

## Role of bile in adequacy of the data of experiments on the small intestine of rats *in vitro* and *in vivo*

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Studies of the functions of the Small Intestine in the experiment occur on model systems in conditions *in vitro*, *in situ*, and *in vivo*. The creation of model conditions presupposes the presence of limitations on certain parameters: for example, in conditions of Digestion and absorption *in vitro*, mediums that are not adequate to the real composition of intestinal juice are usually used. Therefore, in addition to Saliva, Pancreatic and Gastric Juice, they do not contain bile. Bile is necessary for the emulsification of food lipids, the detoxification of pathogenic Microflora coming with a food, for the activation of Pancreatic Lipase, for the transportation of lipids through the Intestinal wall into the Blood and Lymph. Accordingly, the influence of Bile on the fluidity of membranes of enterocytes and, as a result, on the modification of their digestive and transport capabilities should be expected. Therefore, in own experiments *in vitro*

and *in vivo*, we investigated the effect of bile on the activity of hydrolysis systems of dimeric substrates of Protein and Carbohydrate origin and transport of the resulting monomers in the Small Intestine of rats. A significant multidirectional effect of bile on the activity of both hydrolytic and transport systems of enterocytes is shown.

### Speaker Biography

Olha V Storchylo graduated Odessa State University (Ukraine) at biochemistry in 1983. She completed her post-graduate in human and animal physiology and biochemistry at the Institute of Physiology Pavlov named of Academy of Sciences of USSR in 1988 and joined the Human and Animal Physiology Department of Odessa State University as an Assistant Professor. From 2008 until now, she is an Associate Professor of Medical Chemistry Department of Odessa National Medical University. Fields of interests are nutrition, digestion and absorption in the small intestine and effects of milk thistle fruits on it, total body irradiation, nutrigenomics, radio pharmacology.

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