

# 3D VISUALIZATION AND FUNCTIONAL CONSIDERATION OF CELL WALL AND CYTOPLASMATIC MEMBRANE STRUCTURES OF SHIGELLA AND ENTAMOEBA

K.O. Hovnanyan<sup>1</sup>, N.S. Pryatkin<sup>3</sup>, Ch.A.Sargsyan<sup>1</sup>, H.H. Davtyan<sup>1,2</sup>, A.H Trchounian<sup>2</sup>

<sup>1</sup>Institute of Molecular Biology of NAS RA, Yerevan, 0014, Armenia,

<sup>2</sup>Yerevan State University, Yerevan, 0025, Armenia,

<sup>3</sup>Video Teast, Image Analysis Systems, Ltd., St.-Petersburg, 198035, Russia

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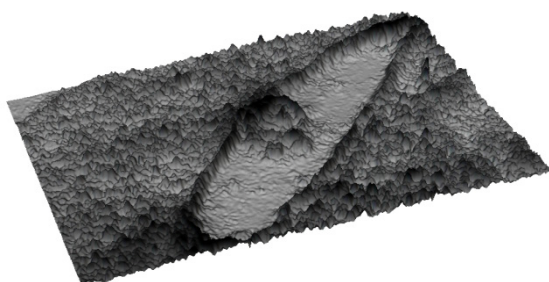
Email:hovkarl@mail.ru

*Shigella flexnerii* and *Entamoeba histolytica* pathogen agents of intestinal bacterial and amebic dysentery. The ferments of pathogenic bacteria and the protozoa, in particular acid phosphatase and phospholypase, are one of the pathogenic determinant to pathogenicity of the pathogen agents of intestine infection[1]. The aim given work is a determination to functional localization of the acid phosphatase and phospholypas in the cells of *Shigella* and *Entamoeba*.

As basic investigation objects there were used different strains of *Sh. flexnerii*, strain “130” and *Ent. histolytica* strain “BN” cultures taken from patients. Acid phosphateses and phospholypases activity topochemistry in *Shigella* and *Entamoeba* have been determined by “lead” modified ways. For preparing electronic-microscopic preparations of bacteria and protozoa, as well as biological samples were fixed, further dehydration, saturating, polymerization in resins, ultrathin sections observation on electronic microscopes Tesla BS-500 (Czechoslovakia) and JEM-100B (JEOL, Japan). Stereoimaging ultracytochemical localization acid phosphatase in the cells of bacteria and protozoa as predicted by Video Test-Structure 5.0–Nanotechnology Program. On the strength of electroniccytochemical researches there were revealed the localizations of acid phosphatase in bacteria and phospholypase in trophozoites due to reaction product as electronically dense precipitates discovered in the periplasmatic dimension and on the surface of plasmatic and phagosomal entamoeba cell membranes (Fig.1). Our results of performed stereoimaging ultracytochemical study tell about *Shigella* and *Enamoeba* phosphatase (acid) and phospholypase activity of wall bacteria and phagosomal membranes of protozoa- agent, promoting cytopathic effect when *Sigella* and *Entamoeba* interaction with host cells.

References:

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**Figure. 1.** . Stereoimaging ultracytochemical localization phospholypases activation in the phagosomes of *Ent.histolytica* strain “BN, cells as predicted by Video Test-Structure 5,0-Nanotechnology Program..