

magnification 6000x. As described previously (Piguet and Vesin, 1994), in lung capillaries, relative numbers of blood platelets were recorded in relation to the number of 100 erythrocytes observed (Fig. 1).

#### Haematological examination

In animals of control groups and of groups in the acute postirradiation phase, counts of erythrocytes, leukocytes and thrombocytes were determined and in the bone marrow, counts of megacaryocytes were established. In groups in the subacute phase after irradiation (8 weeks), thrombocyte counts in the peripheral blood were provided.

#### Statistics

The Student's t-test was used for statistical evaluation.

## Results

#### RT-PCR

Differences were recorded in mRNA TGF- $\beta$ 1 production in the lung tissue of particular mouse strains, taking into account the time after irradiation. There was no positivity in controls of both strains even in the late postirradiation period (not shown). A very moderate positivity was found in the C3H/J strain on day 9 after irradiation. In the same time interval, in the C57BL/6 strain, there was an obvious TGF- $\beta$ 1 positivity in the lung tissue (Fig. 2).

#### Electron microscopy

Relative thrombocyte counts in the strains C57BL/6 and C3H/J were in average 0.1 and 0.095, respectively, in controls, 0.0012 ( $P < 0.05$ ) and 0.00004 ( $P < 0.05$ ), respectively, in mice 9 days after irradiation, and 0.046 ( $P > 0.05$ ) and 0.063 ( $P > 0.05$ ), respectively, in mice 8 weeks after irradiation (Figs. 3, 4). In mice of the C57BL/6 strain, focally enhanced electrodensity of vessel endothelial cells was parallelly recorded nine days after irradiation, in certain cases with a simultaneous dilatation of cisterns of the rough endoplasmic reticulum (Figs. 5A, B, C, see arrows).

#### Haematological examination

In both strains, there was a considerable decrease in thrombocyte and leukocyte numbers in the acute postirradiation period with unchanged count of megakary-

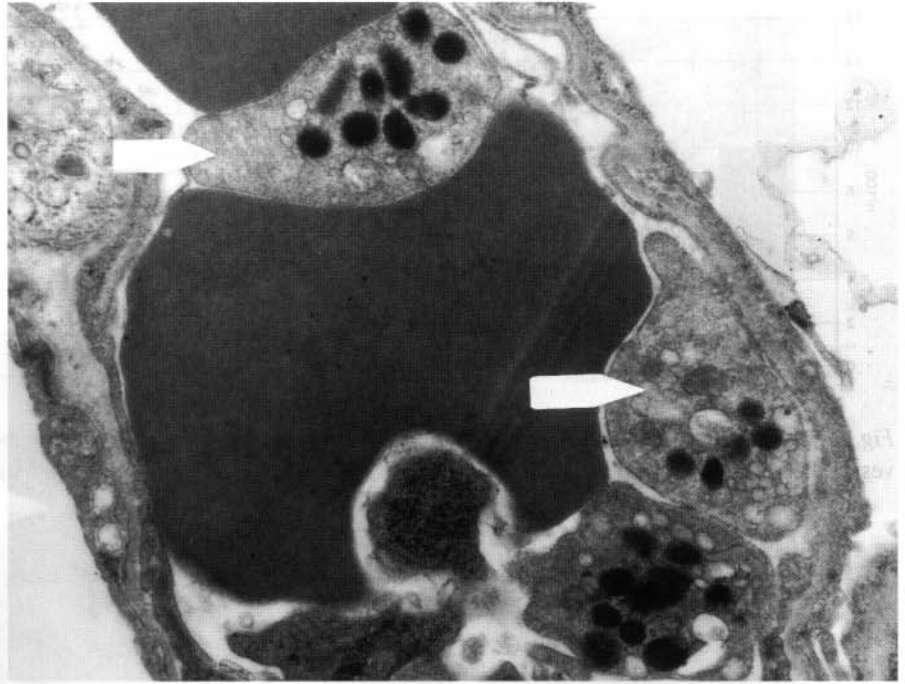


Fig. 1. Illustration of electron-optical evaluation of counts of thrombocytes which are free and which are in contact with the lung endothelium, related to the number of erythrocytes according to the formula  $n = th/ery$ .

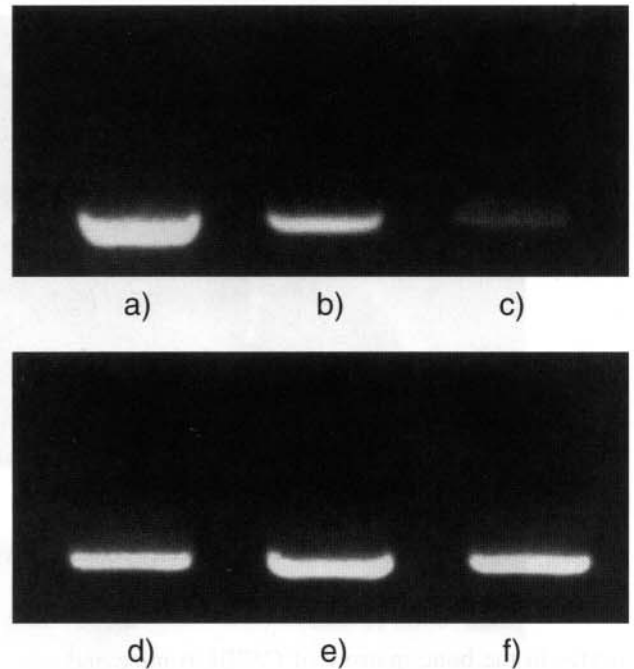


Fig. 2. RT-PCR results: lane a) positive control of template DNA, b) significant production of mRNA TGF- $\beta$ 1 in the lung tissue of an experimental mouse from the C57BL/6 strain on the 9th day after irradiation, c) discrete production of mRNA TGF- $\beta$ 1 in the lung tissue samples from the C3H/J strain on the 9th day after irradiation, d) positive control of template for  $\beta$ -actin DNA, e) production of  $\beta$ -actin in the C57BL/6 strain, f) production of  $\beta$ -actin in the C3H/J strain. Equal amounts of isolated RNA (1  $\mu$ g) were used in each RT-PCR.  $\beta$ -actin served as an internal control.