

## RESULTS OF RECENT STUDIES ON THE RELEVANCE OF VARIOUS SHORT-TERM SCREENING TESTS IN JAPAN

TAKACHI KAWACHI\*, TAKIE KOMATSU\*, TSUNEO KADA\*\*, MOTOI ISHIDATE\*\*\*, MASAMICHI SASAKI\*\*\*\*, TAKETOSHI SUGIYAMA\*\*\*\*\* and YATARO TAZIMA\*\*

\*National Cancer Center Research Institute, Tsukiji, Chuo-ku, Tokyo 104

\*\*National Institute of Genetics, Mishima-shi, Shizuoka 411

\*\*\*National Institute of Hygienic Sciences, Kamiyoga, Setagaya-ku, Tokyo 158

\*\*\*\*Hokkaido University, Kita, Kita-ku, Sapporo-shi, Hokkaido 060

\*\*\*\*\*Kobe University, Kusunoki-cho, Ikuta-ku, Kobe-shi, Hyogo 650 (Japan)

Two groups for studies on detection of carcinogenicity have been organized under projects of the Ministry of Health and Welfare of Japan: They are the "Cooperative Program on Short-term Assays for Carcinogenicity" headed by Dr. Takashi Kawachi and the "Cooperative Program on Long-term Assays for Carcinogenicity" headed by Dr. Shigeyoshi Odashima. In the 6-year period from 1973 to 1978, a total of 186 compounds were examined by short-term assays using *Salmonella typhimurium* TA100 and TA98 (mutation), *Bacillus subtilis* (rec assay), hamster lung fibroblast cells (chromosome aberrations, sister chromatid exchanges), human embryo fibroblast cells (chromosome aberrations, sister chromatid exchanges), rat bone marrow cells (chromosome aberrations *in vivo*) and silk worms (mutations). The compounds tested were selected as known carcinogens, non-carcinogenic structural analogues of carcinogens, food additives widely used in Japan, drugs used in long-term clinical therapy and industrial intermediates with high annual productions in Japan.

A metabolic activation system was used in the *Salmonella* test, *rec assay* and chromosome aberration test in hamster fibroblasts *in vitro*, but not in the chromosome aberration test in human fibroblasts, or in sister chromatid exchange assays in human fibroblasts and hamster fibroblasts.

Results of short-term assays of the 186 compounds, listed alphabetically, are given in Table 1.

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