



Nuclear and cytoplasmic changes in erythrocytes of p53-deficient medaka fish (*Oryzias latipes*) after exposure to gamma-radiation

Alaa El-Din Hamid Sayed, Shoji Oda, Hiroshi Mitani

Abstract:

Previous studies have examined the effects of gamma-radiation on Japanese fish, in particular medaka (*Oryzias latipes*). In the present work, alterations in erythrocytes were recorded as haematological bio-indicators of exposure to gamma-radiation. After exposure of medaka fish to two different doses of radiation (2 Gy and 10 Gy), many malformations in red blood cells were observed in the irradiated fish compared with control fish. These malformations included acanthocytes, crenated cells, amoeboid cells, and sickle cells. More malformations were seen at the higher radiation dose. No micronuclei were seen in any group, but nuclear abnormalities were observed. We conclude that gamma-radiation causes morphological malformations of erythrocytes and is harmful to medaka fish.

Keywords:

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