

Japanese Mobile Phone Operators Find No Scientific Evidence that Radio Waves Affect Human Cells

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Japan's mobile phone operators, NTT DoCoMo, Inc., KDDI Corporation, Vodafone K.K. and TU-KA Cellular Tokyo Inc. have reported interim findings that radio frequency energy from mobile phone base stations does not affect human cells.

Using four human cell lines, two containing established infant and fetal fibroblast cells and two containing cerebral tumor tissues, and examining about 20,000 genes in the human genome (approximately 40,000 genes have been identified), researchers found no effect on cell proliferation, gene expression profile or DNA single-strand breaks. The results seem to indicate the safety of radio waves, as the radio waves used in the experiment were up to 10 times stronger than the limit set forth in radio frequency radiation protection guidelines for base stations.

Experts and organizations such as the World Health Organization (WHO) generally agree there is no scientific evidence that radio waves from mobile phones and base stations have any effect on people's health. Nevertheless, WHO has recommended further research with respect to the safety of these waves and, in response, the four companies started examining the biological effect of microwave exposure from mobile phones and base stations in November 2002.

Mitsubishi Chemical Safety Institute Ltd., which has extensive experience in safety tests using cell cultures and microorganisms,

provided support for the research. In addition, biochemical aspects of the research were commissioned to Professor Junji Miyakoshi of Hirosaki University and engineering aspects to Professor Toshio Nojima of Hokkaido University.

The findings will be announced at the Bioelectromagnetics (BEMS) Annual Meeting 2005 from June 19 to 24 in Ireland and have also been submitted to the BEMS Journal.

The study has already been registered in the WHO database. The companies intend to continue their research and publish further results.

The study was conducted in accordance with Good Laboratory Practice (GLP) standards for equipment, instruments, organizations, personnel and procedural documentation used in safety evaluation tests of pharmaceuticals, chemicals and other products. In Japan, GLP standards for various fields are established by the Ministry of Health, Labor and Welfare, the Ministry of Agriculture, Forestry and Fisheries, the Ministry of Environment and others.

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