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**Relation between Cs-137 Concentration in Human Bodies and Soil Contamination in personal farms of Residents near Chernobyl.**

Toshihiro TAKATSUJI<sup>1</sup>, Hitoshi SATO<sup>2</sup>, Masaharu HOSHI<sup>3</sup>, SHARIPOV V. F.<sup>4</sup>, VESELKINA I. I.<sup>4</sup>, PILENKO I. V.<sup>4</sup>, KALIMULLIN V. A.<sup>5</sup>, MASYAKIN V. B.<sup>5</sup>, KOVALEV A. I.<sup>6</sup>, Hiroyuki NAMBA<sup>1</sup>, Syunichi YAMASHITA<sup>1</sup>, Syunzo OKAJIMA<sup>1</sup>, <sup>1</sup>Nagasaki Univ., Nagasaki 852, <sup>2</sup>Tokyo Medical Coll. Hospital., Ibaragi 300-03, <sup>3</sup>Hiroshima Univ., Hiroshima 734, <sup>4</sup>Mogilev Regional Medical Diagnostic Ctr., Mogilev Belarus., <sup>5</sup>Gomel Specialized Medical Dispensary, Gomel Belarus, <sup>6</sup>Klincy City Children's Hospital, Klincy Russia.

Large part of residents near the Chernobyl Nuclear Power Station have personal farms. Most of them and their livestock eat crops from the farms. But no clear correlation is shown between Cs-137 concentration of their bodies and soil in the farms. On the other hand, activity ratios of Cs-137 to K-40 in the soil show clearer correlation to the Cs-137 concentration in their bodies. Competitive uptake of cesium to potassium by plants seems to bring this result. Soil contamination in the personal farms seems to be a main source of the human contamination.

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**Variability of Radon Progeny Dose Conversion Factors**

Nobuhito ISHIGURE and Jiro INABA; Div. Radiotoxicology, Natl. Inst. Radiol. Sci., Chiba 263

Based on the new ICRP human respiratory tract model (ICRP Publication 66), we evaluated the variability of radon progeny dose conversion factors (referred as DC) with the model parameters on atmospheric and subject characteristics. A computer program for IBM PC was developed for this purpose. The following results were obtained. (1) The DC for the attached aerosols of Type M is insensitive to the conditions of the unattached fraction. (2) The effect of decreasing the assumed aerosol diameter from 0.2 to 0.1 micron is to increase the DC by 29% for Type F aerosols and by 45% for Type M aerosols. (3) If the assumed density of the aerosols is increased from 1 to 3 g/cm<sup>3</sup>, the DC increases by 41% for Type F and by 63% for Type M. (4) The DC is larger while sleeping than while doing light exercise by 32% for Type F and by 52% for Type M. (5) The DC for a habitual mouth breather is larger than a nose breather by 33% for Type F and by 13% for Type M.