

## **PROMISING TO STUDY THE ADHESIVE PROPERTIES PROBIOTIC FERMENTS**

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In recent years, probiotic products and functional food products prepared on the basis of live bacteria ferments culture have been increasingly used in complex therapy of a number of pathological conditions occurring against the backdrop of the broken normal microflora of the human body.

A number of authors demonstrated that probiotics for human must meet the following requirements: save the necessary concept in the process of production; have the potential colonization, to adhere well to the relevant mucosal epithelium; antibiotic substances produce anti -E. coli factor, etc.

Special attention should be paid to the study of the adhesive properties of probiotic cultures as a fundamental factor in their competition with the conditionally pathogenic microflora or infectious agents.

Adhesion - a complex multi-component process, which provides the colonization of microorganisms any solid substrates including human and animal tissues.

Commonly known method for determining fixing properties of microorganisms to epithelium using the cell line - Caco-2 based on the relationship with the bacteria wall colorectal epithelial cells in human colon carcinoma monolayer. Its advantage is that it allows to study investigated the properties directly on human cells, but unfortunately, is the expensive and time consuming. Known method of simultaneous determination of microbial colonies primary adhesiveness seeding erythrocytes. There is also a photometric method for determining the activity of bacteria fixing to erythrocytes, which allows you to accurately and objectively sufficient to simulate the process of attachment of bacteria to the epithelial cells.

The most common by far the study of adhesion of bacterial microflora ferments used detailed Brilis' method. As cells in this method is proposed to use the native human erythrocytes O / I Rh (+) - groups which contain on their surface glikoferin - a substance identical glycocalyx of epithelial cells. Adhesion is assessed by the following parameters: average adhesion and the index of adhesion of microorganisms. To date, at the Department of Biotechnology of the National University of Pharmacy adhesive properties of probiotic fermented sourdough cultures such as: "Bifivit Vivo", "Simbilakt Vivo", "Yogurt Vivo", "Yogurt", "Lactobacterin" have been studied.