During cell transformation, changes occur in the macromolecular architecture on cell membrane surfaces, mainly involving carbohydrate-containing components of the peripheral cell coat. One of the cell surface changes responsible for the different behavior of transformed cells appeared to be the surface anionic sites. The surface topography of negatively charged membrane sites is visualized and evaluated by electron microscopic (EM) observation with cationic ferritin (CF) particles. CF, a polyvalent ligand induces a regrouping-relocation of CF-specific anionic sites and induces a formation of clusters and patches of CF particle binding sites on the surface of leukemic cells and not on surfaces of normal lymphocytes. This probably is due to a more fluid lipid layer in the surface of leukemic cells than on surfaces of normal lymphocytes. The difference in the CF particle pattern as observed in EM between membrane cell surfaces of leukemic cells and those of normal lymphocytes appears to be a characteristic exhibiting an alteration in structural composition and membrane behavior of transformed cells different of that of normal cells. This characteristic has been shown also in a variety of leukemic cell lines and various transformed malignant cell lines. This findings were fully reported at an earlier publication.

Acknowledgement: Thanks to Prof. Yechiel Shai for his continuous support of my research activity.