Short Communication

BIOMEDICAL Journal of Scientific & Technical Research

ISSN: 2574 -1241

DOI: 10.26717/BJSTR.2024.57.009033

AgriTech Biosimilarity –The Restore of a Vanished Civilization

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ARTICLE INFO

Received: July 09, 2024

Published: July 17, 2024

Citation: Elena Viktorovna Drozdova. AgriTech Biosimilarity –The Restore of a Vanished Civilization. Biomed J Sci & Tech Res 57(4)-2024. BJSTR. MS.ID.009033.

Introduction

Biosimilarity is a term of modern biomedicine that describes blurrily the similarity of low-cost drugs to already approved biological medicine. In this article, I would like to borrow this term to use it in the field of nutrition and emphasize once again the significance of food as a medical resource. First of all, I need to explain my idea regarding modern food that cannot be treated on the basis of the beginning of the XXth century, because that is another type of food and the impact of that authentic food (absolutely fresh, grown naturally without any modifications, stored without thermal and chemical stabilizers) is scanted today. Let's turn to the main target of modern food consumption - animal protein. Nowadays official conception sticks to the opinion that protein consumption potentiates the development of cancer. The testimony of this concern is the data that countries with the 9% and lower protein consumption in a daily diet have low rates of morbidity and mortality from cancer. But, for some reasons, no one was puzzled why the data of the best statistic of mortality\ morbidity from cancer has extremely narrow differentiation between morbidity and mortality. The percentage of mortality from morbidity from cancer varies from 68% in such countries like Mexico to 101.3% in India. By the way this percentage in countries with high incidence of cancer varies from 29.9% to 49%. Another disadvantage of protein is its high allergenicity and capability to build immunocomplexes as a source of numerous diseases. That is true, but in part [1-6].

In this regard I would like to draw your attention toward the main storage method of meat and fish products – that is hypothermia. That is not a secret that hypothermic storage of RBC (red blood cells) decreases the amount of glutathione and increases the amount of homocystein. Homocystein as a methionin metabolism product cannot end methionin cycle in the conditions of high concentration of homocystein. Moreover, it enters into a transulfation reaction with the formation of cysteine which in turn leads to the formation of superoxide. Using the examples of collecting donated blood with the glutamine containing medium that caused an activation of homocystein utilization we can assume that feeding livestock with antioxidants before a slaughter and application of substrate amino acids for the glutathione synthesis during the hypothermal storage contribute to solve the problem. An equally significant factor is soy – the worldwide food replacement product. Soy itself is a nutritious product known since ancient times. But, in the last 30 years soy production has substituted many of the agricultural products because of its simplicity of agro technology, productivity and minimality risks of losses. Being the leader of protein and in particular methionin + cysteine content it has become a homocysteine bomb for the humanity, especially for poor segment of the society.

That is our bread and meat today for people, and, of course, soybean meal for livestock additionally increases the amount of homocyctein in tissues. Summing up the result, we have a global problem with oxidation products of homocystein like superoxide radicals, peroxynitrite that is the starting point of massive cell damage, multiple gene mutations and consequently decompensation of many serious systemic diseases and in particular cancer, diabetes mellitus, cardiovascular diseases with extremely expensive treatment. Cheep food requires a space cost of treatment.

Conclusion

Soy food substitute pattern provokes hyperhomocisteinemia in animals and humans. Hyperhomocisteinemia is a cause of dismetabolism of methionin, oxidative stress in cells, mutations and massive cell death that consequently leads to a damage of vascular bed and decompensation of numerous diseases. Hypothermal storage of meat /fish products should be accompanied with antioxidants in medium.

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