

Fig. 3. Percentage of the initial population as a function of time (log scale). Heat-fixed cells. A) Non-adhering cells. B) Adhering cells. C) Total recovery.

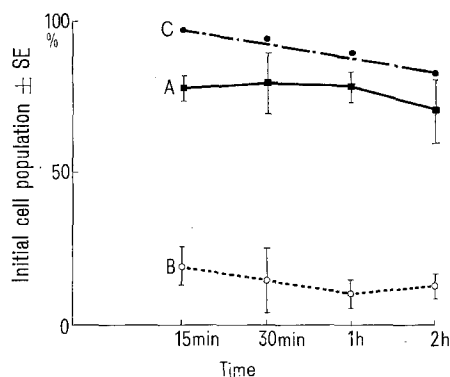


Fig. 4. Percentage of the initial population as a function of time (log scale). Formalin-fixed cells. A) Non-adhering cells. B) Adhering cells. C) Total recovery.

that is maintained constant during the whole experiment. The slow decrease of non-adhering cells (curve A) after 30 min is parallel to the decrease of the total cell population and is unrelated to curve B. Formalin-fixed cells (Figure 4) decrease in number slowly C) without any relation between the non-adhering A) and the adhering B) fraction.

**Discussion.** The decrease in the number of non-adhering cells and the parallel increase of those which adhere describes a change in the condition of the cell population, that follows an exponential function in relation to time.

The absence of adhesion in cell populations killed by heat or by formalin does not agree with the data of TAYLOR<sup>1</sup> and NORDLING<sup>2</sup>, who found that dead cells did adhere to the glass at a faster rate than living cells. An explanation may be that with strongly adhering cells, such as KB cells, 2 phases of adhesion can be distinguished. The first may be assumed to be a rather weak bond, that is to say if we consider the DERJAGUIN-LANDAU-VERWEY-OVERBEEK theory of colloid stability<sup>7, 8</sup> as applied to cells. Then due to a reduction in the electrostatic potential between the cells and the glass surface<sup>9, 10</sup> some adhesion will occur, the rate being proportional to the potential. The possibility also has to be considered that the cells are held to the glass in a 'secondary minimum' or by 'macromolecular bridges'.

After this first contact is established, the cells spread, and due to the large mutual interfacial area they become then firmly bound to the glass, in which case they may be only detached by rupturing the cells or by fracturing the membrane<sup>11</sup>.

It seems that the above method is more likely to leave among adhering cells only the population entering into

this second phase of adhesion. This capacity of cells to adhere in a firm way to the glass surface<sup>12</sup> is a specific marker of viability<sup>13, 14</sup>.

**Riassunto.** La velocità di adesione al vetro di cellule KB è stata studiata utilizzando un contatore di particelle elettronico. I risultati mostrano che è possibile studiare l'adesione di cellule al vetro come fenomeno vitale collegato ai fenomeni di attaccamento attivo e di riproduzione cellulare.

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<sup>7</sup> B. V. DERJAGUIN and L. LANDAU, *Acta Phys.-chim. URSS* 14, 633 (1941).

<sup>8</sup> E. J. W. VERWEY and J. Th. G. OVERBEEK, *Theory of the Stability of Lyophobic Colloids* (Elsevier, Amsterdam 1948).

<sup>9</sup> L. WEISS, *Expl. Cell Res.* 53, 603 (1968).

<sup>10</sup> D. J. WILKINS, R. H. OTTEWILL and A. D. BANGHAM, *J. theor. Biol.* 2, 176 (1962).

<sup>11</sup> L. WEISS, *Expl. Cell Res.* 25, 504 (1961).

<sup>12</sup> L. WEISS, *J. theor. Biol.* 2, 236 (1962).

<sup>13</sup> This work has been supported by a grant from the G. A. and L. Pfeiffer Research Foundation, New York, USA.

<sup>14</sup> We wish to thank Dr. D. WILKINS, Battelle Institute, Geneva, for his helpful discussion and advice.

# CORRIGENDUM

D. A. J. GOODLAD and C. M. CLARK: *Effect of Pregnancy and Feeding Pattern on Tryptophan Pyrrolase in the Rat*, *Experientia* 28, p. 207 (1972). On page 208 the first sentence should read as follows: The level in non-pregnant rats was, however, significantly **increased** by restricting their food intake.

F. J. OELSHLEGEL JR. and G. J. BREWER: *New Positive, Tetrazolium-Linked, Staining Method for the Use with Electrophoresis of Phosphoglycerate Kinase*, *Experientia* 28, p. 116 (1972). On page 117 in the 3rd paragraph, the quantity of  $MgCl_2$  should be **0.011 M** instead of 0.11 M. The G6PD should be 0.5 mg per **100 ml** and the HK should be 0.1 mg per **100 ml** instead of per ml.