

**ADHESION AND METASTASES**

PRZEMYSŁAW JANIK and MACIEJ MALECKI

Cell Biology Department, Cancer Center, W.K. Roentgen 5, Warsaw, Poland

A metastatic cascade begins with the passage of cells from the primary tumor to the circulating blood or lymph. This particular event seems to be a critical event in the fate of tumor cells.

Under new environmental conditions, a tumor cell may die, or survive and have a chance to produce metastases. By contrast, non-transformed cells do not develop ectopic foci; when they reach the circulation system, they soon die. So, it seems that a lack of adhesion would be a factor determining the fate of cells circulating in the blood, a phenomenon already described as anoiksis.

Under physiological conditions, the signal transduction systems that lead to proliferation and survival require the cooperation of at least two types of stimulation; one from growth factor and the other from adhesion molecules like integrins.

When a cell loses adhesion to the extracellular matrix, the pathway from the integrins is switched off and that cell either stops proliferating or dies.

Here, we are going to show the different mechanisms of the cell death of transformed and non-transformed cells.

From *in vitro* experiments performed, it seems that tumor cells display a mechanism protecting them from mitochondrial activated cell death.