



## Comparison of the data of investigation of milk thistle effects on the digestion and absorption of nutrients in the small intestine of the rats in vitro and in vivo

**Olha V Storchylo**

Odessa National Medical University, Ukraine

### Abstract

The small intestine is a barrier between the internal medium of the body and the environment. In the small intestine, the processes of digestion of polymer nutrients finish and the final stages of absorption of monomeric nutrients formed during digestion take place. Different researchers carry out investigation of these processes in different conditions: in vitro, in vivo and in situ. Each of the methods has its advantages and its limitations. In addition to the methodological conditions of the study, both the components of food and related components, such as herbal preparations, influence the results of digestive and absorption processes. Recently, milk thistle fruits is widely used to correct liver problems due to its membranotropic effect, which joins with the main component of milk thistle fruits - silymarin. However, in addition to silymarin, milk thistle fruits contains many other biologically active substances that can affect not only the processes in the liver, but also on the digestive and absorptive processes in the small intestine. Therefore, in our own experiments on the small intestine of rats, we investigated effects of water- and fat-soluble fractions of milk thistle fruits, and the total dried water-alcohol extract of milk thistle fruits on the processes of digestion and absorption of nutrients. Own data obtained in vitro and in vivo experiments are discussed.

### Biography

Olha V Storchylo graduated Odessa State University (Ukraine) in Biochemistry in 1983. She completed her Postgraduation in Human and Animal Physiology and Biochemistry at the Pavlov Institute of Physiology Russian Academy of Sciences, 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. Her fields of interests are nutrition, digestion, and absorption in the small intestine and effects of milk thistle fruits on it, total body irradiation, radiopharmacology, nutrigenomics, pharmacogenomics.



### Publications

1. Mechanisms of radioprotective and radiocorrective effects of dietary phytoadditive of milk thistle fruits
2. Role of bile in adequacy of the data of experiments on the small intestine of rats in vitro and in vivo

3<sup>rd</sup> International Conference on Gastroenterology and Digestive Disorders, Italy, Rome, February 24-25, 2020

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