

## THE CHERNOBYL FALLOUT IN SALZBURG/AUSTRIA AND ITS EFFECT ON BLOOD CHROMOSOMES

Johanna Pohl-Rüling, Division of Biophysics, University of Salzburg, Austria.

An investigation has been carried out to decide whether blood chromosome aberrations reflect an increase of radiation dose of 17 to 90 percent over the normal environmental burden.

The inhabitants of the city of Salzburg/Austria got additional doses in this order of magnitude from the fallout radioactivity after the Chernobyl accident. The reason, measurement and amount of the increase of external and internal radiation doses are described. We had 15 test persons. From two of these the aberration frequencies could be given before and after the accident with a significant increase. For a tentative dose relationship the results were pooled according to the Cs-137 content of the test persons, measured by whole body counter. The mean additional blood doses from the incorporated caesium plus the external fallout radiation were 0.23, 0.36 and 0.55 mGy/yr. An increase in the aberration frequencies was found. The slope of the best straight line through the points turned out to be about  $2.0 \pm 0.7$  total chromosome type aberrations in 100 metaphases per mGy/yr. This result fits well to former investigations of persons with individually calculated radiation burden from the environment. This implicates that dose assessment from chromosome aberrations with dose response curves extrapolated from high doses are not possible for such low doses.

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Berichte der Naturwissenschaftlich-Medizinischen Vereinigung in Salzburg](#)

Jahr/Year: 1988

Band/Volume: [9](#)

Autor(en)/Author(s): Pohl-Rüling Johanna

Artikel/Article: [THE CHERNOBYL FALLOUT IN SALZBURG/AUSTRIA AND ITS EFFECT ON BLOOD CHROMOSOMES. 181](#)