



## Nutrigenomic effect of milk thistle in 2 generations of posterity of irradiated predecessors

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### Abstract

Food is a strong agent of the formation and functioning of our body. Phenomenon of the fast substrate adaptations was found by academic Ugolev in 60-th years of 20-th century and explains the predominant synthesis of corresponding enzymes as a response on the corresponding type of the nutrients. Besides that, the components of food lead to the epigenetic changings in the generations. Therefore, ethnic types of the food very often are suitable for the locals and uncomfortable for the strangers. The small intestine is a final barrier between the environment and intrinsic medium of human organism. It is responsible in the final steps of digestion of polymer nutrients and absorption of formed monomers. Therefore, it is good object for the investigation of this processes and results of effects of environment on them. One of those effects is effect of irradiation. It leads to the not only the problems of irradiated organism, but to the instability of genome of 7-10 generations of its posterity. In the way of prevention and correction of the results of irradiation, the special attention is paid on the phyto preparations, which have low toxicity, mild prolonged effect and wide spectrum of activity. In this range the use of milk thistle fruits are re-searched and discussed very active. In own experiments in vivo and in vitro the effects of oral use of milled milk thistle fruits on the activity of digestive and absorptive processes in the small intestine of 2 generations from irradiated rats were detected. Nutrigenomic effects of milk thistle fruits are different for the processes of digestion of carbohydrate and protein origin dimers and absorption of corresponding monomers in 2 generations of posterity of irradiated males.

### 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 till now, she is an Associate Professor of Medical Chemistry (now – Clinical Chemistry and Laboratory Diagnostics) 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 and radio pharmacology



### Publication

1. Mechanisms of implementation of damage to the functions of the small intestine in 2 generations of posterity of irradiated rats Olha V. Storchylo, PhD Associate Professor, Medical Chemistry Department, Odessa National Medical University, Ukraine.
2. Perfusion of the Functioning Portion of the Small Intestine of the Rats: Parameters of Perfusion and Dependence of the Velocity of Absorption of Glucose on the Velocity of Perfusion. Olha V. Storchylo, PhD Associate Professor, Medical Chemistry Department, Odessa National Medical University, Ukraine.
3. Pharmacological Correction of the Results of Irradiation of the Parents for the Assimilation of Carbohydrates in the Small Intestine of Two Generations of their Offspring by the Help of Milk Thistle Fruits Olga V Storchylo, Odessa National Medical University, Ukraine

9<sup>th</sup> International Conference on Food Science & Technology  
March 18-19, 2020 | Frankfurt, Germany

**Author Citation:** Olha V Storchylo, Nutrigenomic effect of milk thistle in 2 generations of posterity of irradiated predecessors, Food Technology 2020, 9th Conference on Food Science & Technology, March 18-19, 2020, Frankfurt, Germany, 12