



## Editors' Foreword

*Caesar:*

*Let me have men about me that are fat,  
Sleek-headed men, and such as sleep a-nights:  
Yond Cassius has a lean and hungry look;  
He thinks too much: such men are dangerous.*

**William Shakespeare**  
**Julius Caesar, Act 1, Scene 2**

*Dear Colleagues,*

Humans need food (and love) to survive. At the evolutionary level, the survival of biological species is mediated by growth, fertility and longevity phenotypes. However, the human race has evolved in an environment of extremely difficult periods of time, when food was scarce. Hence, the act of hunting or gathering food was laborious and required higher energy expenditure than what it takes to have food nowadays. Such a scenario promoted the ability to eat as much as was available. The “thrifty” genes may thus evolved to promote human survival in a life of famine-to-feast cycle (1). The scenario, especially in the economically advanced countries, has been changed in the last two decades: the average person has enough money to fill the daily caloric needs with fast-food meals. And the average daily energy expenditure has declined in parallel with a sedentary lifestyle. Hence the evolutionary pattern of “the more you eat, the better for survival” became no longer an advantage but a liability, and the presence of *Homo obesus* is increasing dramatically (2 for adipochronobiology of obesity and diabetes).

Today, *Homo obesus* (man the obese), like Diogenes (c. 403-323 BC), is increasingly saying “I am a citizen of the world.” Recent studies provide evidence that morbid obesity is a major evil of human health, because plays a pivotal role in the development of cardiometabolic diseases, such as atherosclerosis, hypertension, type 2 diabetes mellitus, and metabolic syndrome as well as other disease such as nonalcoholic steatohepatitis, obstructive sleep apnea syndrome, polycystic ovary syndrome, and also Alzheimer’s disease. Each of

these diseases increases the risk of having an unsuccessful ageing and a shortened life expectancy.

Both in financial terms and human suffering, the costs associated with obesity and related diseases are enormous. An effective way to reduce the costs and increase the quality of life would be to treat one of the major underlying causes, obesity. Currently available therapies employed to combat obesity have ranged from pharmaceuticals through modifications of lifestyle factors such as nutrition and physical activity to caloric restriction mimetics (3-6), incretin-based drugs (7), vaccination (8), and omics-based personalized treatment (9,10) However, these treatments have disadvantages such as transient effectiveness and undesirable side effects of pharmaceuticals, poor compliance for lifestyle modifications, whereas the experience from recently applied biologicals and gene/cell therapy (11) is controversial.

In most countries the prevalence of obesity now exceeds 15%, the figure used by the World Health Organization (WHO) to define the critical threshold for intervention in nutritional epidemics (12). The prevalence of adult obesity has exceeded 30% in the United States, is over 20% in most of Europe, and is 40-70% in the Gulf and Polynesian islands. Further, WHO’s data show that 20 percent of European children are overweight and that their number increases by 400,000 a year. In a similar vein, “for the first time in American history, today’s generation of children could live shorter lives than their parents. The cause is obesity: more than 11 million children in the United States are with overweight or obese, thousands of them being with type 2 diabetes mellitus.”

This provoked a joint activity of Clinton Global Initiative (an NGO of philanthropic purposes) and the American Heart Association, and they launched in 2005 the Alliance for a Healthier Generation. This health promoting activity may be a role model for other countries.

Dr Ludovicus Nonnius was born in Antwerp, Belgium in 1553 (13). He built up an important practice as physician, naturalist, writer, and latin poet, thus being a good example of a Renaissance humanist. He died in 1645 at the age of 92. A special merit of the author is that he can be considered to be the founder of medical dietetics; his friend, the famous artist Peter Paul Rubens (1577-1640), also appreciated his dietary prescriptions. The main work of Nonnius is his "*Diaeteticon sive de re cibaria libri IV*", where he exposes the basic principles of healthy eating. He asserts that eating vegetables, fruits and fish is very healthy. And also talks about the benefits of drinking wine, eight chapters being dedicated to enotherapy wine (from Greek *oinos* - wine). The Antwerp scholar agrees with Hippocrates and also Galen, who teaches that "red wines produce much blood, so that are proper to feed the body." Recently, oenology (enology) (14) and also xenohormesis (3) have made enormous progress based upon serious scientific research (4-6). Likewise, various "-omics" sciences (9,10), adipobiology and (adipo)pharmacology (7,15,16) are contributing to a better understanding of health and disease. And may hopefully enable us to phenotypically modulate *Homo obesus* into being like *yond Cassius lean and thinks too much*. Hence, *dangerous* for local and global stupidity and selfishness.

**Giamila Fantuzzi and George N. Chaldakov**  
Chicago, IL, USA and Varna, Bulgaria

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