Solar radiations (71–72)

71 Thermosensitivity and DNA-PK activity of scid cells and hybrid scid cells containing human chromosome 8

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Scid cells were sensitive to both ionizing radiation and heat treatment. The sensitivity of hybrid scid cells containing the fragment of human chromosome 8 was recovered against to these treatments. Thermotolerance and induction of HSP72 of scid cells and hybrid scid cells were the same as a wild type strain (balb/c). Scid cells defect double-strand DNA dependent protein kinase (DNA-PK). The DNA-PK activity was detected in hybrid cells. The DNA-PK acivity of hybrid cells was decreased by heat treatment and recovered during incubation at 37 °C after heat treatment.

72 Dose and Dose Rate Effectiveness Factors of Radiation Induced Myeloid Leukemia in C3H male mice.(II)

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C3H male mice were exposed for 22 hours daily to several dose-rate(H:88.2cGy/min, A:0.0298cGy/min,B:0.0067cGy/min,C:0.0016cGy/min) levels and dose levels of Cs gamma-rays. The animals were then maintained for their life span. Dead mice were pathologically examined for the estimation of incidences of myeloid leukemia and other neoplasms. Dose effect curves for myeloid leukemia incidences in these groups were obtained. Dose and dose rate effectiveness factors were estimated from linear regression line of these dose effect curves as 5.5 between H and A group, 11.7 between H and C group. 10Gy-irradiated mice in A and B groups showed quite different incidences of myeloid leukemia(A:0%,B:4.6%).