the 8th of November 2005, I visited¹ Professor Yuri Bandazhevsky and Doctor Galina Bandazhevskaya at Minsk. This first scientific visit was professionally very fruitful.

Nowaday, the CRIIRAD, Professor Yuri Bandazhevsky and Doctor Galina Bandazhevskaya are building up the bases of a biomedical research laboratory in Belarus with the aim to resume the studies on the health effects of radioisotopes chronic incorporations. This visit of November aimed to define more precisely the scientific framework of the laboratory, as well as its scientific strategies.

At first, it was necessary that the situation of Professor Bandazhevsky was regularized with respect to the legislations of his country. Thus, the CRIIRAD has carried out, on September the 2nd, the payment of Professor Bandazhevsky's fine on its own funds (see the report of September 20, 2005 by Romain Chazel)².

This first step achieved, it was possible for the CRIIRAD to employ Professor Bandazhevsky. At the beginning of my visit, Professor Yuri Bandazhevsky signed his contract of employment by the CRIIRAD while Doctor Galina Bandazhevskaya signed an additional clause to her contract (see photographs). Thus Doctor Bandazheskaya, and from now on, Professor Bandazhevsky, are employees of the CRIIRAD, their status being in agreement with the legislations of the Belarus Republic. After having signed his contract, Professor Bandazhevsky declared to me that this day was a great day for him, because finally, after six years of torments, the signing of this contract was symbolizing for him the return to the control of his own destiny and the respect of his private life.

¹Martial Mazars, writer of this report, has a PhD in theoretical physics and is a 'professeur agrégé' in physics. His fields of specializations are within the framework of statistical physics, more specifically in physics of liquids and in the applications to biophysical processes. He is also, since June 2005, member of the Board of directors of the CRIIRAD and secretary of the French branch of the CRIIRAD-Bandazhevsky Laboratory.

²The September 20, 2005 report was published in an increased version in "Trait d'Union n°32/33" (CRIIRAD - November 2005). As the CRIIRAD could not support alone the payment of this fine, a call for participation, to all those who were wishing to contribute to Professor Bandazhevsky release, had been launched in mid-September, once it was sure that the money had indeed been boxed by the authorities of Belarus (see <http://www.criirad.com/>).

The work program of the Gomel Medical Institute, founded³ at the beginning of the Nineties by Professor Yuri Bandazhevsky, was : 1) to establish correlations between pathologies observed among the population and the internal contaminations by radioisotopes, 2) to define strategies allowing to improve the health of the populations and 3) to train physicians in such problems in order to increase significantly the number of specialists needed to face the ecological disaster of Chernobyl. Some correlations between Cs137 accumulation in organs, like the heart and the thyroid gland, and some pathologies have been clearly established. Moreover, it does matter to outline that the levels of Cs137 accumulations found in organs of deceased persons [1] that were measured during autopsies performed at the Gomel Medical Institute, were in agreement with previous data obtained with Cesium-131 [2,3] (the Cs131 isotope was used during the Seventies for the medical scanning of the thyroid gland and of the heart).

Although a large number of medical observations done on the victims of Hiroshima and Nagasaki could also be found among the populations surviving under the fallouts of the Chernobyl disaster [4], it is not surprising that some strong differences were observed too, taking into account that both events were very dissimilar. One well-known and recognized difference is the very early appearance of the thyroid cancer epidemic, observed as soon as 1990, but only published in 1992 (Nature 1992; **359**, 21).

To help the people, the Gomel Medical Institute had also performed anthropogammametry (whole-body counting) and studied the feasibility of reducing the Cesium-137 body load [5], in particular by using compounds containing pectins [6]: the scientific core on which the Belrad Radioprotection Institute held by Professor Nesterenko has established its methods for the population's protection.

