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INTRODUCTION – OBESITY, THE PLAGUE OF XXI CENTURY CIVILISATION

Hunger has been a part of human life ever since the very beginning and throughout history has been present nearly everywhere. Hunger has been one of the causes of migration and conquests of new lands and has been a part of everyday life until humans adapted to their new environment. As a result, throughout evolution humans have mastered the art of dealing with hunger. This is a multilayer issue concerning the nervous and endocrine systems. It involves the behaviours relating to dealing with hunger, tissue metabolism as well as the functions of many bodily systems; especially the digestive system. Humans have developed particularly efficient digestive and assimilatory mechanisms, including secretions of the digestive, gastric and pancreatic enzymes which exceed the true needs of the digestive phase. Experiments on animals as well as clinical research on patients with partial pancreas removal show that no more than 20% is actually needed. Similarly, a decrease of food intake or removal of part of the small intestine soon results in an increase of efficiency of the remaining intestine. Migrating birds and hibernating mammals are a prime example of the abilities of the in-

testine which adapts both functionally and morphologically.

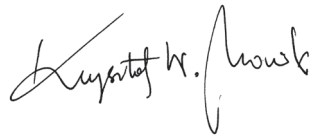
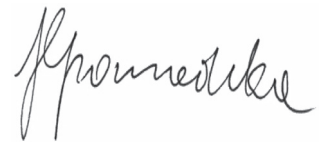
Why should we discuss it in a KOSMOS special issue concerning the obesity? The answer is simple; we want to explain what we're dealing with while attempting to fight obesity: thousands of years of evolution which have led to numerous adaptations allowing fighting food shortage.

There are several definitions of obesity; however they all have one thing in common: lack of balance between the intake and usage of energy in a longer time frame. From evolution, fat reserves should have been used up and replenished with the change in seasons. The human organism however hasn't managed to adapt to the new circumstances where the food is now abundant throughout the year and has resulted in a great increase of obesity-related issues. Scientists are alarmed by the increase in diseases including type 2 diabetes, hypertension and coronary disease. Life expectancy has taken a turn and is currently on a decrease due to obesity.

This special KOSMOS issue entitled "Obesity, the plague of XXI century civilisation" attempts to discuss the current knowledge on the subject of obesity. This

broad subject includes physiology, dietetics, general medicine and many more. We have asked relevant specialists to discuss

these subjects and help us demonstrate the issue of obesity.

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