Obviously, it is not up to our organization (CRIIRAD) and to the CRIIRAD & Bandazhevsky Laboratory to resume fully the work program of the Gomel Medical Institute. The work of the laboratory will focus on fundamental research. The principal objectives will be to establish more precisely the correlations existing between internal contaminations by the radioisotopes and pathologies observed in people. The laboratory will particularly focus on problems related to embryotoxicology and teratology, and on subjacent biophysical and biochemical mechanisms inducing malformations and pathologies among the populations surviving under the fallouts of Chernobyl disaster.

The fundamental research activities being expensive activities that do not produce immediate reusable incomes, the question of how financing studies of the CRIIRAD & Bandazhevsky Laboratory on a long term is of primary importance. The estimated budget of the project (150 000 euros of which 96 400 euros have already been found on November 18, 2005 – that is to say 64% of the total amount)⁴ will allow : (a) to finance all the administrative procedures for the installation of the Laboratory at Minsk in agreement with the international legislations and those of the Republic of Belarus ; (b) to purchase a place for the Laboratory ; (c) to purchase equipments for the Laboratory ; (d)

³The fifteenth anniversary of the Gomel Medical Institute was celebrated on the November 1st, 2005.

⁴It is very important for us to underline here the main role assumed by all the co-founders of the CRIIRAD & Bandazhevsky Laboratory (779 private individuals and 31 organizations, on November 18, 2005). It is only thanks to their fast and massive responses that the project can today be considered as financially sustainable. Thanks to them, the two-thirds of the basic financing are already obtained. The future co-founders will have a as essential contribution because they will allow to warrant fully the basic financing of the laboratory.

to finance the setting-up of the structures (wages, travelling expenses, postmail, etc.) and, if possible, (e) to achieve the first studies of the Laboratory. For the following research studies, the principles of funding will be based on the conventional procedures used to support scientific researches, that is to say it will include research projects which will be submitted to international programs devoted to the funding of the high level scientific research (European projects, ANR projects, etc.) ; this strategy for the funding of the Laboratory activities will obviously not be the only one.

Building relevant scientific projects requires an active collaboration with international scientific partners ; to this aim, have been initiated a bit more than a year ago some very interesting exchanges with some possible partners. We have already stressed the high level of Belarussian researchers and physicians, as well as the excellent quality of their works ; several scientific organizations of Belarus (private or state) could also become some excellent partners for these international scientific projects.

In the current state, all the administrative documents for the opening of the Laboratory at Minsk, that were required by the legislations of the Republic of Belarus and by the International Conventions (convention of the Hague), have been given to the proper authorities of Belarus, the sole authorities able to decide of the administrative admissibility of our file.

BIBLIOGRAPHY

[1] Y.I. Bandazhevsky "Pathology of incorporated radioactive emission." (Minsk – 2000) ; Y.I. Bandazhevsky, "Chronic Cs-137 incorporation in children's organs", Swiss Medical Weekly 2003 ; **133** : 488 – 90.

[2] D.A. Koutras et al., "Thyroid scanning with Gallium-67 and Cesium-131", Journal of Nuclear Medicine 1976 ; **17** : 268 -71.

[3] W. Burguet et al., "Cs-131 myocardial scintigraphy. Application to anterior myocardial infarction.", British Heart Journal 1975 ; **37** : 1037 – 44.

[4] M.P. Little, "Risks of non-cancer disease incidence and mortality in the Japanese atomic bomb survivors", Journal of Radiobiological Protection 2004 ; **24** : 327 - 8 (and reference herein) ; M. Yamada et al, "Noncancer disease incidence in atomic bomb survivors, 1958-1998 (RERF Report No.17-03)", Radiation Research 2004 ; 161 : 622 - 32.

[5] Y.I. Bandazhevsky et al., "Clinical and experimental aspects of the effect of incorporated radionuclides upon the organism." (Ministry of Health of the Republic of Belarus – Gomel, 1995).

[6] Y.I. Bandazhevsky et al., "Structural and functional effects of radioisotopes incorporated by the organism." (Ministry of Health of the Republic of Belarus – Gomel, 1997).

Contacts :

- < French & Spanish : Romain Chazel (romain.chazel@free.fr)
- < French & English : Martial Mazars (Martial.Mazars@th.u-psud.fr)